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VOLUME 2A
Comments and Responses
L-1 through L-309

FINAL
ENVIRONMENTAL IMPACT STATEMENT
ENVIRONMENTAL IMPACT REPORT

FOR THE

CALIFORNIA-OREGON TRANSMISSION PROJECT

AND THE

LOS BANOS-GATES TRANSMISSION PROJECT

DOE/EIS-0128
SCH#85040914

JANUARY 1988

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SECTION 1.0
INDEX TO CORRESPONDENCE

1.0 Index to Correspondence

Volumes 2A and 2B contain the letters and other correspondence comments on the Draft EIS/EIR and the Supplement to the Draft EIS/EIR and the responses to that correspondence. Each letter is identified by an L-# (letter received on the Draft EIS/EIR) or an SL-# (letter received on the Supplement to the Draft EIS/EIR). The letters are presented in L-# order in Section 2.0 and in SL-# order in Section 3.0.

To aid the reader in locating a comment, an index of letters on the Draft EIS/EIR is provided in Table 1.0-1 and on the Supplement to the Draft EIS/EIR in Table 1.0-2. The index is alphabetical by the commentor's last name and shows the corresponding L-# or SL-#. The column in the index entitled "Organization" is intended only as an informal aid in finding comments; it is not intended to fully represent the affiliation of all commentors.

Volume 2A contains letters L-1 through L-309 on the Draft EIS/EIR. Volume 2B contains letters L-310 through L-372 on the Draft EIS/EIR and letters SL-1 through SL-132 on the Supplement to the Draft EIS/EIR. The letter is reproduced on the left side of the page with the commentor's specific comments bracketed. The right side of the page contains responses to those specific comments or a reference to a response to a similar comment.

Some letters received during the comment periods were assigned an L-# or an SL-#, but are not reproduced in this Final EIS/EIR. These letters did not contain substantive comments regarding the documents and therefore did not require a response. In most instances, these letters included address changes, requests for the Draft EIS/EIR or the Supplement to the Draft EIS/EIR, or requests for information. The lists of letters not requiring responses are provided in Sections 3.1.2 and 3.2.2 of Volume 1 of this Final EIS/EIR.

When reviewing Volumes 2A and 2B, the reader should be aware that some consecutive L-#s or SL-#s were not used when logging in the letters. Also, a few of the subcomment designators within comment letters may not be in alphabetical order. This occurred because during multiple reviews of comments, some paragraphs originally bracketed as a single comment were subsequently divided into more than one comment.

Some comment letters contain attachments. All attachments have been reviewed by the lead agencies; however, due to space limitations, some attachments were determined to be non-substantive and have not been reproduced. All comment letters and attachments are available for public review at the offices of the lead agencies in Sacramento, California.

TABLE 1.0-1

INDEX TO CORRESPONDENCE
RECEIVED ON THE DRAFT EIS/EIR

Commentor	Organization	Volume Number	Letter (L) Number
Allen, J.S.	Allen Ranch	2A	L-308
Anonymous		2A	L- 89
Anonymous		2A	L- 87
Anonymous		2A	L-153
Atiyeh, V.	Governor of Oregon (former)	2A	L-269
Attaway, N. & K.		2A	L-137
Austin, C. & D.		2A	L-189
Barker, D.		2A	L-111
Barrie, T.	California Department of Transportation	2B	L-355
Barsch, R.E.	California Department of Water Resources	2B	L-359
Beebe, R.D.		2B	L-372
Beers R.	Citizens Against Transmission Line Easement	2B	L-325
Bello, P.		2B	L-323
Berryman, R.	Champion International	2A	L- 39
Bertagna, J.		2A	L-178
Bever, A.		2A	L-296
Bloomfield, H.J.		2A	L- 96
Boatwright, D.E.	California Legislature	2A	L-263
Bones, J.W.	Lone Star Development	2A	L- 97
Bookout, T. & L.		2A	L-205
Bowen, T.J.		2A	L-157
Bowers, G.H.	Bowers Engineering	2B	L-335
Boyle, E.	California Department of Transportation	2B	L-356
Brady, C.	Friends of the Greensprings	2B	L-320
Brady, C.	Positive Resolution of Powerline Problems	2A	L-151
Brady, C.	Positive Resolution of Powerline Problems	2A	L-309
Bragdon, H.	Contra Costa County Community Development Department	2A	L- 22
Bragdon, H.E.	Contra Costa County Community Development Department	2B	L-290
Briggs, G.	Roseburg Resources Company	2B	L-334

* Form letter; only L-155 is reproduced; see L-155 for response.

** Form letter; only L-278 is reproduced; see L-278 for response.

TABLE 1.0-1 (CONTINUED)

	Commentor	Organization	Volume Number	Letter (L) Number
	Broddick, L. & G.		2A	L-169
	Bross, S.		2A	L-115
	Butcher, R.D.	National Park and Conservation Association	2A	L-202
	Byrne, M.		2B	L-340
	Byrne, P.M.		2A	L- 55
	Campbell, D.	Hobie Cat	2A	L- 28
	Campbell, J.C.		2A	L-302
**	Carotenuto, V.	Caliente Yacht Club	2A	L-262
	Champ, A.	Corps of Engineers	2A	L-268
	Christensen, E.F.	LDS Church	2B	L-366
	Christy, B.		2A	L-188
	Clark, R. & Fabianek,S.	Malin Chamber of Commerce	2A	L-195
	Clifford, L.H.		2A	L-224
	Cline, C.I.	Bethel Marina	2A	L-121
**	Cline, W.	Caliente Yacht Club	2A	L-280
**	Collinson, B.	Caliente Yacht Club	2A	L-270
	Cook, J. & A.		2B	L-353
	Cooke, J.	Hearst Corporation	2A	L- 79
	Cooper, F.E.		2A	L-135
	Cordonier, J.	City of Tulelake	2A	L-102
	Cottle, R.		2A	L- 1
	Crechrion, J.		2A	L-171
**	Daniels, M.	Caliente Yacht Club	2B	L-369
**	Daniels, R.	Caliente Yacht Club	2B	L-311
**	Darling, N.	Caliente Yacht Club	2A	L- 40
	Dauphine, D.C.	California Farm Bureau Federation	2A	L-297
	Davis, A.		2A	L-199
**	DeCato, D. & J.	Caliente Yacht Club	2B	L-370
	DeCato, D. & J.		2A	L-234
	Dederick, J.E.	County of Modoc	2B	L-316
	Delfino, K.L.	California Department of Forestry	2B	L-362
	Delin, L.T.		2A	L- 91
	Delledera, S.		2A	L-237
	Dierksen, C. & Hale, B.		2A	L-176
	Dierksen, C. & Hale, B.		2A	L-213
	Dobbins, G.L.		2A	L-236
	Donahue, J. & V.		2A	L-103
	Doolittle, J.T.	California Legislature	2A	L-264
	Drehobl, R.J.	USDI Bureau of Land Management	2B	L-327
**	Du Frane, S.	Caliente Yacht Club	2A	L-261
*	Dudley, D. & J.	Caliente Yacht Club	2A	L- 26
	Dybas, L.		2A	L-106
	Dybas, R.		2A	L-104
	Dyer, R.	Portland General Electric	2B	L-331
	Edwards, D.B.		2A	L-229
	Edwards, D.B.		2A	L-222
	Edwards, W.J.	Edwards Ranch	2A	L-215

TABLE 1.0-1 (CONTINUED)

	Commentor	Organization	Volume Number	Letter (L) Number
	Ellis, Dr.	Raptor Research	2A	L-223
	Elmore, B.A.		2A	L-248
	Elmore, H.C.		2A	L-218
	Elsea, J.E.		2A	L-174
	Fallman, E.M		2A	L- 65
	Fallman, E.	Planning and Conservation League	2A	L-287
	Farless, J.E.	Corps of Engineers	2B	L-351
*	Fayne, M.D.		2A	L-160
	Feldman, E.	Planning and Conservation League	2A	L-286
	Fileccia, N.S. & B.D.		2A	L-179
	Fiock, N.		2B	L-346
	Fiock, N.E.		2A	L- 33
	Frank, D. & Fullerton, W.	Friends of the Greensprings	2B	L-329
	Fritz, J.		2A	L-100
	Fullerton, W.	Friends of the Greensprings	2A	L-130
	Gallagher, L.M.	California Department of Transportation	2B	L-317
	Garvey, T.M.	Westlands Water District	2A	L-303
	Germino, J.O.	Germino et al.	2A	L-193
	Gigler, A.R.		2A	L-243
	Gilbert, R.S.	County of Fresno	2A	L-293
	Gore, G.M.		2A	L-284
	Greenbank, C.	County of Modoc	2A	L- 20
	Grist, C.	Oregon Department of Energy	2B	L-310
	Gromm, R.	Reclamation District #799	2A	L-267
	Grupe, L.	Star Thistle Farm	2A	L-219
	Halmes, J.E.		2A	L-244
	Halousek, B.		2A	L-251
	Halousek, R.		2A	L-149
	Halousek, R.		2A	L-216
**	Hamburger, D.	Caliente Yacht Club	2A	L- 48
	Hammel, C.B.		2A	L- 78
	Hanson, L.		2A	L-247
	Harding, R.M.	Carr, Kennedy, Peterson and Frost	2B	L-347
	Hathcock, D.		2A	L-232
**	Hearn, Mr. & Mrs. H.J., Sr.	Caliente Yacht Club	2A	L-281
	Heiss, B.		2A	L-112
*	Hemphill, J. & R.		2A	L-156
	Henry, J.V.	Save Our Streams	2B	L-342
	Henwood, K.	Forest Landowners of Shasta and Siskiyou Counties	2B	L-307
	Herum, S.A.	Neumiller and Beardslee	2A	L- 41
	Herum, S.A.	Neumiller and Beardslee	2A	L-203
	Herum, S.A.	Neumiller and Beardslee	2A	L-204
	Herum, S.A.	Neumiller and Beardslee	2A	L-299
	Herum, S.A.	Neumiller and Beardslee	2A	L-300
	Higgins, P.D.	Pacific Power & Light	2A	L-291

TABLE 1.0-1 (CONTINUED)

	Commentor	Organization	Volume Number	Letter (L) Number
**	Hix, L. & L.	Caliente Yacht Club	2A	L- 24
	Hogan, Mr. & Mrs. R.		2A	L- 54
	Holck, D.	D. Holck Farms	2A	L- 14
	Holden, J. B.J.	Oregon Aeronautics Division	2A	L- 21
	Hoopingarner, H.A.		2B	L-339
**	Hopkins, B.	Caliente Yacht Club	2A	L- 49
	Hunter, J.	County of Shasta	2B	L-337
	Imbrecht, C.R.	California Energy Commission	2B	L-344
*	Jackson, R.L. & G.		2A	L-155
	Jereb, J.		2A	L-173
	Jermane, R. & D.		2A	L- 42
	Johnson, M.S.		2B	L-348
	Johnson, W.A. & P.K.		2B	L-318
	Joiner, V.		2A	L-198
	Jones, D.A.	San Francisco Clean Water Program	2A	L-150
	Jones, W.		2A	L-118
	Keehn, R.		2A	L-180
	Kemmerly/Hesnard	California Department of Transportation	2B	L-358
	Kennett, W.E.		2A	L- 45
	Kifer, J.		2A	L-288
	Kilian, C.		2A	L-285
	King, T.F.	Advisory Council on Historic Preservation	2A	L- 9
	Klassen, H.C.		2A	L-298
	Kloc, D.A.	United States Air Force	2B	L-368
	Knoll, E.		2A	L-139
	La Pena, F.	California State University, Sacramento	2B	L-319
	Lane, J.	California State Lands Commission	2A	L-266
	Learner, P.		2A	L- 19
	Lebaron, S.		2A	L-190
	Lindenmeyer, T.H.	East Bay Regional Park District	2A	L- 18
	Livak, N.J.	Livak et al.	2A	L-200
**	Lyman, J.	Caliente Yacht Club	2A	L-271
**	Martini, L.	Caliente Yacht Club	2A	L-282
**	Masela, G.M.	Caliente Yacht Club	2B	L-363
	Matthews, W.E. & R.L.		2B	L-315
	Mattia, M.A.		2A	L-212
	McCleskey, D.		2A	L-159
	McCleskey, D.L.		2A	L-184
	McCormack, F.	Izaak Walton League	2A	L- 4
**	McFerney, D.	Caliente Yacht Club	2A	L- 32
	Meagher, R.A.	Concerned Citizens of Butte Valley	2B	L-328
	Melo, L.		2A	L-196
	Mettler, M.A.	Pool Establishment	2A	L-133

TABLE 1.0-1 (CONTINUED)

	Commentor	Organization	Volume Number	Letter (L) Number
	Meyer, Larry J.		2A	L-182
	Micka, L.		2B	L-304
	Miller, G.	Committee on Interior and Insular Affairs	2A	L- 17
	Mirick, E.		2A	L-231
**	Modis, C. & L.	Caliente Yacht Club	2A	L-272
	Moore, B.		2A	L-209
	Moore, H.		2A	L-109
	Moore, J.K.	Sierra Club, Mother Lode Chapter	2B	L-322
	Moore, M.		2A	L-108
	Moore, M.J.		2A	L-276
	Moore, S.G.		2A	L- 30
*	Morrill, R.B.		2A	L-161
	Muir III, D.H.		2A	L- 53
	Murray, Jr., C.W.	Environmental Protection Agency	2B	L-364
	Murray, T.J.	Bonneville Power Administration	2B	L-371
	Myers, R.	Tulelake Chamber of Commerce	2A	L-206
	Newton, C./ Harlow, G.	Shasta County Fire	2A	L-260
	Nile, J.B.	Santa Fe Pacific Timber Company	2A	L-192
	Nile, J.B.	Santa Fe Pacific Timber Company	2B	L-341
	Nystrom R.K.		2A	L-211
	Ohanian, J.B.	Office of Planning and Research	2B	L-326
**	Papenhauser, R.&J.	Caliente Yacht Club	2B	L-365
	Parnell, J.C.	California Department of Fish and Game	2B	L-333
	Patel, V.	California Department of Water Resources	2B	L-360
	Pendoley, R.J.	Solano County	2B	L-349
	Perlman, M.		2A	L-207
	Peterson, D.G.	Modoc County-Klamath County Power Line Committee	2A	L-214
	Phillips, G. & H.		2A	L- 15
	Polityka, C.	USDI Office of Environmental Project Review	2B	L-332
	Prosser, Mr. & Mrs. J.		2A	L-235
	Pugh, P.	Associated Professional Engineers	2A	L-255
	Rayburn, R.G.	California Department of Parks & Recreation	2B	L-361
	Rechtin, J.	Lava Beds National Monument	2A	L- 3
	Reseck, G.A.		2A	L-175
	Rhodes, P.T.	Mt. Shasta Audubon	2B	L-314
	Robinson, R. & A.		2A	L- 13

TABLE 1.0-1 (CONTINUED)

	Commentor	Organization	Volume Number	Letter (L) Number
**	Roumbanis, J.,L., M.,D., & C.	Caliente Yacht Club	2A	L-278
	Ruling, C.		2A	L-220
	Ruppert, B. & D.		2A	L-273
	Russak, J.E. & M.		2A	L-245
	Sani, G.		2A	L-217
	Schaefer, P.		2B	L-336
	Shaw, A.T.		2A	L-119
	Shaw, M.		2A	L- 52
	Siegel, M.	Caliente Yacht Club	2A	L-279
	Silviera, J.W. & B.		2A	L- 70
	Simpson, E.R.		2A	L-249
	Smith, B.J.	California Department of Transportation	2B	L-357
	Smith, Z.G.	USDA Forest Service	2A	L-295
	Snyder, B.	California Licensed Foresters Association	2B	L-343
	Sollid, A. & G.		2A	L-177
	Spieler, J.F.		2A	L-208
	Spotts, J.L.		2A	L-227
	Sprayberry, D. & M.		2A	L-105
	Streeter, D.	Oregon Clearinghouse	2A	L- 11
	Stromsness, C.		2A	L-283
	Sylva, E. & R.		2A	L- 46
	Taylor, M.		2A	L-226
	Teague, D.		2A	L-172
	Tendeland, T. & F.		2A	L-289
	Terry, R.		2A	L-120
	Thackeray, G.	Siskiyou County Supervisors	2A	L-128
	Thatch, G.D.		2A	L-305
	Thompson, T.A.		2A	L-186
	Tibbetts, E.		2A	L-101
	Tomaselli, R.		2A	L-183
	Tomaselli, G. & R.		2A	L- 44
	Toner, K.		2B	L-345
	Torlakson, T.	Contra Costa County Supervisor	2A	L-265
	Tschirky/Graham	Modoc County-Klamath County Power Line Committee	2B	L-330
**	Tuttle, E.	Caliente Yacht Club	2A	L- 34
**	Tuttle, L.	Caliente Yacht Club	2A	L- 31
**	Tuttle, P.M.	Caliente Yacht Club	2A	L- 29
**	Tuttle, S.C.	Caliente Yacht Club	2A	L- 35
	Urrutia, J.M.	Bank of Stockton	2A	L-117
	Van Nostrand, J.M.	Perkins Coie	2A	L-292
	Van Susteren, P.		2B	L-313
	Vernon, F.		2A	L-233
	Vidricksen, K.L., M.D.		2A	L-277
	Vinzant, M.J.		2A	L-181
	Waldman, A.L.		2A	L-225
	Walt, H. R.	Board of Forestry	2B	L-321

TABLE 1.0-1 (CONTINUED)

	Commentor	Organization	Volume Number	Letter (L) Number
	Way, C.T.	East Bay Municipal Utility District	2A	L- 10
	Weisenburg, L.E.	Delta Coves	2A	L- 90
	Weisser, V.	California Public Utilities Commission	2A	L-306
	Weland, M.C.	Oregon Department of Fish and Wildlife	2A	L- 23
	White, J.C.	California Aviation Council	2A	L-197
	Whitener, J.J.	Bethel Island Fire	2B	L-324
**	Williams, I.	Caliente Yacht Club	2A	L- 43
	Wilson, J.P.		2A	L-110
	Wolford, M.	Byron Union School District	2A	L-312
	Wood, W.M.	Klamath Sierra Club	2A	L- 27
*	Wright, C.		2A	L-162
*	Wright, G.		2A	L-163
**	Xeulner, R.D.	Caliente Yacht Club	2A	L-256

TABLE 1.0-2

INDEX TO CORRESPONDENCE
RECEIVED ON THE SUPPLEMENT
TO THE DRAFT EIS/EIR*

Commentor	Organization	Letter (SL) Number
Amstein, L.		SL- 60
Anonymous		SL- 15
Anonymous		SL- 35
Barker, P.F.	USDA Forest Service	SL- 99
Barringer, B.		SL- 50
Beebe, R.D.		SL-125
Beers, R.		SL- 85
Bottimore, M.L.		SL-111
Brotsch, B.		SL-133
Brown, N.		SL-108
Caldwell, F.		SL-119
Carrara, J.F.		SL-115
Caughey, D. & E.		SL- 68
Deffebach, M.F.		SL-116
Delledera, S.		SL- 17
Dobbins, G.L.		SL- 47
Donovan, M.J. & Rapalus, N.		SL- 65
Donovan, M.J. & Rapalus, N.		SL- 73
Dunn, D. & G.		SL- 33
Duvall, P.		SL- 8
Easton, C.C.		SL- 92
Environ. Coord.	National Park Service	SL- 52
Feider, J.	Western Area Power Administration	SL-110
Ferris, H.	Pacific Power & Light Company	SL- 63
Fiock, N.		SL- 9
Fisher, A.		SL-129
Fletcher		SL- 7
Forner, V.		SL- 88
Fox, D.D.		SL- 29
Frager, S.R.	AFA	SL- 77
Frey, N.	Siskiyou County Supervisors	SL- 84
Gabbar, R.		SL- 11
Garcia, A. & D.		SL- 28
Germino, J.O.	Germino et al.	SL- 38
Graham, B.		SL- 64

* These comments and responses are presented in Volume 2B of this Final EIS/EIR.

TABLE 1.0-2 (CONTINUED)

Commentor	Organization	Letter (SL) Number
Grist, C.	Oregon Department of Energy/Oregon Review Committee	SL-103
Hammond, J.C.		SL- 98
Hanson, L.		SL- 61
Hanson, T.		SL- 62
Hayhurst, C. & B.		SL- 34
Henwood, K.	Henwood Energy Services, Inc.	SL-121
Higgins, P.D.	Pacific Power & Light Company	SL-101
Howard, D.M.	Community Legal Information Center	SL-124
Hughes, D.		SL- 49
Hughes, J.J. & H.L.		SL- 59
Jacoby, K. & P.		SL- 72
Jaffe, D.		SL- 32
Johnson, F.H.		SL-113
Jones, E.W.		SL- 19
Kennett, W.		SL- 66
Kifer, J.R.		SL- 39
Kifer, J.R. & A.K.		SL- 45
Kilian, C.		SL- 87
Kilian, C.J.		SL-106
Killeen, M.D.		SL-109
Kincaid, C.		SL- 30
King, R.F.	City of Coalinga	SL- 24
King, V.		SL- 86
Klatt, P.	Western Power	SL- 25
Krauska, M.S. & T.A.		SL- 89
Krauska, T.		SL- 97
Lebaron, S.		SL- 18
Leight, W. & H.		SL- 10
Leight, W.J.		SL- 36
Matthias, B. & E.		SL- 16
Mazzarella, S.		SL- 1
McCauley, D.		SL- 67
McCleskey, D.		SL- 80
McCleskey, D.		SL-132
McCleskey, D.		SL-134
McConey, J.		SL-131
Miller, C.E.		SL- 56
Moore, G. & S.		SL- 57
Murray, T.J.	Bonneville Power Administration	SL- 40
Murray, T.J.	Bonneville Power Administration	SL-122

TABLE 1.0-2 (CONTINUED)

Commentor	Organization	Letter (SL) Number
Nelson, C.		SL- 93
Nelson, L. & D.		SL- 26
Newton, W.W. & A.J.		SL- 31
Norby, G.M. & E.M.		SL- 27
Nystrom, R.K.		SL- 37
Otez, J.		SL- 51
Patel, V.	California Department of Water Resources	SL- 76
Perry Marine Service		SL- 14
Peterson, D. et al.	Modoc County-Klamath County Powerline Committee	SL-120
Phillips, A.		SL- 74
Phillips, A. & J.		SL- 75
Plummer, F.F., R.A., F.M. & S.		SL- 41
Polityka, C.	USDI Office of Environmental Project Review	SL-102
P.R.O.P.P.		SL-123
Quay, C.	Benton County Public Utility District	SL- 53
Rechtin, J.		SL-107
Rhyne, D.		SL- 44
Rice, L. & A.		SL- 12
Roberts, D.S.	Driscoll Strawberry Associates	SL- 23
Rodocick, D.		SL- 83
Rodocick, J.		SL- 22
Ruling, C.		SL- 4
Russak, J.E.		SL-117
Russak, W.		SL-105
Semonich, D.		SL- 42
Shaw, M.		SL- 3
Shumway, N.D.	U. S. Congress	SL-104
Simmons, T.	Humboldt Research	SL- 13
Slingerland, R.M.		SL- 2
Smerber, J.		SL- 91
Smerber, J.P.		SL- 94
Smerber, W.		SL- 90
Smerber, Z.A.		SL- 96
Speigel & McDiarmid		SL- 70
Starr, P.		SL- 5
Stastny, E.		SL- 95
Streeter, D.		SL- 58
Taggart, L.	California Indian Legal Services	SL- 54

TABLE 1.0-2 (CONTINUED)

Commentor	Organization	Letter (SL) Number
Terry, R.		SL- 55
Thatch, G.D.		SL-118
Thomson, W.L. & P.A.		SL- 20
Toler, I.		SL- 71
Trapnell, H.W.	Hambone Ranch	SL- 78
Trapnell, H.W.	Hambone Ranch	SL- 79
Vignola, R.	Antioch City Hall	SL- 81
Vinzant, M.		SL- 48
Walt, H.R.	Board of Forestry	SL-100
Walter, F.		SL- 46
Wetmore, M.L.		SL- 69
White, J.C.	California Aviation Council	SL- 6
Wickizer, D.	Board of Forestry	SL-126
Wieman, D.	Environmental Protection Agency	SL-130
Willard, et al.		SL- 21
Williams, J.		SL-114
Wooley, W.		SL-127
Woolley, E.W.		SL-112
Woolley, K.		SL- 82
Wynhamer, E. & M.		SL- 43

SECTION 2.0

CORRESPONDENCE AND RESPONSES ON THE DRAFT EIS/EIR

2.0 Correspondence and Responses on the Draft EIS/EIR

Letters L-1 through L-309 containing specific comments on the Draft EIS/EIR are reproduced and bracketed on the following pages. Responses to the specific comments are identified or referenced and appear across from the comment they address.

L-1

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A CALIFORNIA-OREGON TRANSMISSION PROJEC

We do not want this power line threw our area because of the health dangers, property values decreased. The

B liner would be to close to homes and stop many, planned developments. It would d decreases the region physically and visually. It would cost the living customers alot pay for running my water, which then would be a law suit involved.

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995

Clip this page, fold it in thirds, and return it to us. Thank you.

ROGER & LORRAINE COTTLE
ROUTE 1 BOX 164
BRENTWOOD CA

A Comment noted. See responses to L-330 F3 and L-184 A.

B Your concern for these potential impacts is noted. The Draft EIS/EIR contains detailed discussions of these impacts. See response to L-15 E.

L-3

Julie Rechtin
Lava Beds National Monument
Box 865
Tulelake, Ca. 96134
Feb. 1, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, Ca. 95866

Dear staff:

First, I'd like to thank you folks for your help in answering my questions during this comment period so far. This includes the letter I wrote before the comment period began (before the EIS came out, when I first understood the line was to detour into the Highlands.) Also, the Tracy meeting and subsequent phone calls.

A There was one question which was never answered: In Vol. 1, Sec. 4.8-1, concerning the "acres of prime timber" and "acres of non-prime timberland" to be affected by the entire COTP project irreversibly, I'd guess this ought to be about 42 miles and 30 miles respectively. Unless, of course, you don't consider cutting a 200-foot swath through the woods to be irreversible. However, you just said that activity on 2070 acres of forest land would be affected. This doesn't quite add up.

On to specific comments: you have heard these comments informally, but I understand that doesn't count for the record. Hopefully this will reach you in time to count; I just realized you have to receive these comments by February 3. Since I've spent a solid week trying to understand the documents, I hope these comments reach you in time. I hope you still address them if they are at least postmarked on time. I was hoping to stop by your office per invitation by Doug Proctor, but I ended up going through Sacramento on a Saturday (yesterday.)

B Starting at Lava Beds, I don't believe 3 miles is a wide enough zone of influence for the lines in that area, especially with respect to visibility. The vegetation is open, and the present lines are quite visible in the afternoons. The majority of the eastern monument is wilderness, where the activities of man should not be an intrusion, and even if the lines are 5 or 6 miles away, they will definately intrude. We are currently removing the small power lines through the park just to enhance this natural character. The lines are quite visible from Schonchin Butte lookout, also.

C The photo that you chose to use to represent impact from Lava Beds was from the parking lot of Schonchin Butte in the morning on a hazy day. If you had shot from the lookout in the afternoon, the northeast entrance or southeast entrance, you would have a different impact. I also suggest you shoot the impact on the park access road in the East Sand Butte vicinity...both looking down the road (east) on the straight stretch before the lines, looking towards Doublehead; and the non-view we will have of Glass Mountain between the existing lines and the new line's crossings looking west.

A In Volume 1 of the Draft EIS/EIR, page 4.8-1, the text says "Activities on 2,070 acres of forest land (1,270 acres of USFS administered land) including 22 acres of prime timber, 21 acres of non-prime timberland". This should say "15 miles (364 acres) of prime timber and 27 miles (654 acres) of non-prime timber on Forest Service lands". These clarifications are included in Volume 1, Section 1.1.4 of the Final EIS/EIR.

B As explained on page 3.7-9 of the Data and Impact Analysis Report in Volume 2A of the Draft EIS/EIR, the determination of the distance thresholds for the visual analysis and assessment was based on previous research on the visibility of various types of transmission structures across a range of landscape settings. These settings included areas with topography and vegetation similar to the area to the east of Lava Beds National Monument. However, in this research, it was verified that under certain lighting conditions, specular reflection from glossy conductors can make transmission structures visible from greater distances than those used in the assessment of visual impacts for the Draft EIS/EIR. This specular reflection can be reduced or eliminated by using conductors that have been treated to produce a matte finish. An American National Standard was approved on May 3, 1976 for an acceptable non-specular finish on bare overhead aluminum conductors.

For these reasons, it is believed that the zone of influence for the visual analysis is appropriate, but it is also acknowledged that the likelihood of specular reflection in the sensitive areas such as near the Lava Beds National Monument and in the Sacramento Delta warrants the adoption of non-specular conductors as a mitigation measure for the COTP. This measure has been adopted. Pre-darkened or de-glossed tower steel has also been adopted as a measure to mitigate visual impacts. It is also noted that it would be impractical to control development 5-6 miles outside the boundary of the Monument without, in effect, extending the boundary itself.

L-3 (continued)

C The photograph taken from Schonchin Butte does not show specular reflection. This is representative of viewing conditions from the Butte for much of the time and illustrates that the COTP would not be visually prominent if specular reflection is not a factor. Since the general use of non-specular conductors and the use of pre-darkened tower steel on National Forest lands to the east of this viewpoint have both been adopted as mitigation measures, the existing Schonchin Butte photograph has not been replaced. The other suggested photographs have not been provided since the COTP would not approach closer than three miles from the boundaries of Lava Beds National Monument, assumed to be the location of greatest viewer sensitivity in this area.

L-3 (continued)

D, E

There are some other areas where the visual impact is not properly documented. The new line will block the view of the Highlands and Glass Mountain as you proceed west on the Tionesta Road. It will cross the road. (It will not be four miles north as listed in your report.) It will affect views from that road along its length, including the scenic overlook with the view of the Burnt Lava Flow. The line will also run very close to the Powder Hill Road (what you call the Medicine Lake Road.) This road will be crossed twice, one crossing in the Giant Crater Lava Flow. This road is also improperly described in your visual impacts section; it isn't shown on any of your maps either.

F

I suggest you show these impacts with photos. I suggest you also show the views from the Lyons Road, which is the most popular access to Glass Mountain for tourists. I suggest, further south, you show the visual impact of the crossing of the Pacific Crest Trail, looking down the right-of-way or/and diagonally from above. I'd also like to see the crossings of the Pit River. Considering that visual impact will be major no matter what your mitigations are, we need to see what they really will be. I don't believe your photo section was adequate.

G, H

As far as getting off the major roads is concerned, the effect on the scenic quality of the Burnt Lava Flow area will be major. Although you are technically avoiding the actual geologic feature, the enjoyment of the area will be impaired, especially since you will be traversing the most popular part of the flow and ice cave area. I am also concerned with the effect on Double Hole Crater and the Ice Caves there; your maps in the EIS bring the line closer to the Burnt Lava Flow (than the newsletter maps) to avoid the other geologic area; I'm not happy with either possibility.

I

Timberland: An area along the Black Mountain-Tionesta Road is mismarked; you have an area marked as juniper when it is really plantation put in after the '77 Cougar Fire. I believe the Twin Fire is also being planted. This represents a significant investment you intend to terminate, not just some juniper.

J

I also note that the total forestland to be affected in alternative D is more than that in alternative B, but you chose D as the preferred environmentally because there is less private timberland involved. I'm not sure that is a fair judgment. (B also affects other parameters less than D, but I don't want to recommend B because of the wildlife impacts, either.)

K

I don't believe that the Medicine Lake route was well enough studied. You didn't get input at public meetings on it because it is outside the advertised corridors. Some of us didn't go to the initial meetings because those corridors weren't objectionable. Your justification that the route was in the initial study "area" is stretching your credibility.

The truth comes out when I examine the topo map section and find you do not have the Medicine Lake quad at all. Your reps at the hearings didn't even realize it wasn't there. Yet 6 miles of the route will pass through there.

D

Because steel lattice structures would be used for the proposed transmission line, the COTP would be unlikely to actually "block" views. Route segment N-10 Alt.5, a segment of Alternative D, could intrude on views of the Glass Mountain Lava Flow. However, with the selection of N-10M2(A1) and N010M2(A) as the Project preferred options in this area, the COTP will not be constructed along route segment N-10 Alt.5, and visual impacts will be reduced for these areas.

E

The visual analysis in the Draft EIS/EIR states that this segment would cross the Medicine Lake Highway, also called the Tionesta Road. This analysis misnamed the Powder Hill Road as the "Medicine Lake Road" and has been changed to state that both the Powder Hill Road and the Medicine Lake Highway would be crossed by segment N-10 Alt.5. The new Project preferred route N-10M2(A1) would not cross the Powder Hill Road.

F

The purpose of the photo-simulations included in the Draft EIS/EIR is to illustrate a representative range of visual conditions and verify the assessment of impacts, rather than to illustrate all the potential visual impact site along the alternative routes. In addition, a new route option, N-10M, has been adopted that will reduce the impacts addressed in the comments regarding the Glass Mountain Lava Flow area. Additional photo-simulations are not included.

G

A new route option, N-10M, has been adopted that will substantially reduce the impacts addressed in this comment. This new route is identified in Section 2.5 of Volume 1 of this document and is analyzed in Section 3.2 of the Supplement to the Draft EIS/EIR.

H

See response to L-3 G.

I

Comment noted. Our original information was derived from aerial photos taken in October 1985. The only tree plantations near the preferred route shown in our photos is one located west of Black Mountain, approximately two miles south of the alternative.

J

As noted in the comment, many factors were considered and weighed in selecting the preferred route. One factor in favor of Alternative D is that it affects the least amount of total prime timberland. The prime timber factor was considered to be as important as private Timberland Production Zones when comparing the various alternatives.

K

The area referred to was included in early corridor analyses. A specific route though the area was developed in July 1986. The comment period on the Draft EIS/EIR allowed for public comment on the route. The Medicine Lake map was inadvertently left out of the map set.

L-3 (continued)

L It is OK that you do not actually show the bald eagle nesting in the Highlands; I don't know if I'd want it published either. (Just like you didn't show Bear Valley winter roost, but I actually think that is common knowledge now that it is a refuge.) Anyways, you didn't even mention it, however, as a wildlife impact. So here are the details:

In the past, bald eagles have nested in the Blanche/Bullseye Lake area, as well as Medicine Lake (south end.) Eagles may have nested at Alcohol Crater, or just summered there; however, logging there last year may have scared them away—temporarily or long-range, I'm not sure. But there is use in all those areas.

M You are aware of the bear, pronghorn, and deer habitat you will affect. I would like to emphasize that poaching east of the monument is already a problem, and putting in more access will compound the problem in key winter range. Hunters also wait

N along the current lines for deer to leave the Long Bell Refuge; putting in the second route will compound problems for the deer attempting to migrate; and the second line may be even more of an intrusion than the first according to Alice Purcell's masters thesis maps. (on file at the park, written through OSU, I believe.)

O The 55 new miles of access roads, the 40 mile swath of denuded timberland, combined with massive amounts of clearcutting proposed by the Shasta-Trinity and Modoc Forests will have tremendous effects on above wildlife, plus others. For instance, you assume that that snag averages can be compensated for by topping trees near the right-of-way. You haven't mentioned that many of these areas will be clearcuts, and then plantations, with snag recruitment problems all their own. The Forest Service also doesn't like topping productive trees, I'm sure. They'll be scrambling to keep their cut up to Washington-dictated levels without the benefit of the trees in your right-of-way. They will also have to compensate for your line in partial retention and full retention areas.

P I'm not sure why the lines must be separated so far in the Highlands, when you are willing to bring them so close in the Pit River. It would seem to me that fire will spread up Pit River drainages much faster than through the Highlands; it is also quite difficult to fight there.

Q I u erstand that my objections to routing the line through the Black Mountain pass are not considered engineering obstacles—the increased snow and wind, colder temperatures, the large amount of lightning in that area. I would like the measures addressed which you intend to take in that area to mitigate these problems, and the extra impact such things as more towers per mile will have.

R I also understand that Julie Donnelly-Nolan believes that, despite the volcanic activity in the area, that chances are slight it will affect you. You might ask Dan Miller, currently assessing the volcanic hazards, for his opinion. The higher you run your lines on the volcano, the higher your risk, I do know that.

L These areas are all at least 3 miles from the proposed route alignment. Eagles at these areas would not be disturbed during construction due to distance and visual screening. The areas are already well-roaded. Furthermore, birds would not be expected to regularly use the area near the transmission line because no attractive water bodies are nearby.

M Hunter and poacher access to new roads can be partially controlled by careful road closures; these cannot always be completely effective in preventing use. The COTP will assist in closing access roads in areas where this can be shown to offset potentially significant impacts to big game. This will be worked out through development of the U. S. Forest Service (USFS) special use permit and through coordination with the California Department of Fish and Game (CDFG). See the mitigation section, Section 1.1.5, in Volume 1 of this document.

Control of poaching and overuse of the area by hunters can probably best be handled by restricting access to the whole area, as has been done on the McCloud Flats and other areas in California by the USFS and CDFG.

O Topping of snags has been successfully implemented as a mitigation measure on the Pacific Power and Light transmission line that crosses the Modoc National Forest (Ross pers. comm.). We believe it can be made to work for the COTP. The COTP has no control over USFS harvest levels or cutting practices.

P The COTP is concerned about sufficient separation from the existing Intertie in forested areas. Actual separation over the entire route varies somewhat and in the Pit River area it narrows to about two miles due to lack of an opportunity to route further to the west.

Q Snow, wind and temperature measurements are being collected at a meteorological station to confirm the meteorological predictions for maximum load occurrences in this area. Towers will be designed and located in high snowload and windy areas to withstand stresses associated with high wind, snow, and ice formation. In these areas, towers will be located closer together by approximately 10 percent. The impact from these additional towers is not considered to be significant, although further impact to visual, biological, soil and other resources are anticipated. Although the lightning levels in this area are the highest for the COTP study area, they are low for transmission lines, in general, and are not expected to present a problem to transmission line operation.

L-3 (continued)

R Pages 4.1-12 and 4.1-13 of Volume 1 of the Draft EIS/EIR state that impacts from volcanic activity will be minimized "through distance, intervening topography, and the placement of towers on high integrity soils/rock". These measures recognize that the higher the COTP lines are on the mountain, the higher the risk involved. The measures have been developed in consultation with Mr. Dan Miller.

L-3 (continued)

Rechtin 4

S I also have a few general concerns. Nowhere did you analyze an alternative of applying the cost of the transmission line (plus buying the energy) to a conservation program. You only stated what is currently planned or possible through recommended regulations. What if you gave monetary incentives? You do not have a benefit/cost ratio for that.

T Your own economic report states that with a weak OPEC and small firm power sales that your benefit/cost ratio would drop below 1. This is not even counting the cost in visual and environmental damage because you cannot monetarily quantify that. (This has the unfortunate affect of saying it is not important.) You seem to think that Northwest power can be priced to sell because it is cheap hydro, but you also state that coal and nuclear make up ½ of Northwest power. If Trojan is shut down due to accident, legislation, or the sheer anticipated cost of decommissioning, where will your surplus be? If the cost of the WPPSS fiasco raises the cost of Northwest power, where will you be? Where will Northwest customers be; producing energy which costs more to make than it can raise in revenues?

U You state that the Northwest will have a firm surplus until the mid-1990's, but your line will barely be complete by then. You'll be operating with good-water-years hydro; is that considered firm power?

V I'm beginning to understand that you want to justify this current proposed line for its reliability. I wonder if stringing another line clear from Oregon really will take care of the problem. I've been told that fire is really not the problem issue, that weather and/or substation outages are a bigger concern. I would have liked to see that reliability study within the EIS; I would like to know exactly how set in stone these reliability rules are, too. The NPCA says they are not as inflexible as you make them out to be, that elsewhere lines are encouraged to run together.

W I'm also not sure that another solution might solve your reliability problem better. Decreasing your expected electric needs through conservation as mentioned earlier would be even more reliable than the proposed line because you wouldn't have to worry about the lines going out at all. Producing the energy in California would have that same benefit. Better coordination with all the lines coming off the Pit River already could help. This new line will carry only 8% of the expected increase in power to 1996, even less of the total energy need, yet somehow it is going to prevent outages and save your electric customers. I don't buy it.

X Notice I haven't mentioned non-specular wires yet. Yes, they would be an improvement over the existing lines. I'd like you to replace the existing lines with them, actually. I don't believe you should

Y use build the new line at all in the preferred route, even with the nonspecular wires.

S California and Northwest utilities have been providing incentives for conservation for several years. Since incentive levels are based in part on alternative costs, they are presumed to increase with them. The Draft EIS/EIR assumes these incentives will continue.

Utility resource plans already include the conservation programs and incentives that have been determined to be cost effective. Those plans also include additional power from generating resources. Since those generating resources have been determined to be cost effective relative to more conservation, and the COTP is cost effective relative to generating resources in utility plans, the COTP is cost effective relative to the available conservation alternatives.

See also response to L-159 A.

T Although the current firm power surplus in the Northwest and the possibility that it may be declining demonstrate the prudence of building the COTP on the planned schedule, the benefits of the COTP do not depend on continuation of the current firm power surplus in the Northwest. The COTP will continue to provide firm capacity and nonfirm energy to California even if the firm surpluses in the Northwest cease to exist. These benefits are available (1) from power that is available when river flows are better than critical dry conditions used for planning, (2) due to the fact that California has its highest power demands in the summer whereas the Northwest has its highest demands in the winter, and (3) due to the fact that generating resources added in the Northwest to meet energy load growth will provide ability to meet peak demands in excess of the peak loads in the Northwest. No resources need be built in the Northwest for the purpose of making power available to sell to California.

Projections of the magnitude of Northwest energy surpluses made in the Draft EIS/EIR are based on average Northwest water conditions. Hence, even in years in which there are no firm energy surpluses projected, i.e., after the current firm surplus is gone, the Northwest would have non-firm energy to sell to California in the average year because of the extra water available under average water conditions in the Northwest. The Northwest plans and builds generating resources primarily based on energy requirements. To define the amount of energy generation that must be added, the Northwest subtracts the energy available from hydroelectric plants under a recurrence of the worst (critical) streamflow on record and the energy capability of thermal plants from expected firm loads. A firm surplus of energy means the result of this subtraction is negative, and no new energy generation is required. Obviously the Northwest normally has substantially more energy available than would occur under critical streamflow conditions.

L-3 (continued)

T (cont.) California utilities will be able to obtain firm capacity to avoid construction of capacity resources even without a capacity surplus in the Northwest. There is firm capacity available for purchase by California utilities at the times needed to meet California peak loads because the amount of capacity resources required to be constructed by Northwest utilities to meet their winter peak loads ensures that a firm capacity surplus will exist in the Northwest during the summer. This summer firm capacity surplus exists even after the Northwest has scheduled maintenance on capacity resources into summer months.

The firm capacity surplus in the Northwest is projected to extend beyond the firm energy surplus because the construction of resources to meet firm energy loads adds more firm capacity than is needed to meet Northwest peak loads. Firm capacity is therefore available to California both as a result of seasonal diversity and throughout the year as a result of meeting firm energy loads. If, as postulated in the comment, a major Northwest resource is removed from service then its replacement would provide similar firm capacity.

No incremental expense is incurred in the Northwest to make firm capacity available for purchase by California. The costs of constructing the firm capacity are a necessary result of meeting Northwest loads. Pricing of firm capacity to California purchasers is therefore a result of market forces as modeled in the Draft EIS/EIR. WPPSS, construction of resources to replace failed resources and other matters that may affect Northwest costs do not directly affect this pricing.

Capacity for energy exchanges benefit both regions. California obtains capacity at a discount price in return for promising to return more energy than was received with the delivery of the capacity. However, there is a very low probability that the California utilities will have to physically return the energy. Rather, energy for the return usually can be purchased as non-firm within the Northwest. This allows California to get firm capacity at a lower price, thereby avoiding construction of generation and allows the Northwest to plan part of its energy requirements as being met by the firm return obligation; thus reducing the amount of generation constructed in the Northwest. The benefits of the COTP do not depend on any new resources being built for the purpose of selling power to California. Fewer total resources would be required in the Northwest.

Additionally, an important benefit from the COTP is that it enables California and the Northwest to take advantage of interregional diversity in loads and resources. California experiences its peak usage during the summer season due to heavy irrigation pumping and air conditioning loads. The Northwest experiences its peak usage during the winter months due to high electric heating in the Northwest. During the summer period when Northwest loads are low and utilities are generating electricity with their less expensive resources, the Northwest can supply to California electricity at a cost less than California could install additional capacity and generate such electricity.

L-3 (continued)

T (cont.) During winter, when California loads are relatively lower, California can supply electricity to the Northwest at rates favorable to the Northwest. This ability to take advantage of regional diversity to the economic benefit of both regions is in no way dependent upon the existence of surpluses in the Northwest.

U Although the current firm power surplus in the Northwest and the possibility that it may be declining demonstrate the prudence of building the COTP on the planned schedule, the benefits of the COTP do not depend on continuation of the current firm power surplus in the Northwest.

See response to L-3 T for a more complete discussion.

V The purpose of the proposed line is to increase the transmission transfer capability by 1,600 MW as well as to increase overall system reliability. By the time the line is in service, the capacity of the existing lines will have been increased to 3,200 MW. It is the combined rating of 4,800 MW that creates an insurmountable problem to the entire WSCC system should all three lines be lost due to a common problem. Should a three line outage be credible, WSCC reliability criteria could dictate, for example, that the three lines operate at 3,200 MW. Thus, the new line would add nothing to the transmission transfer capability. There are many instances where lines of different voltages and less transfer capability at less strategic locations can, and do, run alongside of each other.

W For a discussion of conservation as an element of a strategy involving a mix of resources see the responses to L-306 BB and L-306 CC. The COTP will not prevent outages. It will remedy the problems caused by the existing two lines tripping out at the same time by providing a third, independent path for the power. This is why separating the new line from the two existing lines is such a critical issue.

X See response to L-3 B.

Y Comment noted.

L-3 (continued)

Z

If you can find some way to build the new line to the east of the existing lines, as I mentioned at Tracy, through the Whitehorse area and east of the Long Bell Refuge, it might be better than the preferred route. Following the existing lines from the Pit River just west of Lake Britton might be better than the three crossings of the Pit along the preferred route. You could hook the existing lines into the new substation near Malin; the new line into the old substation. (This might require different BPA modifications.) You could cross the new line over the existing ones south of Round Mountain. I don't know that your refusal to make a crossover is non-negotiable. I would prefer, however, that the line not be built at all.

Sincerely, Julie Rachtin

Z

See response to T-69 F. Routing the proposed lines along the existing lines from the Pit River just west of Lake Britton was also considered, but is not acceptable due to the need for separation between the lines. See response to L-179 D.

L-4

Izaak Walton League
Klamath Falls, Ore.
Oct. 20, 1986

Transmission Agency of Northern California
P.O. Box 661030
Sacramento, Calif;

Dear Sirs:

This letter is in relation to the proposed alternate route for the California-Oregon Transmission Project's KV Line (500). On behalf of the Izaak Walton League of Klamath Falls, Ore. we wish to inform you we are in support of the proposed alternate route as proposed by John Cross.

We strongly urge you to consider the proposed alternate route which would place the line East of the Project's preferred route and leave clear the farmland and benefit the community in many ways.

This proposed alternate route is being supported by Modoc County Powerline Committee, Malin Powerline Committee, Modoc and Siskiyou County Boards of Supervisors, Klamath County Chamber of Commerce, Malin City Council and Chamber of Commerce and local Tulelake organizations.

As a sportsman group the Izaak Walton League strongly supports this proposed alternate route and urges your consideration of this matter.

Sincerely,
F.W. McCormack
Pres. Izaak Walton League
2571 Lakeshore Drive
Klamath Falls, Ore. 97601

A Your support of the John Cross Alternative is noted. See response to L-330 H.

L-9

Advisory Council On Historic Preservation

The Old Post Office Building
1100 Pennsylvania Avenue, NW, #809
Washington, DC 20004

Mr. David G. Coleman
Area Management
Sacramento Area Office
Western Area Power Administration
Department of Energy
1825 Bell Street-Suite 105
Sacramento, CA 95825

REF: Memorandum of Agreement (PMOA) regarding the construction of the California Oregon Transmission Line
Western Referent: N1600

Dear Mr. Coleman:

A The enclosed Memorandum of Agreement has been ratified by the Chairman of the Council. This constitutes the comments of the Council required by Section 106 of the National Historic Preservation Act and the Council's regulations. A copy of the ratified Agreement has also been sent to the State Historic Preservation Officers of California and Oregon.

Thank you for your cooperation in this matter.

Sincerely,

Thomas F. King
Director, Office of Cultural
Resource Preservation

A The COTP thanks the Advisory Council on Historic Preservation for their participation and comments. As indicated in Section 1.5 of Volume 1 of this Final EIS/EIR, this MOA has been added as Appendix H to Volume 3A (COTP Technical Appendices) of the Draft EIS/EIR.

L-9 (continued)

Memorandum of Agreement
among the
Western Area Power Administration,
Transmission Agency of Northern California,
California State Historic Preservation Officer,
Oregon State Historic Preservation Officer,
and
The Advisory Council on Historic Preservation
Regarding the
California-Oregon Transmission Project

WHEREAS, the Transmission Agency of Northern California (TANC), a joint powers agency formed under the laws of California, serves as Project Manager on behalf of a diverse group of publicly- and privately-owned utilities and the Western Area Power Administration (Western) who are proposing to construct the California-Oregon Transmission Project (Project); and,

WHEREAS, the Project and its potential associated facilities consists of: (1) construction of a new 500-kV transmission line from the Oregon border area to the Redding, California area, (2) reconstruction of an existing 230-kV transmission line from the Redding area to the Tracy Substation in California, (3) construction of a new 500-kV transmission line from the Tracy Substation to the Tesla Substation, (4) possible construction of a new 500-kV cross-tie from the Redding area to the Round Mountain Substation in California, (5) construction of new 500-kV substations in southern Oregon and the Redding area, (6) expansion of the existing Tracy Substation, and (7) construction of access roads; and,

WHEREAS, TANC has been designated the lead agency under the California Environmental Quality Act (CEQA) for ensuring that the Project complies with CEQA; and,

WHEREAS, Western has been designated the lead Federal agency for ensuring that the Project complies with the National Environmental Policy Act and Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA); and,

WHEREAS, Western and TANC are working together to prepare a joint environmental document which will satisfy the requirements of both Federal and State environmental laws and regulations; and,

WHEREAS, Western has determined that the Project may have an effect upon properties listed in or eligible for inclusion in the National Register of Historic Places and has requested the comments of the Advisory Council on Historic Preservation (Council) pursuant to Section 106 of the National Historic Preservation Act (16 U.S.C. 470) and its implementing regulations "Protection of Historic and Cultural Properties" (36 CFR Part 800); and,

L-9 (continued)

WHEREAS, corridor selection and facility design consist of three phases: (1) Regional Study, (2) Alternative Route Selection, and (3) Preferred Route Selection; and,

WHEREAS, the Regional Study and Alternative Route Selection have been completed;

NOW, THEREFORE, Western, TANC, the California and Oregon State Historic Preservation Officers (SHPO), and the Council agree that the undertaking will be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

Western in cooperation with TANC will ensure that the project is implemented in accordance with the following stipulations:

I. TANC will ensure that historic and cultural properties are identified, their significance evaluated, and that potential effects on historic and cultural properties are considered during the Project by implementing the measures specified in the "Cultural Resources Work Plan" (Attachment 1) as amended by this agreement.

II. The Joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR) prepared by Western and TANC will be provided to the SHPOs, the Council, the USDA Forest Service (USFS) and the Bureau of Land Management (BLM) for review. The EIS/EIR will document the consideration given to cultural resources in selecting a preferred alternative and will identify future plans for survey and treatment of cultural resources. The final EIS/EIR will respond to all comments received and will be provided to the above parties.

III. TANC will implement a cultural resource survey of the final alignment prior to construction. A survey and assessment report will be prepared subsequent to the survey which will describe the findings of the survey, evaluate the significance of reported cultural resources based on the criteria found in 36 CFR 60.4, assess the impacts of the proposed project on cultural resources, and provide recommendations for mitigation of impacts to cultural resources. The recommendations in this report will constitute TANC's draft Historic Property Management Plan (HPMP) for the Project.

IV. Based upon the information and recommendations provided by the cultural resource survey and assessment and the draft HPMP, Western and TANC, in consultation with the California and Oregon SHPOs, USFS, and BLM, will (1) determine the eligibility for inclusion in the National Register of Historic Places for all cultural resource sites within the survey area, (2) determine the effect of the Project on cultural resources, and (3) agree upon the final HPMP for the Project.

L-9 (continued)

a. If Western and the SHPOs cannot reach agreement regarding the eligibility of sites in their respective states, Western will request a formal determination of eligibility from the Keeper of the National Register.

b. The reviewing parties (SHPOs, U.S. Forest Service, Bureau of Land Management) will provide their comments to Western within 30 days of receipt of the draft HPMP. Failure of the reviewing parties to comment within 30 days shall not prevent Western and TANC from implementing the HPMP.

c. Western will ensure that the comments of the reviewing parties are incorporated into the final HPMP whenever reasonable and feasible.

d. The final HPMP will be provided to the Council for review. The Council will provide any comments it may have within 10 working days of receipt of the final HPMP.

V. The preferred method of treatment of historic and cultural properties will be avoidance. New lines will be designed in so far as is technically, economically, and environmentally feasible to avoid or minimize the placement of transmission line structures, ancillary facilities, and new access easements within the boundaries of historic and cultural properties.

VI. Western and TANC anticipate that total avoidance of historic properties will not be possible. Therefore, the HPMP will include a data recovery program (ORP). The ORP will include a single, comprehensive, research design for all work to be conducted in accordance with this Agreement. The research design will be based on current archaeological, historical, and, where appropriate, ethnographic research concerns in the study area, applicable portions of any State Historic Preservation Plans and shall take into account the standards, principles, and recommendations embodied in the Council's "Treatment of Archaeological Properties: A Handbook," Parts I and III.

VII. Western and TANC will consult with landowners and land managers when data recovery is proposed at a site on their land.

VIII. Western and TANC will ensure that all site avoidance and mitigation measures in the HPMP plan are included as specifications in the construction contracts.

IX. All reports resulting from the implementation of data recovery shall be submitted to the SHPOs and the land managers for review and comment. Western and TANC will ensure that any comments received are considered and incorporated, as appropriate, into the final reports. Copies of the final reports will be provided to the SHPOs, the Council, the USFS, BLM, the Bureau of Indian Affairs, the California Native American Heritage Commission, and other appropriate Native American groups.

L-9 (continued)

X. TANC will ensure that prior to initiation of construction activities in the area of a historic or cultural property all avoidance or mitigation measures to be carried out in each such area have been completed.

XI. Western and TANC will ensure that an archaeologist is available for consultation throughout the construction of the Project.

XII. In the event the Project design is amended after the HPMP is finalized, and the amendment results in the deletion, addition, or rerouting of any portion of the Project, Western will consult with the appropriate SHPO regarding the need for additional historic property identification and evaluation work and that, as necessary, the steps specified in Stipulations I through VI of this Agreement are completed.

XIII. If previously undiscovered archaeological property is encountered during construction, all work that may have an adverse effect on the property will cease until such time as Western and TANC have consulted with the appropriate SHPO to evaluate the property and, if necessary, design and implement mitigation measures. The evaluation of the discovery will occur within 5 calendar days.

XIV. Western and TANC shall ensure that construction contractors are informed that historic properties are located in and near the project area and that these properties are protected by Federal law.

XV. Should Western, TANC, and the California and/or Oregon SHPO be unable to agree upon mutually acceptable programs and approaches for implementing the provisions of this Programmatic Memorandum of Agreement (PMOA), Western will consult further with the Council to resolve issues at dispute in accordance with 36 CFR 800.6(b)(7).

XVI. Pursuant to 36 CFR 800.6(c)(4) if a signatory to this PMOA determines that the terms of this PMOA cannot be met or believes a change is necessary, the signatory shall immediately request the consulting parties to consider whether an amendment of the Agreement is necessary. Amendments will be executed in the same manner as the original PMOA.

L-9 (continued)

Execution of this Memorandum of Agreement evidences that Western has afforded the Council a reasonable opportunity to comment on the undertaking and its effects on historic properties and that Western has taken into account the effects of its undertaking on historic properties.

Historic Preservation Officer
Western Area Power Administration — Date 3/4/86

Chairman, Transmission Agency of Northern California — Date 3/24/86

California State Historic Preservation Officer — Date 3/10/86

Oregon State Historic Preservation Officer — Date 8.11.86

Executive Director
Advisory Council on Historic Preservation — Date 12/10/86

Chairman
Advisory Council on Historic Preservation — Date 12 DEC 86

L-10

EBMUD

EAST BAY MUNICIPAL UTILITY DISTRICT

February 11, 1987

Environmental Coordinator
California-Oregon Transmission Project
P. O. Box 660970
Sacramento, CA 95866

Subject: Draft EIS/EIR for the California-Oregon Transmission Project and the Los Banos-Gates Transmission Project

To the Environmental Coordinator:

A Thank you for the opportunity to review and comment on the subject EIS/EIR. EBMUD is concerned regarding any impact to its Mokelumne Aqueducts which would be crossed by the proposed California-Oregon Transmission Project.

All the proposed California-Oregon routes would require crossing permits from EBMUD. No towers or roads would be permitted on the Aqueduct right-of-way. An additional concern is that alternative route S-8, Alternate 2 passes near ancillary pumping facilities located near Bixler, which are used in extreme water supply emergencies. If this alternative is selected for construction, EBMUD wants to review and provide input to design and construction as it might impact operation of the emergency facilities.

For further information regarding use of the Mokelumne Aqueduct right-of-way and possible impacts to EBMUD facilities, please contact T. J. Rosten, Manager of Water Production Division at (209) 463-2463. For further information regarding this response, please contact Leo O'Brien, Senior Civil Engineer, Water Service Planning (415) 891-0695.

Very truly yours,

C. T. WAY

A The COTP will comply with all applicable permit requirements. EBMUD will be consulted regarding possible impacts to the pumping facilities. The S-8Alt.2 route is not the Project preferred route.

L-11

Executive Department

155 COTTAGE STREET NE . SALEM, OREGON 97310

January 14, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

SUBJECT: California-Oregon Transmission Project
PNRS #: OR861203-010-4

Thank you for submitting your draft Environmental Impact Statement/Environmental Impact Report for State of Oregon review and comment.

A [Your draft was referred to the appropriate state agencies for review. The consensus among reviewing agencies was that the draft adequately described the environmental impact of your proposal.

B [We will expect to receive copies of the final statement as required by Council of Environmental Quality Guidelines.

Sincerely,

INTERGOVERNMENTAL RELATIONS DIVISION

Dolores Streeter

Dolores Streeter
Clearinghouse Coordinator

DS:lh:0793t

A Comment noted.

B Comment noted.

L-13

October 31, 1986
Robert & Clara Robinson
P.O. Box 115
Tulelake, Ca. 96134

To Whom it May Concern,

After 25 years we finally were able to buy a home site such the view we wanted. We've been living here 4 years now. We are very upset by the prospect of the power line living in our view of Mt Shasta, Medicine Lake Highland, Mt. Dome and the Peninsula.

A According to your own practice, you do not want the power line to obstruct Home site views.

B We have noticed that in the Bonanza area you run 3 power lines side by side, Why can't this be done from the Malin substation until the line is out of the Tulelake Basin?

Robert & Clara Robinson

A See response to L-330 F1.

B Locating the three lower voltage lines referred to in this comment within a common right-of-way does not present a risk to the whole Western Systems Coordinating Council (WSCC) system because a simultaneous outage of these three lines would not result in a catastrophic outage. For the COTP line and the existing AC Intertie, this is not the case. See L-179 D for a further explanation.

L-14

WRITTEN COMMENT FORMS
FOR THE DRAFT EIS/EIR
FOR THE
CALIFORNIA-OREGON TRANSMISSION PROJECT
AND THE
LOS BANOS-GATES TRANSMISSION PROJECT

If you have comments on the Draft Environmental Impact Statement/Environmental Impact Report that you would like to have considered by the lead agencies, you can use this form to write them down. This form can be handed in to the court reporter at the meeting, or mailed to the Environmental Coordinator at the address below. Your comments must be mailed by February 3, 1987. Thank you.

MY NAME IS DON HOLCK, I FARM APROX 800 ACRES IN ALAMEDA COUNTY, CLOSE TO THE TRACY PUMPING PLANT OF THE BUREAU OF RECLAMATION. PART OF THE ACREAGE BELONGS TO MY MOTHER, THELMA HOLCK. THIS LETTER STATES HER FEELINGS ALSO.

THE PROPOSED TRANSMISSION LINE WILL GO THROUGH HER PROPERTY, IN ADDITION TO TWO OTHER LINES ALREADY CONSTRUCTED.

A WE ARE VERY MUCH OPPOSED TO ANY NEW LINES TO BE BUILT. THEY ARE A NUISANCE TO THE LAND OWNER AND THE GROWER WHO TRYS TO FARM AROUND THEM. BELEIVE ME, I KNOW, I'VE BEEN FARMING AROUND THEM ALL MY LIFE. BESIDES BEING A HAVEN FOR WEEDS, THE TOWERS ARE A HAZZARD TO EMPLOYEES AND AERIAL APPLICATORS WHO HAVE TO NEGOTIATE THEM EVERY TIME THEY SPRAY. AIR CRAFT ARE SUPPOSED TO FLY

Hearing Date: _____

Location: _____

Name/Address: _____

_____

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

DON HOLCK FARMS
Hay, Grain, Silage
15638 W. VonSosten Road
Tracy, CA 95376
Home: (209) 835-5139
Office: (209) 835-5464
Mobile: (209) 835-1960
Cal 1556

A See response to T-6 F. Farming operations and aerial applications must be accomplished in a prudent, cautious manner when undertaken near overhead power lines of any type. Mitigation measure VI.E.8 in Section 1.1.5, Volume 1 of the Final EIS/EIR states that the COTP will be located in relation to existing lines where practical so as to minimize obstacles to aerial applicators. Wherever possible, efforts will also be made to locate towers to minimize impacts on farming operations.

L-14 (continued)

A OVER THE LINES, BUT IF THEY DID, THE EFFECTIVENESS OF THE APPLICATION OF CHEMICALS WOULD BE MINIMAL. SO THEY IN TURN, FLY UNDER THE LINES, CAUSING EVEN GREATER DANGER.

B I REALIZE YOU ARE PREPARED TO PAY FOR THE USE OF THE PROPERTY, BUT THE FEE I'M SURE WILL BE A NOMINAL PAYMENT WHEN YOU CONSIDER WE WILL HAVE TO PUT UP WITH THESE OBSTRUCTIONS FOR LIFE

MAKING A LIVING AT FARMING IS DIFFICULT ENOUGH NOW WITHOUT THESE PROBLEMS,

C THESE ARE BIG PROBLEMS IN COMPARISON TO OTHERS SUCH AS TV AND RADIO RECEPTION, HUMMING AND STATIC ELECTRICITY THE LINES CREATE AND STORE IN EQUIPMENT PARKED NEAR BY WAITING TO ZAP THE NEXT PERSON READY TO CLIMB ON.

D HAVE YOU EVER CONSIDERED PUTING THE HIGH VOLTAGE LINES ON THE EXISTING TOWERS? EVEN IF IT MEANT REBUILDING OR MODIFYING IT WOULD TAKE UP LESS AREA OF OUR LAND THAT HAS ALREADY DEPRECIATED IN VALUE SINCE THE FIRST SET OF LINES CAME THROUGH.

I HOPE YOU CONSIDER THESE COMMENTS BEFORE YOU MAKE YOUR FINAL DECISION.

DBA DON HOLCK FARMS

B Landowners will be compensated for easements. Appraisals are made to determine the fair market value of the easement by a qualified real estate appraiser. The appraiser analyzes market data and comparable sales and the rights being acquired from the landowner. The landowner has the right to accompany the appraiser. The landowner is then presented with an offer to purchase the easement at its fair market value. Every effort will be made to obtain an agreement which is fair and reasonable.

The landowner usually retains use of the land for agricultural purposes. Also see responses to T-175 A and T-175 D.

C See responses to L-330 G3 and L-330 H3.

D Extensive consideration has been given to placing the new transmission line on the existing towers between the Sacramento River and Tracy Substation. However, if this were done, all three 500 kV AC transmission lines would be adjacent and separated by as little as 162 feet. Several instances in the recent past involving aircraft and/or storms have resulted in the failure of transmission lines that are in proximity. Because of the potential magnitude of a failure that could be caused by the simultaneous outage of all three 500 kV transmission lines, it is important that sufficient separation be provided to prevent such a catastrophe. For that reason, utilizing the existing alignment in this area is no longer under consideration.

L-15

Friday
Nov. 7, 1986

Calif Oregon Transmission Project
Robert A. Olsen
Project Manager Director

Gentlemen:

A We are property owners on Bethel Island in East Contra Costa County. We have learned of the proposed 500,000 Volt powerline from Oregon to Southern California from local people, not receiving a single notice from the Transmission Project nor our county planning department. Now we are told that you have decided that the preferred route is a corridor 1500 feet wide which goes over our property and extends across Taylor Slough. We are appalled at the lack of notice which blocked us from attending hearings and to have an input into the final choice of routes.

We have been property owners on Bethel Island for five years with a Post Office Box and have subscribed to and read thoroughly the Daily Ledger (Antioch), Oakland Tribune (which covers Contra Costa County) and the Bethel Island Beacon and none of these mentioned the power line. Then we found out the Transmission Project put a notice in the Stockton Newspapers, which is in a different county and we know of no one in our area who reads it. We were told that you complied with the law but we believe your minimal notice was deliberately done to eliminate our input.

B We are retired and in the process of building our home, which permits were granted in the past year and not a mention of a power line possibly over our property. Needless to say

C we would not be building if we had known about a power line that would block our view of Mt. Diablo and the Antioch Bridge

A A response was sent to the commentor on November 19, 1986. See also responses to T-152 B and T-152 F.

B The alternative route that crosses this property is not part of the preferred route.

C Because steel lattice structures would be used to support the proposed transmission line, the COTP would be unlikely to actually block views, although it is acknowledged that the alternative routes in the southern section of the COTP would be visible from many locations in the Delta and may intrude on scenic views at these locations, including residential areas such as those on Bethel Island.

L-15 (continued)

humming and radio interference.

The Calif. Oregon Transmission Project report listed several unacceptable places to put the power line and our locality qualifies for several:

1. Blocks a beautiful view.
2. Nuisance of humming in wet weather.
3. Built on unstable ground.
4. Flooded from ground water and seepage
5. Where thousands of migrating birds congregate for a few months on their way south and north.
6. Over and parallel within a few hundred feet of a populated area.

We propose that the power line be put in the existing power line corridor ¼ mile west of us or in the new proposed route east of Bethel Island through ranch lands and non-residential areas.

Sincerely,

Helen Phillips

Gene Phillips

71 Taylor Place
P.O. Box 1089
Bethel Island
CA 94511

c.c. Mike Burke - Energy Resources Regulatory Environmental Coord.
c.c. Tom Torlakson - Supervisor
c.c. Phil Isenberg - Assemblyman
c.c. Dan Boatwright - Senator
c.c. George Miller - Representative
c.c. Constance Brady - P.R.O.P.

D See responses to L-329 C1 and L-330 H3.

E The Draft EIS/EIR acknowledges that all of the alternative routes in the Southern Section of the COTP would be visible and may intrude on scenic views from locations in the Delta, including residential areas such as those on Bethel Island. However, the relative extent of these visual impacts would vary. The COTP routing studies and impact assessments have attempted to compare the relative impacts (including visual impacts) of the alternatives and to reduce those impacts to the lowest practical level consistent with the COTP objectives.

Of the alternatives for the Southern Section of the COTP, Table 1A in the Summary section of Volume 1 of the Draft EIS/EIR indicates that Alternative B would generally be likely to affect views from fewer residences along its centerline than Alternatives A or C. This is consistent with the selection of Alternative B as the Project preferred route in the Southern Section of the COTP.

In addition, the implementation of the visual resources mitigation measures for the COTP (Section 1.1.5, VII., of the Final EIS/EIR) will substantially mitigate visual impacts, as discussed in the Draft EIS/EIR and the response to L-3 B.

The commentor's preference for a route that avoids Bethel Island is noted.

F See response to L-329 C1.

G It is recognized that the ground in some areas of Bethel Island may be unstable. Bethel Island is not part of the preferred route for the COTP. Where unstable ground is encountered along the preferred route, proper engineering design of tower footings will be used with special construction techniques to mitigate the hazard.

H It is recognized that some parts of the Delta experience periodic flooding. The transmission line foundations will be designed to withstand flooding.

I The Draft EIS/EIR addresses the potential impacts of the COTP on migratory birds in the Delta and elsewhere.

J The COTP endeavors to avoid populated areas wherever possible. The preferred route is to the west of Bethel Island.

L-15 (continued)

K The suggested alternative 1/4 mile west has been considered and eliminated because of the need for reliability. To put the COTP next to the existing AC Intertie would result in all three lines in the same corridor. See response to L-14 D.

The route to the east of Bethel Island was considered and judged to be unacceptable because it is subject to more flooding, there is a lack of good access, it appears to be a major waterfowl resource area, and it is more expensive compared to the preferred route. See the Phase II Report in Volume 2A of the Draft EIS/EIR, Section 4.1-4, "Webb Tract Route".

L-17

NINETY-NINTH CONGRESS
MORRIS K. UDALL, ARIZONA, CHAIRMAN
[committee roster]

COMMITTEE ON INTERIOR AND INSULAR AFFAIRS
U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, DC 20515

January 14, 1987

STANLEY SCOVILLE
STAFF DIRECTOR AND COUNSEL
ROY JONES
ASSOCIATE STAFF DIRECTOR AND COUNSEL
LEE McELVAIN
GENERAL COUNSEL
RICHARD ACHEW
CHIEF MINORITY COUNSEL

Robert A. Olson
Project Managing Director
California Oregon Transmission Project
P. O. Box 66970
Sacramento, CA 95866

Dear Mr. Olson:

A I understand the draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) for the California-Oregon Transmission Project is scheduled to be released February 3, 1987. Based on conversations with residents in my Congressional district, and members of Positive Resolution of Power Problems (PROPP), I am writing to request your assistance in extending the deadline for comments on the EIS/EIR by three to four weeks.

This additional time will give my constituents an opportunity to adequately comment on the proposed project. Given the impact which the Project could have on my district, I think this is a reasonable request.

I hope you can give this request your favorable consideration.

Sincerely yours,

George Miller

GEORGE MILLER, Chairman
Subcommittee on Water and Power Resources

cc William H. Clagett
Administrator
Western Area Power Administration
P. O. Box 3402
Golden, Colorado 80401

A The period for receiving comments on the Draft EIS/EIR was extended to March 2, 1987.

L-18

East Bay
Regional Park District

11500 SKYLINE BOULEVARD, OAKLAND, CA 94619-2443 TELEPHONE (415) 531-9300

BOARD OF DIRECTORS
TED RADKE President
LYNN BOWERS Vice President
JOHN O DONNELL Secretary
JAMES H DUNCAN Treasurer
WALTER H COSTA
MARY LEE JEFFERDS
HARLAN KESSEL

DAVID PESONEN
General Manager

January 16, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Subject: DEIR/EIS for the C.O.T. Project DOE/EIS-0128
SCH#85040914

Dear Person:

The EBRPD has reviewed the subject document and offers the following comments about the proposed transmission lines across Jersey Island.

A The EBRPD Board has designated Jersey Island as a potential regional parkland; however, it has not indicated any boundaries for that parkland. The District does not own any property in the Jersey Island area nor has the Board authorized negotiations to acquire any specific property there. Board policy is that any new power transmission lines crossing existing parklands must be underground. Since there is no existing parkland on Jersey Island, the District urges the selection of a power transmission line alignment which will have the least overall adverse environmental impact.

B The EBRPD owns most of the historic coal mining district in the Antioch area. As a point of clarification for your discussion of earth resources (Vol. I, p. 3.1 - 21), the coal resource is essentially "worked out" and has not been mined since about 1906.

The District appreciates the opportunity to review and comment on this project. If you have any questions, please contact the undersigned at 530-9650.

Very Truly Yours,

T. H. Lindenmeyer
Environmental Coordinator

THL:ns
cc: David Pesonen
Bob Doyle
Kevin Shea

A Alternative B in the south was selected as the preferred route because the analysis showed that it had less overall adverse environmental impact than either of the other two southern alternatives (A and C). The potential of a regional park, without any actions by the park district to further it, would not alter that analysis. See response L-307 I for a discussion of the feasibility of underground transmission lines of the size needed for the COTP.

B This comment is noted and the information is incorporated into Section 1.1.3 of this Final EIS/EIR.

L-19

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

A I would like to make the following comments: Get on with the job!

I would like my name removed from the mailing list. Please

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Paul Learner
4 Orinda Way, #210-B
Orinda, CA 94563

A Comment noted.

L-20

MODOC COUNTY
DEPARTMENT OF AGRICULTURE
202 West 4th Street
Alturas, CA 96101

CLINTON B. GREENBANK
AGRICULTURAL COMMISSIONER
SEALER OF WEIGHTS AND MEASURES
AIR POLLUTION CONTROL OFFICER
PREDATORY ANIMAL CONTROL OFFICER
PHONE (916) 233 3939 EXT 401

MARY C. PFEIFFER
AGRICULTURAL INSPECTOR II
PO BOX 222
TULELAKE, CA 96134
PHONE (916) 667-2713

February 9, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Dear Sir,

A I would like to reiterate my objections to routing of the transmission line through agricultural land in Modoc County.

In my opinion, the recognized danger to residents, workers, and agricultural aircraft should, in itself, override any considerations of building on farm land. Add to this the devaluation of property, the difficulty of farming under the lines, loss of productive acreage, visual impact, etc. and it is very difficult to imagine that a decision to site the line through farm land could be made.

B At the public hearing January 5, 1987 in Newell, CA, I testified as to the possibility of the spread of noxious weeds and nematodes by construction equipment. After the construction of the natural gas pipeline through Modoc County several years ago, we discovered on new infestation of nematode (Meloidogyne sp.) and one of a noxious weed (Salvia aethiopis). While there is no way to prove the pests were brought in by construction equipment, the fact they were discovered on the pipeline corridor was suspicious. Nematode pests have little or no effect on rangeland but are impossible to eradicate in farm land and render the land unacceptable for the planting of seed crops. Many noxious weeds can be controlled or eradicated on rangeland but those same weeds cannot be eradicated from farmland because the effective control measures are not registered for use on farmland.

I urge you to seriously consider these points when making your decision.

Sincerely,

Clinton B. Greenbank

Clinton B. Greenbank

CBG:vk

A Comment noted. Efforts have been and will be made to reduce the amount of farm land that is crossed by the COTP. See response to L-330 G.

B Each landowner will have the opportunity during the easement acquisition process to negotiate conditions such as steam cleaning of construction vehicles. This could be required before and after a vehicle entered a field to prevent the spread of nematodes and other pests, and noxious weeds. See also responses to T-6 F and T-16 C.

L-21

State of Oregon Aeronautics Division

3040 25th STREET S.E., SALEM, OREGON 97310 PHONE 378-4880

January 16, 1987

Environmental Coordinator
California-Oregon Transmission Project
P. O. Box 660970
Sacramento, CA 95866

California-Oregon Transmission Project

The Oregon State Aeronautics Division has reviewed the proposal made by the Transmission Agency of Northern California (TANC) to construct a powerline connecting into Southern Oregon. The primary route currently under consideration lies to the east of the City of Malin, Oregon. We wish to propose an adjustment to this route to avoid endangering the traffic pattern of general aviation aircraft using a long-established private airport. We wish to add a further adjustment to the powerline siting so as to avoid a small area of farmlands frequently sprayed by aerial applicators whose operations might be endangered by the positioning of the powerline as presently proposed.

Our records show an airport at the Loveness Farms, three miles east of Malin in the western half of Section 18, Township 41 South, Range 3 East, W.M. This airport has been in existence since prior to July 5, 1947 and has been registered with this Division since 1970. Although private in ownership and use, it is visited by business and pleasure aircraft regularly at the invitation of the owner because of its longer, safer runway than the nearby Malin public-use airport.

A Since its beginning, the Loveness Farms Airport has had uninhibited approach and departure routes to the north and south. The proposed route of the TANC project would angle close on the east edge of the Loveness Airport and cut across the northern approach path very close to the runway. Depending on the decision for actual placement, the powerline could become a hazard eliminating safe use of the northern access to the airport. The long existence and use of the Loveness Airport has earned it prescriptive rights to a safe approach/departure path. We believe the route should be repositioned to the east and north of the proposed alignment.

B A short distance to the northwest of the Loveness Airport, in Section 1, 2 and 12 of Township 41 South, Range 12 East, lie several areas of prime irrigated farmland. These lands require fertilization by aerial applicators (spray planes), but the TANC proposal crosses a portion of the farmlands. If the line is positioned over these lands, safety will be reduced for the aerial

A A route option has been identified that is farther northeast from the airport. This route option, which is labeled North 1 and is presented in the Supplement to the Draft EIS/EIR, has been adopted as the COTP preferred route.

B See responses to L-14 A, L-21 A, and T-175 H.

L-21 (continued)

B applicators attempting to spray the land. By moving the proposed alignment a short distance to the northeast, the margin for safety and the operating area of the spray pilots will be increased considerably.

C Mr. Loren Loveness, owner of the Loveness Airport, has approached us with an alternate proposal for routing the line. His proposal insures safety for the airport and the aerial applicators. We concur with the proposal, which we believe is referred to as the "John Cross Alternate". We believe this alternate route is designed to insure safety to aviation, and we endorse that feature most readily.

Sincerely,

PAUL E. BURKET
Aeronautics Administrator

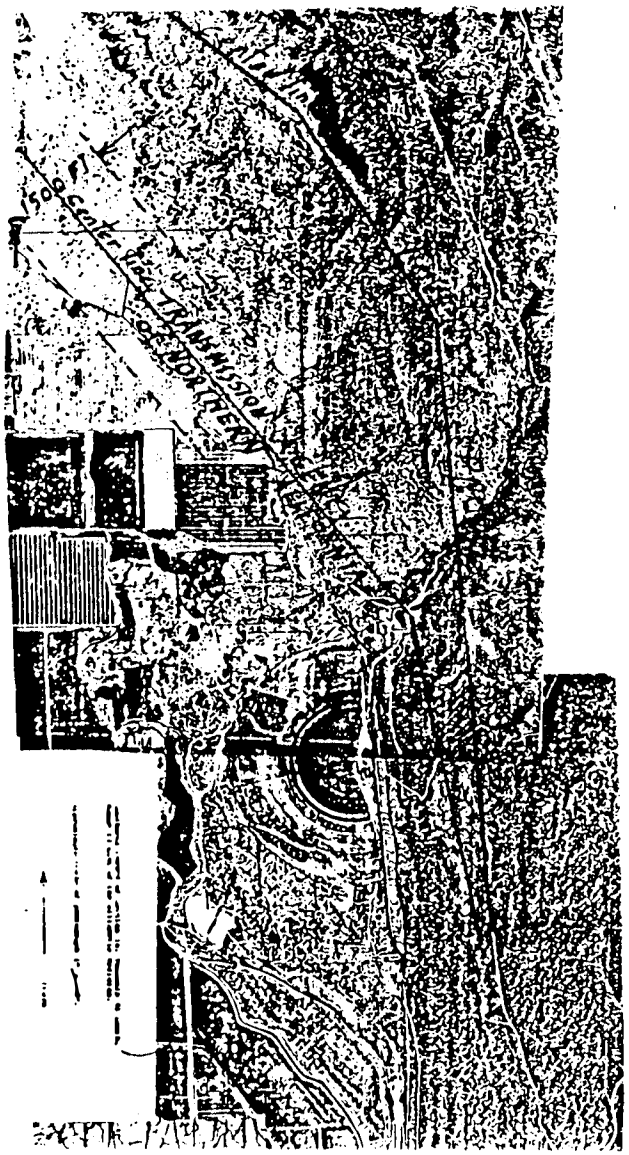
Joseph B. J. Holden
Assistant Administrator
Air Operations and Safety

JBJH:cal/ltre

cc: Oregon Energy Siting Council
Terry Virnig, COTP Siting Committee
Loren Loveness

C Comment noted. See responses to L-21 A and L-330 H.

L-21 (continued)



L-22

Community
Development
Department
County Administration Building
651 Pine Street
4th Floor, North Wing
Martinez, California 945530095

Phone
372-2026

Contra
Costa
County

Harvey E. Bragdon
Director of Community Development

The Transmission Agency of Northern California
James Beck, Chairman
The Western Area Power Administration
William Clagett, Administrator
P.O. Box 661030
Sacramento, CA 95866

Dear Sirs:

A I am writing to support the December 31, 1986 request of P.R.O.P.P. (Positive Resolution of Powerline Problems) for an extension to the period for review of the Draft Environmental Impact Report/Environmental Impact Statement for the California-Oregon Transmission Project.

For the reasons pointed out in the December 31, 1986 letter from P.R.O.P.P., it would seem that the granting of an additional 45 days to review the Draft EIR/EIS would provide interested citizens an opportunity to fully understand the issues involved, to fully evaluate and critique the draft document, and to provide the lead agency with comments which would perfect the EIR/EIS.

Additional review time would also be beneficial to this department, as staff resources are scarce and we would hope to have additional time to perform the detailed type of review for this project which it deserves.

If you have any questions concerning this request, please call.

Sincerely yours,

Harvey E. Bragdon,
Director of Community Development

HEB:db

cc: Positive Resolution of
Powerline Problems
Christine Thresh, Coordinator
Supervisor Torlakson

A Comment noted. The comment period was extended to March 2, 1987.

L-23

Department of Fish and Wildlife

506 SW MILL STREET, P.O. BOX 59, PORTLAND, OREGON 97207

January 20, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, California 95866

RE: Draft EIS/EIR COTP

Dear Sir:

The Oregon Department of Fish and Wildlife has reviewed the above referenced environmental statement.

A The Department supports the Northern Section Preferred Alternative D (Malin route) as having the least impact on Oregon's fish and wildlife resources.

B We have a concern, however, over the general treatment with respect to wildlife impacts and mitigation given to the more recently identified "options within the alternative". More specifically, the possibility of new lines to the east of existing lines (vol. I p. 2.1-19).

C New construction in the area as noted on p. 3.1 - 27, will impact big game winter ranges, raptors, waterfowl and non-game species. A number of mitigation measures identified on pages 5.1 - 12, 13 will have to be applied.

D We look forward to more specific discussions of impacts and mitigation to be applied in the Compliance Monitoring Plan during the Project Design phase.

For site-specific information regarding the above, please contact local Department biologists noted below:

Ralph Opp/John Toman
ODFW
4343 Miller Island Road
Klamath Falls, OR 97601
Phone - 883-5732

Sincerely,

Michael C. Weland
Assistant Director
Habitat Conservation Division

c Central Region
Opp/Toman
Savage - DOE
Coenen/Faast

A Your support for the Preferred Alternative D is noted.

B Your concerns are noted regarding route options to the east of the preferred route. An option known as the Copic Bay option was analyzed in the Draft EIS/EIR and was found to potentially cause greater impacts to deer and other wildlife. Another option, the North 1 option, was analyzed in the Supplement to the Draft EIS/EIR.

C The COTP is committed to applying identified mitigation measures in areas where impacts to wildlife are found to be significant. Mitigation measures can be found in Section 1.1.5 of this Final EIS/EIR.

D Comment noted. The Oregon Department of Fish and Wildlife will be consulted on applicable portions of the Mitigation and Compliance Monitoring Plan.

L-27

Transmission Agency of Northern California
P.O. Box 661030
Sacramento, CA 95866

Dear Ladies and Gentlemen:

A The Klamath Group of the Oregon Chapter, Sierra Club has been opposed to the construction of an additional power line from the Northwest to California since the project was

B first proposed. The power line will be completed at about the same time that the present power surplus will be depleted, resulting in the need for more power generating facilities in the Northwest.

Since we were opposed to the transmission line in general we have not previously taken a position supporting or opposing any of the proposed routes. With the selection of the preferred route in the Malin-Tulelake area, opposition has been raised to a segment of the route near

C Newell. We believe that the proposal made by Mr. John Cross, to shift the transmission line from the agricultural land near Newell to range land east of Newell, is

D reasonable and should be given careful consideration. Transmission lines should not be placed across agricultural land when alternatives such as this are available.

Sincerely

William M. Wood

William M. Wood, Chairman
Klamath Group, Sierra Club
P.O. Box 1774
Klamath Falls, OR 97601

A Your opposition to the COTP is noted.

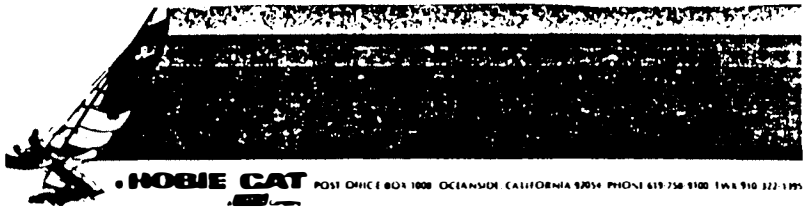
B The current firm power surplus is in the Northwest and the possibility that it may be declining demonstrate the prudence of building the COTP on the planned schedule. The benefits of the COTP, however, do not depend on continuation of the current firm power surplus in the Northwest. Additional benefits come from (1) power available when river flows are better than critical dry conditions used for planning, (2) the fact that California has its highest power demands in the summer whereas the Northwest has its highest demands in the winter, and (3) the fact that generating resources added in the Northwest to meet energy load growth will provide ability to meet peak demands in excess of the peak loads in the Northwest. No resources must be built in the Northwest for the purpose of making power available to sell in California.

See response to L-3 T for a more complete discussion.

C The Copic Bay option, an alternative similar to the John Cross alternative, is identified and presented in the Draft EIS/EIR. See responses to L-330 H and T-10 F.

D The COTP routing guidelines included concerns for land use in that the crossing of highly productive agricultural land would be minimized. These guidelines were adhered to whenever possible. However, in some locations, factors such as reliability considerations or other environmental resource constraints were such that agricultural lands could not be totally avoided. See also response to L-330 G.

L-28



HOBIE CAT POST OFFICE BOX 1000 OCEANSIDE, CALIFORNIA 92054 PHONE 619 758 9100 TWX 910 322 1195

I.D. CAMPBELL, PRESIDENT & GENERAL MANAGER

November 15, 1986

S. Harvego, Eng. Consultant
Transmission Agency of N. California
1010 Hurley Way
Sacramento, Ca 95825

RE: Hobie Comptip™ Sailboat Mast

Dear Mr. Harvego:

A I personally wrote to your company on October 1, 1979 and again on October 1, 1982 regarding the potentially catastrophic accidents that can occur when a sailboat mast contacts an electrical power line. These letters were an appeal on behalf of sailors of all types of sailboats for utilities to survey their line heights over and near water and launching sites to ensure that the lines at least met the minimum requirements of the current National Electrical Safety Code.

Quite frankly, the responses to our earlier letters were decidedly mixed. The ones we liked best thanked us for bringing this safety matter to their attention and assured us that their systems would be reviewed and changes made as necessary. Some utilities even worked with us on additional warning programs for our mutual customers.

We also received responses that said that the problem was ours--not the electrical utilities'. They recommended grounding, different materials, banning sailboats, and so on. We tried to respond to these replies by telling the writers about our already-existing warning programs and the work we were doing in R&D to solve--or minimize--the danger of a mast striking a power line. We did say then that we had no answer--it was a mutual industry problem--and that the only practical solution we knew of was to totally avoid contact between the mast and the electrical line.

One of the purposes of this letter is to advise you that the R&D work we have done over the past nine years has borne fruit. We do have a solution that greatly minimizes the danger that exists when a sailboat mast inadvertently contacts a low overhead power line. We call the solution the Comptip™ mast.

A The minimum conductor to ground clearances will typically be 50 feet above sea level for the new line in the Delta south of the Sacramento River.

L-28 (continued)

Comptip™ is a compression-molded upper mast section made of electrically non-conductive materials that replaces the aluminum extrusion. We were able to accomplish the redesign of the upper mast with virtually no weight gain in this critical area.

We are presently installing the Comptip™ mast on most of our boat models at the factory. We plan to install the Comptip™ mast on all our sailboats under 20 feet LOA just as soon as we can complete the design, tooling and production jigs.

Further, we are offering to all existing owners of our products a no-charge retrofit of their all-aluminum masts to bring them to the Comptip™ mast configuration. Enclosed is a copy of the letter making this offer.

The additional reason for this letter is to stress that while we feel the Comptip™ mast is a significant breakthrough in sailboat safety, there are limitations to the effectiveness of electrical insulators in the marine environment. The only sure protection to the user of any sailboat--even one equipped with the Comptip™ mast--is to avoid contact between the mast and an electrical power line. Your help is still needed to stop power line accidents. Here are some suggestions:

1. Warnings and notices enclosed with monthly bills;
2. Display booths at boat shows in your service area;
3. T.V. and radio public service messages.

The reality is that most sailboats will continue to have all-aluminum masts. No matter how successful our program to put Comptip™ masts on Hobie and Holder products, these boats still represent only a small percentage of the total number of sailboats in use. We are encouraging other sailboat manufacturers to use the new technology we developed; some will not. Additionally, we doubt that many other sailboat companies will undertake the extremely costly job of retrofitting the masts on boats they have already produced.

We have responded to the safety danger of a sailboat mast striking a power line. We will continue our efforts to warn and educate all sailors of the continuing danger. We feel strongly that you have a great responsibility in this safety area that also demands your action. Only then will we have substantially eliminated sailboat/power line accidents.

Very truly yours,

DOUG CAMPBELL

IDC/kh
enclosure

L-30

MERDLYN ROAD
BYRON, CALIFORNIA
(209) 835 5827

EASTIN ROAD
NEWMAN, CALIFORNIA
(209) 862 2254

SHELDON G MOORE
ROUTE 1, BOX 8
BYRON, CALIFORNIA 94514

California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Nov. 17, 1986

Dear Project Director:

A We want you to know that we most strongly oppose any encrochment on our property on Clifton Court Tract, (Map designation S-3J).

We learned of this project November 5, 1986, and have just returned to California after a scheduled trip.

B This ranch has been brutally attacked in the past by various agencies. It has been condemned on the North and South. It has fourteen steel transmission towers and twenty nine wooden poles used to transmitt electricity to others.

We will do everything within our power to keep your project off our property. We have sacrificed enough.

C I suggest that any route in the Clifton Court area be limited to land already owned by the State of California.

A Comment noted.

B Comment noted.

C See response to L-193 B.

Sincerely

Sheldon G. Moore

L-33

January 29, 1987

ENVIRONMENTAL COORDINATOR
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Dear Mr. Beck,

A I have received the copies of the EIS/EIR and find them of great interest and a very good job of research on the project. It took me some time to digest all eight volumes, but was well worth it.

B I am relieved to see that a decision has been made to exercise the Eastern route and do hope that the commission can find a way to keep the towers out of the farmlands around Tulelake and Malin.

If any further research is needed on the project, I would appreciate receiving a copy of same. Thanks,

Sincerely,

Norman E. Flock

Norman E. Flock
P.O. Box 7
Montague, CA. 96064

A Comment noted.

B Comment noted. See response to L-330 G.

L-39

Timberlands
P.O. Box 6034
Redding, California 96099
Region 916 222-2311
District 916 222-2282

Champion
Champion International Corporation

January 16, 1987

California-Oregon Transmission Project
P. O. Box 660970
Sacramento, California 95866

Gentlemen:

A Consider this letter a formal request to extend the comment period for the TANC EIS/EIR by an additional two months.

B I feel this extension is justified in light of the following:

1) There were only three or four weeks available for studying the documents under the current schedule.

2) The sheer volume of material, 17 pounds to be specific, cannot be analyzed with any degree of accuracy in such a short period.

3) The complexity of the documents which range from the environmental to the economic necessitates closer scrutiny.

4) The time of year the documents were issued, early winter, negated any possibility of field checking your statements.

I hope you grant this request in the interest of adequate assessment that cannot be accomplished under the above restrictions.

Sincerely,

Ron Berryman
Area Forester

A Your request is noted. The comment period for the Draft EIS/EIR was extended by one month.

B Comments noted.

L-39 (continued)

cc: Mike Burke
Regulatory & Environmental Coordinator
Public Utilities Commission
Energy Resources Branch
1107 - 9th Street, Suite 710
Sacramento, CA 95814

Robert Bellamy - Champion International Corporation

John W. Reese, Jr.
SHADWELL & REESE
P. O. Drawer 4647
Redding, CA 96099

The Honorable John T. Doolittle
State Capitol
Sacramento, CA 95814

The Honorable Stan Statham
State Capitol
Sacramento, CA 95814

L-41

Neumiller & Beardslee
A PROFESSIONAL CORPORATION
ATTORNEYS AND COUNSELORS
FIFTH FLOOR WATERFRONT OFFICE TOWER II
509 WEST WEBER AVENUE
STOCKTON, CALIFORNIA 95203
(209) 948-8200

MAILING ADDRESS
PO DRAWER 20
STOCKTON, CALIFORNIA 95201-3020

ROBERT L BEARDSLEE
THOMAS J SHEPHARD SR
DUNCAN A MCPHERSON
RUDY V BILANSKI
ROBERT C MORRISON
JAMES R DYKE
JAMES A ASHEW
JOHN W STOVALL
STEVEN A HERUM
LESLEY D HOLLAND
JACK B JOHAL
RICHARD M ARCHBOLD
C DAVID MURST
PAUL N BALESTRACCI
STEVEN D CRABTREE
MICHAEL J DYER
GERALD L HOBRECHT
DEMETRA N DEDES
JEANNE ZOLEZZI

REFER TO FILE NO

November 26, 1986

California-Oregon Transmission
Project
Post Office Box 660970
Sacramento, California 95866

Re: Opposition to Project

To Whom It May Concern:

A — This office represents the landowners of Coney Island, an island in the Delta generally located in Contra Costa County. Although the proposed transmission line goes across Coney Island my clients, Mr. and Mrs. Speckman, have yet to receive notification of any opportunity to comment on the project or the course of the transmission line.

Please be advised my clients are inalterably opposed to the transmission line being constructed across their property and will vigorously take all legal steps necessary to prevent the taking of their real property. You must understand that

B — Mr. and Mrs. Speckman are in the process of planning to construct a residence on the island and the transmission lines

C — will not only destruct cropping patterns it will also be an

D — aesthetic monstrosity. As a result, they have a very real and vital interest in this project. In short, my clients

E — oppose the taking of their property for this transmission line.

F — In this connection please provide me with the following information:

1. The true and correct copy of the draft EIS/EIR;

2. A true and correct copy of the final EIS/EIR;

3. A true and correct copy of the record decision; and

A A response was sent to the commentor on December 11, 1986.

B Every effort will be made to avoid home areas when the final alignment is determined. In the event that a home cannot be avoided, property owners will be compensated for their losses. See Volume 1 of this Final EIS/EIR, in Section 1.1.5, Mitigation, under the subheading Socioeconomics.

C We agree that it is possible for cropping patterns to be disrupted to some degree by transmission line towers. Irregular furrows are sometimes created around the tower base, and extra maneuvering time is often required for tractor operations. The placement of a tower in relation to a field boundary can have a mitigating effect on the disruption to cropping patterns, depending on the type of crop and irrigation practices used. These potential impacts are discussed in Section 3.6.2.2 in Volume 2A. The document "Geothermal Public Power Line NOI Resources Testimony - Agricultural Resources" is a study by Resources International (1985) that has been used as a general reference for discussion in the Draft EIS/EIR (Section 3.6.2.2 of Volume 2A) of impacts on cropping patterns and irrigated agriculture. The document also provides additional information on the impact of transmission lines on agriculture in general.

L-41 (continued)

D See response to L-15 E.

E Comment noted.

F A response was sent to the commentor on December 11, 1986.

L-41 (continued)

F

4. A true and correct copy of the Notice of Determination as filed by the lead agency.

Thank you very much for your consideration of this matter. I would respectfully ask that I be given copies of any and all future notifications to landowners and the general public with respect to this project.

I would also appreciate receiving all pre-EIR/EIS economic studies or other studies concerning the location of the transmission line.

Very truly yours,

Steven A Herum

STEVEN A. HERUM
Attorney at Law

SAH/tc
cc: Mr. Herb Speckman

L-42

P. O. Box 375
2601 Sleepy Hollow Road
Dorris, CA 96023
February 25, 1987

The California-Oregon Transmission Project
P. O. Box 660970
Sacramento, CA 95866

A This letter is written in protest to the COTP being considered for construction in Siskiyou and Modoc Counties, California and specifically, the Butte Valley areas of Dorris and Macdoel.

Our objections have been previously stated in our letter written to your organization last summer.

We are firmly opposed to the construction of the powerline in Northern California.

Yours truly,

Richard K. Jermane

Richard K. Jermane

Donagene Jermane

Donagene Jermane

dj

A Your opposition to the construction of the COTP in Northern California is noted.

L-44

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments: We object to the transmission line alternative routes B and C as they appear to pass near our property at Antelope Creek and would be a hazard to the air strip we plan on putting in in the near future. We hope you will use the preferred route.

A

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

TOMASELLI, RICHARD & GLENDA
5933 CHABO CREST
OAKLAND CA 94618

A The Alternative D in the north is the preferred route because it had less overall adverse environmental impact than Alternatives B or C. Your concern involving the proposed transmission line and the planned airstrip is noted.

L-45

Wm. E. (Bill) Kennett
Geologist
Petroleum & Water Resources
Geologic Hazards

March 9, 1987

RE: Redding Substation

California Oregon Transmission Project
P.O. Box 660970
Sacramento, CA. 95866

Attn: Rick A. Lind:

Thank you for sending copies of the Draft EIS/EIR Volume 1 and Volume 3A. Your transmittal dated 2-24-87, accompanying Copy #848 indicated that "information on the substation sites is presented in Vol 1, Sec 2.1.2.". The copy I received is missing section 2.1.2. It shows Sec. 2.1.1 then 2.1.3. Please send me copies of Sec. 2.1.2. which contain information of the substation sites.

A

B

In a cursory reading of Vol. 1 and 3A, I have several concerns. Sec. 2.1.9, Vol 1 indicates that the preferred site for the Olinda sub-station is GP4, which lies on the property of my client, Mr. I. E. Johanson (1768 West Street, Redding, CA). Vol. 3A Sec. 3-15 recites that GP4 is located 500 feet south of Gas Point Road. Figure 2.1.5B indicates the 1500' x 2000' (69 acre) site leaves a narrow useless corridor between it and the west line of my client's property.

C

In light of the above, I request that before a final decision is made on the 'Olinda' site that the property owner's imput be considered. When your people arrange for a meeting with Mr. Johanson to discuss site GP4, please arrange for 30 days notice to Mr. Johanson and to me.

Sincerely,

Wm. E. Kennett

cc. Mr. I. E. Johanson
1768 West Street
Redding, California

Mr. Franklin Cibula
Redding, California

A A telephone conversation confirming the completeness of the commentor's copy of Volume 1 of the Draft EIS/EIR was held with the commentor on March 24, 1987. A follow-up response was sent to the commentor on April 28, 1987.

B Mr. Johanson has been contacted by the Western Area Power Administration concerning the location for the Olinda Substation. Western continues to coordinate with Mr. Johanson to resolve any concerns he may have concerning the Olinda Substation site.

C See response to L-45 B.

L-46

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the followin comments:

A [I feel the Preferred Route as shown in this flier would be the most satisfactory for the environment, farmers, wildlife, Sacred Indian Grounds and many other reasons.

I would like my name removed from the mailing list.

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

[illegible] Sylva
11[illegible] Sylva Rd.
Montague, CA 96064

A Comment noted.

L-52

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A NO ONE HERE WANTS YOUR DAMN TOWERS AND HIGH VOLTAGE WIRES RUNNING THROUGH OUR PARADISE. PLEASE TAKE THOSE DUMB THINGS SOMEWHERE ELSE! LIKE ALONG A FREEWAY BECAUSE NO ONE CARES WHAT THE FREEWAYS LOOK LIKE ANYWAY — BUT DON'T RUIN THE DELTA!

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Michael Shaw
Route 2, Box 319
Oakley, CA 94561

A In identifying alternative route segments, the COTP study team attempted to reduce the visual exposure to sensitive viewer groups as much as possible. These groups included residents, persons engaged in recreation, and persons engaged in recreational travel (often, the same persons during different portions of the day). The alternative route segments through the Delta were laid out to avoid major travel routes, as well as residential areas, wherever possible. However, the commentor's preference for a route that would avoid the Delta entirely is noted.

L-53

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A Run the lines up Hwy 4, we don't need or want ~~running~~ high power lines running across or around Bethel Island.

B We have enough problems with the danger of levees breaking and flooding. I do not want an over head hazard added. You could say they are for emergency's, I saw towers blown down in the Alaska Earthquake 10 years ago.

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Daniel H. Muir III
PO Box 221
Bethel Island, Ca.
94511

A The Preferred route has been identified to the west of Bethel Island.

B Most of the existing lines in California were designed strictly in accordance with the State of California Rules for Overhead Electric Line Construction, General Order No. 95. This regulation does not specifically recognize the need for special design considerations for locations where extreme wind and/or icing conditions may occur. Much experience has been gained since many of the earlier lines were built. In preparation for the construction of the new line, special weather studies are being made for locations along the preferred route in order to identify areas where unusual weather-related problems can be expected. Consequently, the COTP will be designed to withstand predictable extreme weather conditions.

L-54

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A Your Dec 5 letter received - we go along with your preferred alternative 4 Supply pipe to Redding Route - Keep it all in one place - instead of taking up more landscape in new area.

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Mr. & Mrs. Robert Hogan
19020 Highway A-12
Montague, CA 96064

A Comment noted.

L-55

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A In Sacramento recently I parked directly under transmission lines because they go right through a shopping center.

B I like hunted fields around Byron over which power lines run, and the hunting is just as good there as elsewhere.

I would like my name removed from the mailing list.

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

C I've lived in Byron thirty years and you can route the lines through my yard if you like. The people who don't want to be anywhere near transmission lines should be barred from complaining when there are shortages in the future and their appliances can't be used.

P M BYRNE
P O BOX 181
BYRON CA 94514

A Comment noted.

B Many activities can be pursued under and around high voltage transmission lines which are consistent with safe operation of the line.

C Comment noted.

L-65

December 15, 1986

California-Oregon
Transmission Project
P. O. Box 660970
Sacramento, CA 95866

Ladies and Gentlemen:

I recently received my first issue of your newsletter of December 1986, issue eight, giving some information about your California-Oregon Transmission Project. Shortly thereafter I received a call from your Realty Specialist from Sacramento, to whom I gave permission to enter my farmland to study possible routes for this Project.

I want to enter my opinion in writing before I attend the January public meeting in Brentwood. My opinion is, after

A studying Figure 2.1-9 of the Southern Section Alternatives and Options, that your Project should only use Alternative Route C and bypass my Orwood Tract and Bixler ranches, as I believe

B Discovery Bay should be left alone to preserve the character of this development. I also suggest another Alternative, and that is to parallel the Sante Fe Railroad along the Palm Tract before heading south on Woodward Island.

Please keep my name on your mailing list and also consider this and any other objections carefully and fairly.

Very truly yours,

Edna M. Fallman

Edna M. Fallman
Owner
#015-160-001-2
#011-240-001-5
#015-160-002-0
#015-180-007-5

A Your preference for the Southern Section Alternative Route C is noted.

B Paralleling the Santa Fe Railroad along Palm Tract was considered under route Segment S-8G. Although agricultural operation impacts would be less with this segment, land use impacts would be increased. Segment S-8G with Segment S-8I accomplish the same routing requirements as Segment S-8H. Segments S-8G and S-8I impact 4.5 miles of irrigated row crop land including an agricultural preserve, but S-8H impacts 3.5 miles of irrigated row crop land. Segments S-8G and S-8I for the life of the project have an estimated long-term agricultural economic effect of $198,000 and an estimated short-term agricultural economic effect of $14,000 whereas Segment S-8H has an estimated long-term agricultural economic effect of $142,100 and an estimated short-term agricultural economic effect of $10,100. Segment S-8G has one residence located within the reference centerline right-of-way; S-8H has none. Although Segment S-8G parallels the railroad and appears to have less of a land use impact, when comparisons are made, including effects of Segment S-8I, it has more land use impacts than does Segment S-8H. Further, because Segment S-8G would result in a longer segment and require an additional angle structure, it would have greater construction cost. For these reasons Segment S-8H was selected over Segments S-8G and S-8I.

L-70

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A DOES THE PROJECT LEASE RIGHT OF WAY LAND FOR, TREE FARMS, FISH FARM OR NON INHABITED WAREHOUSES?

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995

ATTENTION
LARRY MOIR

SILVIERA, J. W. & BARBARA O.
499 EMBARCADE RD.
OAKLAND CA 94606

A A response was sent to the commentor on December 12, 1986.

L-78

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A 1. The draft EIS/EIR does not prove that this project is really needed.

B 2. Was there ever a plan to upgrade the present route? Is there a possibility of doing this?

C 3. Why not route the Sacramento River further north and route the project much more to the east of the presently ~~[illegible] my name removed from the mailing list.~~ projected route?

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Cynthia Burroughs Hummel
P. O. Box 116
Knightsen, CA 94568

A See Appendix B to Volume 3A of the COTP Draft EIS/EIR, responses to L-306 (comments from the California Public Utilities Commission), and responses to L-344 (comments from the California Energy Commission).

B The plan for the COTP includes upgrading the existing Western Area Power Administration double-circuit Shasta-Tracy/Cottonwood-Tracy 230 kV transmission line to become the COTP 500 kV transmission line for approximately 170 miles of its total length. For the area south of the Sacramento River, it will be constructed on a new right-of-way east of the existing AC Intertie lines to provide separation for reliability. Upgrading the existing AC Intertie for its entire length between Oregon and Tesla Substations was also studied as described in Section 10.2 of Appendix B of Volume 3A to the COTP Draft EIS/EIR, page 101. Also see response to T-70 B.

C A primary feature of the COTP is the planned use of the existing Western 230 kV lines from near Redding to the Sacramento River. This includes the use of existing towers for crossing the Sacramento River to avoid establishment of a new crossing of the river. A route to the east of Bethel Island was considered earlier in the process. See the Phase II Report in Volume 2A of the Draft EIS/EIR, Section 4.1-4, "Webb Tract Route."

L-79

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A We urge that alignment be situated on marginal lands where it will not impact quality productive timberlands.

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you

HEARST CORPORATION
200 HEARST BLDG.
SAN FRANCISCO CA 94103

A Comment noted. Wherever possible, productive agricultural and timber lands have been avoided by the preferred route. Changes in the preferred route since the Draft EIS/EIR have resulted in a reduction of impacts to prime timberland. See Table 1B in the Summary of Volume 1 of this document for a description of the changes.

L-87

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

A I would like to make the following comments: Rates should not be increased for residential use, especially for retirees on fixed income. Farmers - ranchers get a higher price for their products every year, so do the timber companies.

A For a discussion of rate impacts of the COTP, see response to T-126 A. The costs and benefits of the COTP will be passed to the customers by the individual utilities according to their individual conditions.

L-89

CALIFORNIA OREGON TRANSMISSION PROJECT

P.O. Box 660970, Sacramento, CA 95866 (916) 924-3995

Already sent notice one notice of address change Do same again!

A Really support the Main "D" into Oregon & "B" in Calif.

MEMORANDUM

TO: Interested Persons December 5, 1986

FROM: Robert A. Olson, Project Managing Director

SUBJECT: DRAFT EIS/EIR FOR CALIFORNIA-OREGON TRANSMISSION PROJECT AND LOS BANOS-GATES TRANSMISSION PROJECT: ROUTES UNDER CONSIDERATION FOR THE CALIFORNIA-OREGON TRANSMISSION PROJECT

1/5/87 *

Please note address change & you're sending out 3 each Name & Address

The December 1986 issue of the California-Oregon Transmission Project (COTP) newsletter was recently mailed to interested persons and organizations. The newsletter invited public review of the Draft Environmental Impact Statement/ Environmental Impact Report (EIS/EIR) for the COTP and Los Banos-Gates Transmission Project. The newsletter also included a map insert identifying a preferred transmission line route for each of the projects.

Attached for your information are more detailed maps of the northern and southern sections of the COTP study area that show the preferred route and alternative routes and the optional route segments upon which the transmission line may be built. The maps are the same as those presented in the Draft EIS/EIR, and should be used to identify route segments more precisely than the maps included in the newsletter.

More detailed maps of the two project study areas are contained in the Draft EIS/EIR.

Attachments

A Comment noted.

L-90

Delta Coves

December 6, 1986

California Oregon Transmission Project
P. O. Box 660970
Sacramento, CA 95866

RE: SOUTHERN SECTION ALTERNATES & OPTIONS - FIGURE 2.1-9

Gentlemen:

A This is to inform you that Alternate Route C of the above referred transmission route through Bethel Island will adversely affect the Delta Coves waterfront residential development situated between Gateway Road and Stone Road to the east of Bethel Island Road extending to Piper Road extension.

Said alternate route will be routed exactly over the waterway entrance to the Delta Coves project and therefore render the development impossible.

Delta Coves has been in the permit process since 1973 with prior approvals from 1964. In 1976 rezoning was obtained for the the construction of some 560 residential units surrounding a 150+ lagoon with access from Sandmound Slough.

At the present time, said rezoning is in litigation due to exorbitant Contra Costa County demands introduced at the final moment after full compliance with some initial 29 conditions for approval.

Attached is a copy of the development plan so that you can readily evaluate the extent of lost profits which would be involved in any condemnation litigation or settlement.

B In addition, Alternate Route C will also impact a similar project scheduled for the westerly side of Bethel Island Road. I am certain that you will be hearing from that organization as well as others.

C I herewith request notices of all hearings, copies of all relevant material, and all EIR submissions.

Very truly yours,

L. E. Weisenburg, Jr.
General Partner

A Comment noted. The preferred route passes to the west of Bethel Island.

B Comment noted. The preferred route passes to the west of Bethel Island.

C A response was sent to the commentor on December 22, 1986. Delta Coves has been added to the mailing list.

L-91

12/9/86

California Oregon Transmission Project
P.O.Box 660970
Sacramento, Ca. 95866

Dear Mr.Olson:

Just received your memorandum dated 12/5/86. The first I have heard of your intentions.
My property, parcel # 032-082-009, is located at 5551 Bethel Island Rd., Bethel Island, Ca. 94511 and consists of 8 Ac.
From the map received, with above memorandum, it appears as if your preferred route "B" would cross my property.

A This property was purchased 17 yrs ago to produce an income for my retirement and a business for my children. A transmission line across this small parcel would severely restrict its use and make it practically wortless.

B To route a transmission line through a populated, scenic area, containing small parcels of land, rendering them esthetically unacceptable and

C offensive also severely restricting them as to use and value, seems plain stupid or is it bureaucratic arrogance?

D Your choice of route seems even more absurd, since just a few miles away, on the east side of Franks Tract, there is an abundance of empty farmland, through which a line would do no harm.

Under no circumstances will I agree to an easement through my property and I will fight you till hell freezes over.

Most Sincerely,

Lars T. Delin
36 Broadmoor Ct.
San Ramon, Ca. 94583

A The Bethel Island route is not part of the preferred alternative because of the potential for substantial residential, commercial, and recreation impacts. The preferred alternative crosses Jersey Island and Dutch Slough. Commercial, residential and productive agricultural lands were avoided whenever possible, given engineering and environmental constraints. See also responses to L-184 A and T-82 C.

B See response to L-15 E.

C See response to L-91 A.

D Routing the line along the east side of Franks Tract would require the crossing of Webb Tract. The crossing of Webb Tract was eliminated as an alternative route for reasons given in Section 4.1.4 of Volume 2A of the Draft EIS/EIR.

L-96

TO: ROBERT A OLSON, PROJECT MANAGER 12-10-86

FROM: H. JOHN BLOOMFIELD
4955 DISCOVERY PT
BYRON CA 94514
(415) 634-4009

SUBJECT: LOCATION OF PREFERRED ALTERNATIVE (B) IN RELATION TO PROPERTY UNDER OUR OWNERSHIP.

IT APPEARS THAT ROUTE (B) MIGHT PASS THRU A PORTION OF OUR PROPERTY DESCRIBED AS FOLLOWS:
THE NORTH EAST PORTION OF SECTION 11, T1N-R3E LOCATED ABOUT ONE MILE NORTH OF ORWOOD ROAD IN THE BRENTWOOD AREA. THIS AREA INDICATED ON THE ENCLOSED MAP.

A WE FEEL THAT A SLIGHT EASTERLY MOVE OF THIS PROPOSED LINE WOULD ELIMANATE THE NEED OF ANY OF OUR PROPERTY. THIS PARTICULAR AREA HAS LONG BEEN A POTENTIAL SITE OF A MARINA OR DEVELOPMENT OF THAT TYPE. THE POWERLINE RIGHT OF WAY WOULD ALL BUT ELIMANTE THOSE PLANS.

PLEASE GIVE YOUR CONSIDERATION TO OUR PROBLEM.

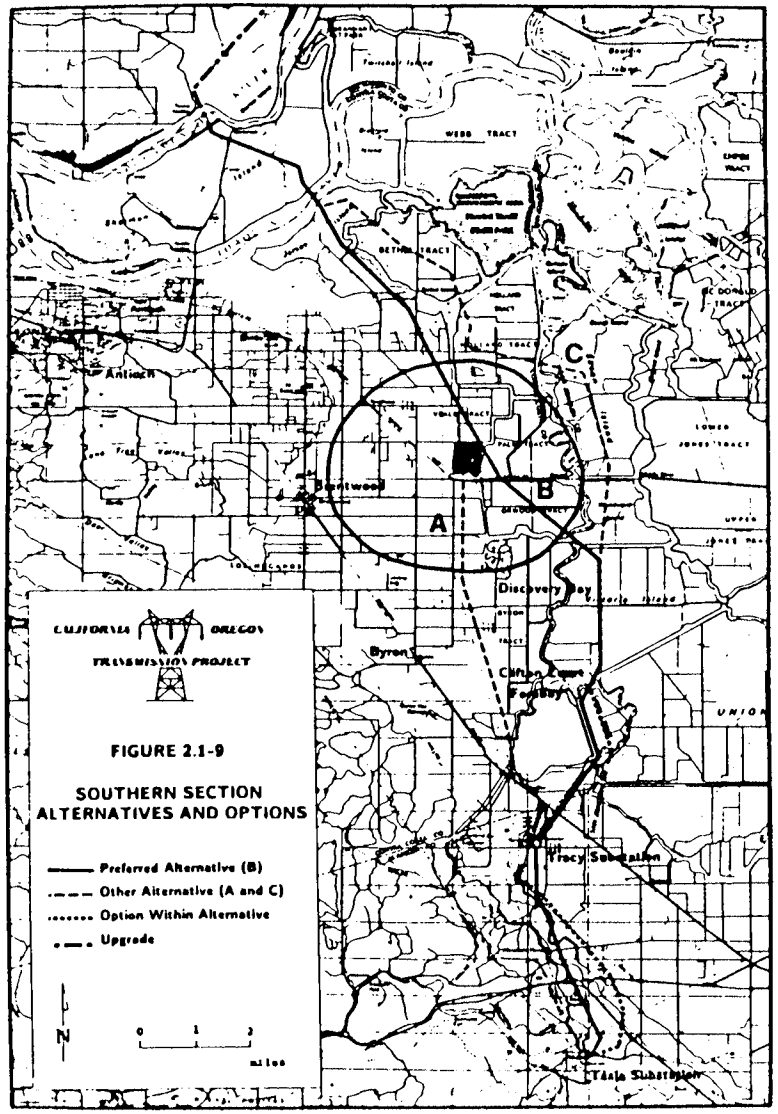
THANK YOU

H JOHN BLOOMFIELD

A It is intended that the selection of a 200-foot wide easement within the 1,500-foot wide route will allow further avoidance of environmental and property impacts. Suggestions by individual landowners will be carefully considered during the final design process and selection of a proposed easement.

The South 1 route option addressed in the Supplement to the Draft EIS/EIR would completely avoid the indicated property. The South 1 option has been adopted as the preferred route.

L-96 (continued)



L-97

December 10, 1986

Robert A. Olson, Project Managing Director
California-Oregon Transmission Project
P.O. Box 660570
Sacramento, CA 95866

Dear Mr. Olson:

A As owners of a 91-lot subdivision at the end of Sandmound Boulevard, Bethel Island, we strongly oppose your Route B proposed power line, which would pass over the corner of our recently approved subdivision #6610, CCC.

We are prepared to make vehement and exhaustive sacrifices, legally and publicly, to oppose the 6 route proposed in your plan.

Sincerely,

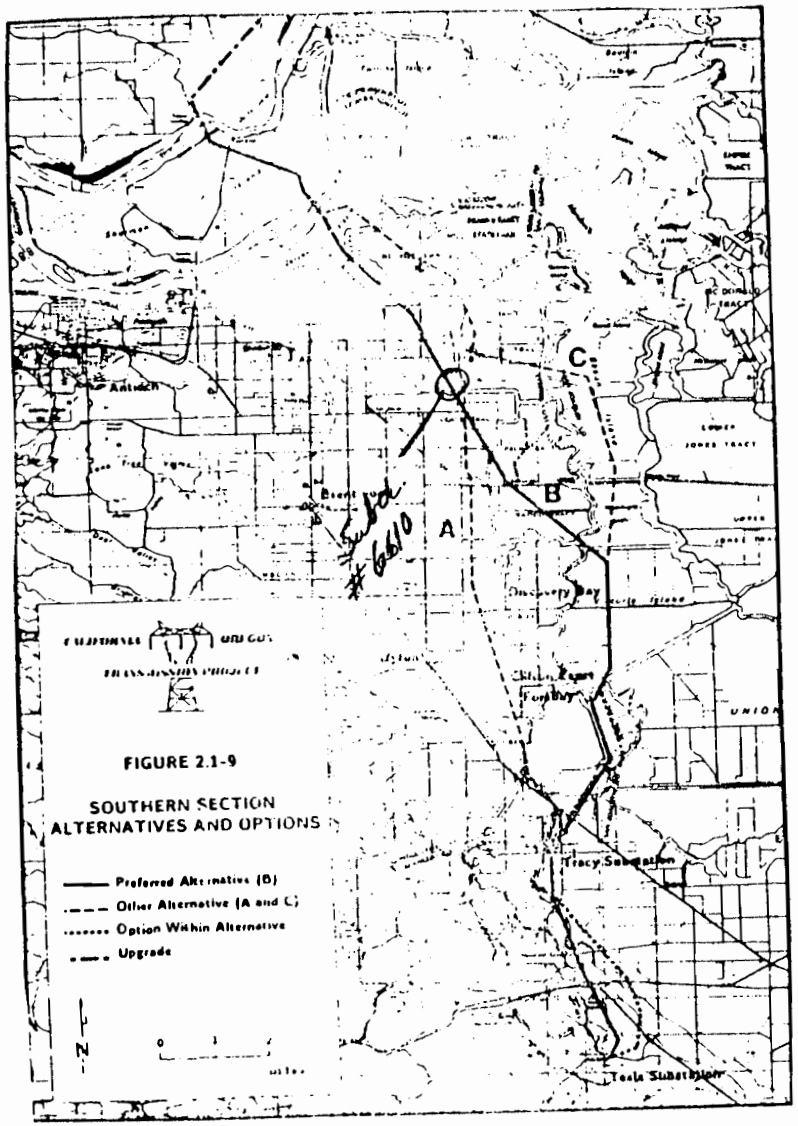
James W. Bones
General Partner
Sandmound Investors
Lone Star Developers, Inc.
P.O. Box 5043
Walnut Creek, CA 94596

cc: Constance Brady, Chairperson, PROPP
cc: Harvey Bragdon, CCC Planning Dept.
cc: Mike Burke, Public Utilities Commission
cc: John R. Mullen, Attorney for Sandmound Investors

JB/ps

A Comment noted. A new route option, designated South 1, has been analyzed and presented in the Supplement to the Draft EIS/EIR. As described in Section 1.1.2 of Volume 1 of this Final EIS/EIR, South 1 has been adopted as the preferred route. This new South 1 option would move the line so that, at most, only the extreme southwest corner of your property would be affected.

L-97 (continued)



L-100

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A You are placing power line to close, housing developing - plus over a school site. Keep down power lines away from populated areas

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

John E. Fritz
5606 Sunfish Court
Byron, CA 94514

A Comment noted. See response to L-91 A. The preferred route does not cross the school site.

L-101

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A I do not like to have it near any residential property. And Bethel Island is too small an area to have it any place on our island.

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

A Comment noted. The preferred route passes to the west of Bethel Island.

L-102

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A THE CITY OF TULELAKE HAS WENT ON RECORD OPPOSING THE PLACING OF THIS LINE ON IRRIGATED FARM LAND. Jo Coelho CITY CLERK

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

City of Tulelake
Planning Department
P.O. Box 305
Tulelake, CA 96134

A Comment noted. See response to L-330 G.

L-103

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments: We do not believe it is

A necessary to build around Bethel Isl. Area - It should be simpler to build from TRACY Sub, Kiway between Brentwood & Stockton looping on to Rio Vista area. thru undeveloped areas

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Jerry and Virginia Donahue
P.O. Box 115
Bethel Island, CA 94511

A The study area for the Southern Section was determined in preparation for the corridor selection process. This study area extends between the end of the upgrade (route segment S-1A) and Tesla substation, and is approximately twenty-five miles wide at the widest point. The study area boundary in this area was based largely on engineering considerations, existing transmission corridors, and the need to find a reasonable route between the two end points.

A route passing to the north and east of Bethel Island was considered, but eliminated. See the Phase II report in Volume 2A of the Draft EIS/EIR, Section 4.1.4, "Webb Tract Route".

L-104

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued penodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A It is very Important to compensate those who
are in the Path, as long as they can show Due
B cause! The long term Effects, if any should be clearly
up. (I+ not Law Suits in the future will Follow

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Ron Dybas
1690 Taylor
Bethel Island, CA 94511

A See response to L-14 B.

B Table 2A in the Summary of Volume 1 of this document identifies the significant impacts and adopted mitigation to reduce the impacts from the COTP.

L-105

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A This project shouldn't have to
go over the most populated Island
in the whole delta

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

A Comment noted. The preferred route passes to the west of Bethel Island.

L-106

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

While Power is Important, and overland the cheapest, easiest way to channel it! Why then are you not getting all the Data Possible to allay the fears of the Public! OR IS their NOT Enough

A

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Lorrie Dybas
P.O. Box 1399
Bethel Island, CA 94511

A There have been substantial efforts at compiling and disseminating information on the COTP. The extensive material in the Draft EIS/EIR, the numerous public workshops at several stages of the routing process, and the item by item response to government agency and public comments show the lead agencies' and COTP Participants' efforts to conduct an open and comprehensive environmental process. See also responses to T-152 B and T-152 F.

L-108

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A Do not put project on Bethel Island find another alternate

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Martha Moore
P.O. Bo. 420
Bethel Island, CA 94511

A The preferred route passes to the west of Betnel Island.

L-109

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A We do not want this project on Bethel Island, as there are other places unpopulated

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

A The preferred route passes to the west of Bethel Island.

L-110

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A A great project if built with union labor.

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

John P. Wilson
6281 Center Drive
Redding, CA 96001

A The COTP will be open to both union and nonunion labor.

L-111

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A I DON'T WANT ANY MORE POWER POLES ON BETHEL ISLAND FIND ALTERNATIVE ROUTES — ASK

B YOURSELF IF YOU WOULD WANT THIS IN YOUR FRONT YARD

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Dennis Barker
P.O. Box 685
Bethel Island, CA 94511

A Comment noted. The preferred route passes to the west of Bethel Island.

B Comment noted.

L-112

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A I do not want this line on or near my property unless you want to pay me $2000 for the loss & lodge of my property. Also
B I prefer more East of Round Mt area such as Hilt or no lines in the area

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Ed Hess
P. O. Box 159
Round Mtn., CA 96084

A See responses to L-14 B and T-82 C.

B Moving the COTP to the east of Round Mountain would require the crossing of the two existing 500 kV Intertie lines. See the response to T-69 F for a discussion of crossing the existing Interties.

L-115

12849 Ashley Court
Saratoga, CA 95070
December 12, 1986

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Dear Sir:

I am writing in regard to your 12/5/86 memorandum of the California-Oregon Transmission Project and in particular to figure 2.1-9, Southern Section Alternatives and Options.

I was dismayed to note that your preferred alternative Route B appears to go directly through my property, Parcel # 032-082-010 on the west side of Bethel Island Road immediately south of Sandmound..

I purchased over 8.0 acres about 15 years ago as my retirement shelter. I had and have every right to assume that this parcel will be zoned commercial since it is on the main road to Bethel Island just before the bridge. I have already paid a substantial amount of money for this property with more payments to come, and I am now faced with the prospect of severe property depreciation. Who will build stores on property with a major transmission line overhead or adjacent?

A

My lot is one of 4 lots. One of these has commercial structures and anotheris owned by the Crippled Children's Society of Santa Clara County as a long range investment. There certainly are larger parcels both to the north, south and also east which are uninhabited and have no potential commercial value that could be used for your purpose. Both I and the Santa Clara Crippled Children's Society feel victimized by this proposal and request the route be changed.

B

I must work the night of 1/13/87 in the San Jose area and will not be able to attend the public hearing, but I am vitally interested in the outcome. Please write and inform me of any recourse I may have.

C

Yours truly,

Seymour Bross

Seymour Bross

A See responses to L-14 B and T-82 C. There are numerous areas where commercial and industrial properties have been developed around existing transmission lines.

B A new route option in this area, South 1, was analyzed and presented in the Supplement to the Draft EIS/EIR. South 1 has since been adopted as the Project preferred route. Site-specific placement of the line within the 1500-foot wide route will reduce impacts to your property.

C A response was sent to the commentor on December 22, 1986.

L-117

ESTABLISHED 1867

BANK OF STOCKTON

JOHN M. URRUTIA
VICE PRESIDENT
SPECIAL LOAN DEPARTMENT

COMMERCIAL · SAVINGS · TRUST

P O BOX 1110 · STOCKTON, CALIFORNIA 95201

December 15, 1986

Mr. Robert A. Olson
Project Managing Director
California-Oregon Transmission Project
Post Office Box 660970
Sacramento, California 95866

Re: Proposed Transmission Line Route

Dear Mr. Olson:

The Bank of Stockton has reviewed the various route options of the transmission line project, which appears to run from north of the Oregon border to about Los Banos. By your maps, which were sent December 5, 1986, it would appear that there are several proposed routes through the Stockton delta area. Briefly I would like to set out the concerns of the Bank of Stockton with regard to these proposed routes:

A 1) By structure, delta soil is not considered generally stable.

B 2) The preferred route crosses areas that generally have a very high water table.

C 3) New transmission lines through the delta would further hamper water fowl in their migratory and native flights.

D The Bank would suggest to you that the new transmission lines be directed over your alternative "A" route. It would seem that putting new transmission lines adjacent to existing lines, on more stable soils to the west and out of water fowl flyways, would be more realistic. Further, by your map it would appear to be a more direct and shorter route from just south of Veale Tract to the Tracy substation using the alternative "A" route.

Please accept this letter as the Bank's formal recommendation regarding the route of new transmission lines.

If you should have any questions, please feel free to contact me.

Sincerely,

John M. Urrutia
Vice President
Special Loan Department

JMU:cab

cc: R. M. Eberhardt

A The Project recognizes the unstable nature of Delta soils. Pages 3.1-18 and 3.1-19 of Volume 1 of the Draft EIS/EIR characterize Delta soils as "poorly drained organic soils or peat which are highly susceptible to subsidence and wind erosion". Mitigation measures for geologic hazards and soils shown in Section 1.1.5 of Volume 1 of this Final EIS/EIR are designed to minimize these impacts.

B A high water table does not present a serious transmission line design problem, and it will be handled by suitably designed and constructed foundations.

C Some waterfowl collisions may occur with the COTP line. These are unavoidable and have been noted as significant impacts based upon discussions with CDFG. We note, however, that other forms of mortality including hunting will be much greater than mortality caused by transmission line collisions.

D Your preference for Alternative A is noted.

L-118

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A I disapprove of line being that close
to residential area, or not
B healthy - what way with Hiway 5 ?

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Wilma Jones
P.O. Box 270
Knightsen, CA 94548

A Comment noted. See responses to L-121 F and L-330 F3.

B The use of an Interstate Highway 5 corridor was considered early in the scoping process for the COTP. It was removed from consideration for several reasons including the visual exposure to travelers and residents and the loss of the ability to use a significant portion of the Upgrade Section between Redding and the Sacramento River. See also resonse to L-309 U.

L-119

The Hofmann COMPANY

BUILDERS AND DEVELOPERS

1380 GALAXY WAY P.O. BOX 907 CONCORD CA 94522

TELEPHONE 682 4830 (Area Code 415)

December 16, 1986

Mr. Robert A. Olson
Project Managing Director
California-Oregon Transmission Agency
P. O. Box 660970
Sacramento, CA 95866

Dear Mr. Olson:

Subject: Draft EIS/EIR for California-Oregon Transmission Project and Los Banos-Gates Transmission Project: Routes under Consideration for the California-Oregon Transmission Project

A The proposed route for the southern section of the California-Oregon Transmission Project identified as the Preferred Alternative (B) is, in our opinion, the most practical route and also has the added advantage of not impacting our project known as Discovery Bay in Byron.

B If you were to select Alternative (A), it would have a drastic impact upon very valuable urban lands upon which tentative maps have been approved by the Contra Costa County Board of Supervisors for our development. Alternative (A) would cross through extremely expensive land that has been partially prepared for immediate residential development.

We strongly recommend Alternative (B) and object to Alternative (A) in the Discovery Bay area.

Sincerely yours,

A. T. Shaw

Albert T. Shaw
Executive Vice President

la

cc: Elliott Christensen

A Your support for the southern preferred route Alternative B is noted.

B In the Discovery Bay area, the COTP selected Alternative B as the preferred route over Alternative A in part because of the amount of planned and approved residential development.

L-120

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A I DO NOT WANT YOUR TRANSMISSION PROJECT GOING ACROST BETHEL ISLAND. MY NEIGHBORS DONT WANT IT THERE EATHER.

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Rodger Terry
P.O. Box 235
Bethel Island, CA 94511

A The preferred route passes to the west of Bethel Island.

L-121

BETHEL MARINA INC.
P.O.BOX 1097 BETHEL ISLAND, CA. 94511

California-Oregon Transmission Project
P.O.Box 6506970,
Sacramento, CA. 95866

December 16, 1986

Dear Mr. Olson:

Bethel Marina Inc. owns Caliente Isle located on Taylor Slough between Bethel Island and Jersy Island. Caliente Isle is the home of the Caliente Isle Yacht Club and it would appear from the maps attached to your memorandum of Dec.5, 1986 that the preferred route of a transmission line passes almost directly over our yacht harbor and club buildings.

The corporation and the club officers and members are very concerned about the proposed route for the following reasons:

A 1. Our berths are roofed and walled by metal creating the possible chance of electrical shocks.

B 2. One of our main sources of communication is our vessels radios and we fear interference problems.

C 3. A number of our members wear pacemakers and hearing aids and we fear the lines would cause malfunctions.

D 4. Our members have joined the club and berth at this location in a large part because of the peace and quiet offered. The hum and buzz of the line will break this tranquility.

E 5. The higher potential for fire is of great concern and the possibility of higher insurance rates cannot be dismissed.

F 6. The fear of the unknown is very real and exposure to the electrical field has not been proven harmless to the health after long term exposure.

G 7. The view of our surroundings would be ruined.

Because of these concerns we fear that in the event of the lines being installed over the preferred route we would be forced out of business on Caliente Isle and we do not intend on doing that without taking all legal means to stop the project.

Sincerely yours,

Charles I. Cline

A The proposed centerline of the preferred route would remain on the west side of Taylor Slough. Because the berths are roofed and walled by metal, the inside area would be somewhat shielded from electric fields. Electric shocks due to induced current would depend on size of metal surface, construction, distance to the proposed COTP line, with the most important consideration being the path by which a shock might occur. Grounding of the metal roof/wall structure would be accomplished by the COTP as appropriate after proper design by Project engineers.

B See response to L-330 H3.

C See response to L-309 E2.

D The COTP will be designed to have very low noise levels through use of bundled conductor and specially curved, smooth hardware. See also response to L-329 C1.

E The potential for fire during construction and operation of the transmission line is not increased because of the line's proximity to a marina. To our knowledge, the existence of a high voltage transmission line near private property does not impact insurance rates.

F Section 3.10 of Volume 2A of the Draft EIS/EIR describes recent literature reviews on electric fields and health hazards. Also see responses to L-330 F3 and SL-51 A.

G See response to L-15 E.

L-128

MEMBERS
Norma Foy ..... Dist 1
Phillip Santos ..... Dist 2
Roger Ewenstein ..... Dist 3
Patti Adair ..... Dist 4
George Thackeray ..... Dist 5

Board of Supervisors
of
SISKIYOU COUNTY
P. O. Box 338
Yreka, California 96097

CLERK
Norma Price
Phone 916/842-3831
Ext 264

December 30, 1986

Environmental Coordinator
California-Oregon Transmission Project
P. O. Box 660970
Sacramento, California 95866

Subject: Environmental Impact Statement/Environmental Impact Report, California Oregon Transmission Project, State Clearinghouse Number 85040914

Dear Sir:

A Having reviewed the Draft Environmental Impact Report and the preferred alternate route through Siskiyou County, the Board of Supervisors wishes to go on record recommending the certification of the Environmental Impact Report, together with all appropriate mitigation measures and any necessary statements of overriding considerations. As soon as the Environmental Impact Report is certified as complete, we would further recommend that the preferred alternate be adopted.

B Again, we would like to reiterate our concerns that in the preferred alternative, wherever possible, prime agricultural lands and prime timberlands be avoided in the site specific alignment of powerlines. While obviously a minor consideration of the overall Intertie consideration, these features remain significant issues to this County and our adjoining counties.

Thank you again for the opportunity to provide input.

Yours truly,

George R Thackeray

George Thackeray, Chairman
Siskiyou County Board of Supervisors

cc: Paul Tschirky

A Comment noted.

B Prime agricultural and timberlands have been avoided whenever possible, given engineering and environmental constraints. Implementation of the mitigation measures described in Section 1.1.5 of Volume 1 of this document will also help reduce impacts on these important resources.

L-130

Friends of the Greensprings
15097 Highway 66
Ashland, Oregon 97520

December 17, 1986

Robert A. Olson
Transmission Agency of Northern California
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Dear Mr. Olson:

I am writing on behalf of the Friends of the Greensprings, a community service organization of the residents of the Pinehurst area along State Highway 66, between Ashland and Klamath Falls, in Southern Oregon.

A We have been deeply involved in following the procedures aimed at transmitting BPA power to California via the COTP 500KV transmission line. One of the proposed routes for that line passes through the heart of our community, and has united the residents here against it. We have been, and wish to continue to be monitoring the decisions made by both the COTP and the BPA regarding this project.

We have long been awaiting the release of your draft EIS/EIR and the BPA's IDU DEIS and IAP, intending to examine them closely and to submit extended and detailed comments. We received our copy of the COTP draft EIS/EIR last week. We also received the BPA's IDU DEIS only last week. We are now faced with the monumental task of wading through volumes and volumes of difficult, technical information. It would be difficult enough simply to get through the COTP report, but to conscientiously study both reports and still manage to make comments by the BPA's January 2 deadline, and to have worthwhile, educated comments to make at the COTP's January 5 public hearing seems utterly impossible. Most of us are working people. It is the Holiday season and most of our constituency are busy with family or out of town. We can not possibly meet with our members before the January 5 hearing in Klamath Falls. In fact, as it has seemed to us

B from the very beginning of this process, we can't help but suspect that the opinions of the residents of Oregon are not being given due consideration and that the comment period was scheduled purposely to minimize public involvement.

C We urge you to extend the public comment period by at least 30 days. The goals of the draft IDU DEIS and the EIS/EIR, are, after all, to inform the public and elicit educated response from the people who will be affected by this project. We have written the BPA and requested the same, but have been informed that they cannot extend their comment period unless COTP does. We would also like to see additional public hearings in February. Much time and expense has gone into preparing these reports. Without an extension of the public comment period, we feel we will not be able to participate as we would like in the full and open airing of the merits of your reports.

Sincerely,

Wendy J. Fullerton

Wendy Fullerton, Vice-Chairperson
Friends of the Greensprings

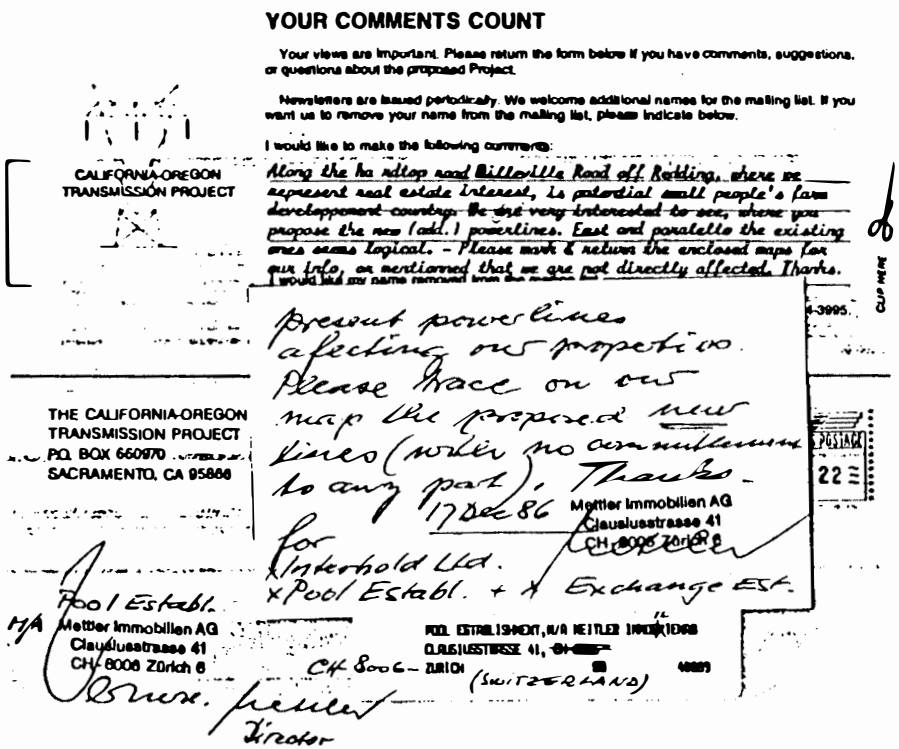
A Comment noted. You will continue to receive information about the COTP.

B All persons affected by the COTP, whether in California or Oregon, are encouraged to provide comments. The original comment period was the result of the sequence of events in the environmental schedule for the COTP.

C The Draft EIS/EIR for the COTP was distributed to the public for review and comment in late November 1986. The period of receiving comments on the Draft EIS/EIR was extended from an initial deadline of February 3, 1987 to March 2, 1987, in response to requests from the public for additional review time. This extension gave the public nearly 90 days to review the document and provide comments on it.

During the public review period, many substantive, valuable comments were submitted both as public testimony and as letters to the lead agencies. Some of these comments led to the identification of new routing options for portions of the preferred route for the COTP. These routing options were addressed in a Supplement to the Draft EIS/EIR, which was issued [illegible] in late June 1987. The 45-

L-133



YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comment(s):

Along the hilltop road Billerville Road off Redding, where we represent real estate interest, is potential small people's farm developpement country. We are very interested to see, where you propose the new (add.) powerlines. East and parallelle the existing ones seems logical. - Please mark & return the enclosed maps for our info, or mentionned that we are not directly affected. Thanks.

I would like my name removed from the mailing list

CUT HERE

CALIFORNIA-OREGON TRANSMISSION PROJECT

THE CALIFORNIA-OREGON TRANSMISSION PROJECT
P.O. BOX 660970
SACRAMENTO, CA 95866

Present powerlines affecting our properties. Please trace on our map the proposed new lines (would no communications to any part). Thanks.
17 Dec 86

Mettler Immobilien AG
Clausiusstrasse 41
CH-8006 Zürich 6

for
Interhold Ltd.
Pool Establ. + Exchange Est.

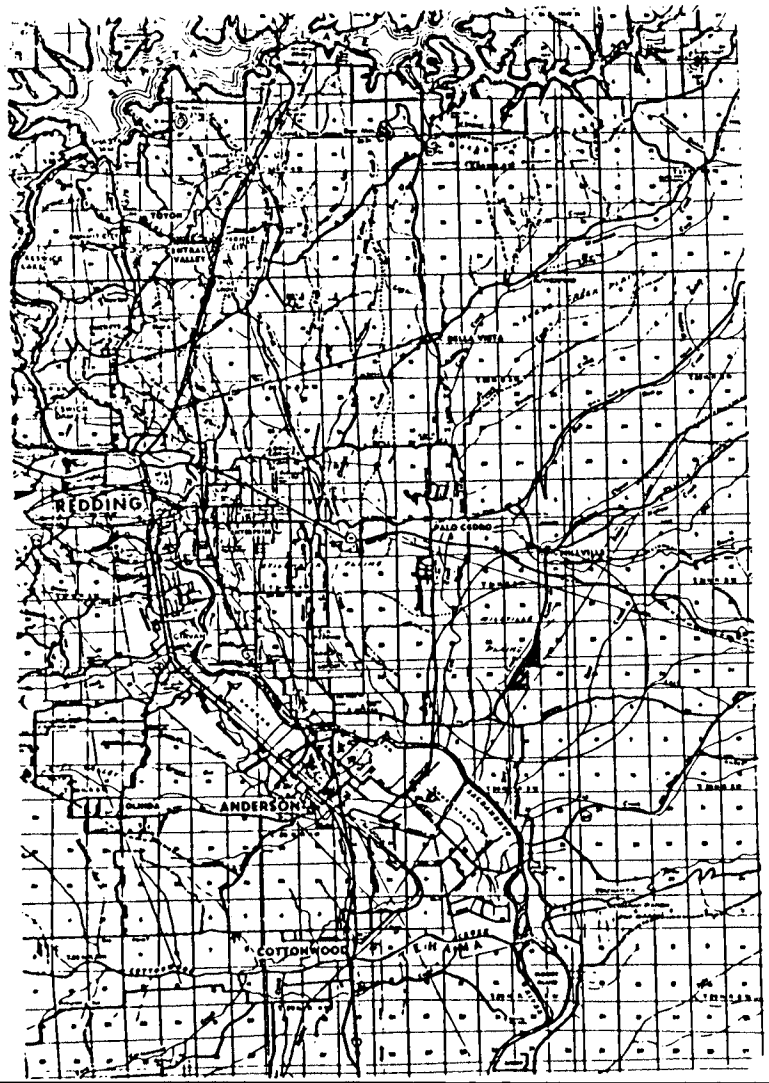
Pool Establ.
M/A Mettler Immobilien AG
Clausiusstrasse 41
CH-8006 Zürich 6

POOL ESTABLISHMENT, M/A METTLER IMMOBILIEN
CLAUSIUSSTRASSE 41, CH-8006
ZURICH (SWITZERLAND)

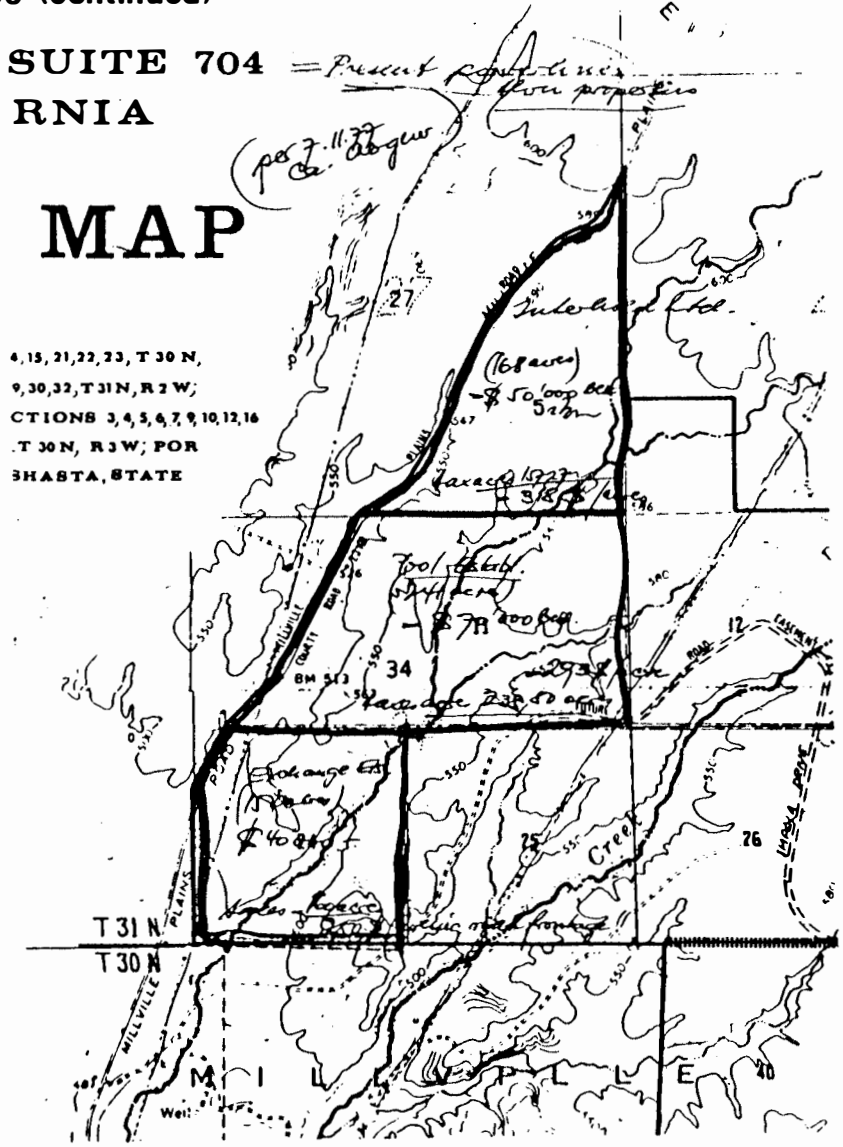
Bruno Mettler
Director

A The preferred route parallels the western edge of the two 230 kV transmission lines. Quadrangle maps showing the location of the route were sent to the commentor on January 14, 1987.

L-133 (continued)



L-133 (continued)



L-135

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A [Your material is very complete.

I would like my name removed from the mailing list. no.

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Forrest E. Cooper
Attorney at Law
35 G Street South
Lakeview, OR 97630

A Comment noted.

L-137

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A WE DON'T WANT THIS IN THE DELTA !!

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Norman and Karen Attaway
P. O. Box 20034
San Jose, CA 95160

A Comment noted.

L-139

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

I feel that it would be detrimental to the Valley, and the

A Valley would can no revenue from the line. It would be an

B eye sore.

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Ed [illegible]
[illegible] Star St.
Macdoel, CA 96058

A Comment noted. The lines and towers will be designed and located to minimize inconvenience and potential loss of value. See also response to L-14 B.

In addition to compensation provided for easements needed for the line, the electric power rate and reliability benefits will be widley spread to most, if not all, of the electric power consumers in the affected region. Since the preferred route is located in the eastern corridor near Malin, Oregon, no direct impacts on the Butte Valley are expected. See also responses to L-3 T, L-329 A, and L-330 B.

B The Draft EIS/EIR acknowledges that Alternative Routes B and C in the Northern Section of the COTP would be highly visible and would intrude on the scenic quality of the Butte Valley, including areas around Macdoel. The commentor's preference for a route that avoids the Butte Valley is noted. A preferred route in the eastern corridor has been adopted.

L-149

6737 Kimberly Ct.
Klamath Falls, Ore. 97603
Dec. 26, 1986

The California-Oregon Transmission Project
P.O. Box 660970
Sacramento, ca. 95866

Gentlemen:

A All of our protests against the line going across farm land seems to have been for naught. Your preferred route is directly across a farm that we own.

B Perhaps a value set on the easement about 2300' in length would indicate how strongly we feel about this line crossing any farm land unnecessarily.

$495,000.00

Sincerely yours,
By Richard Halousek
Betty Halousek

Richard Halousek
Betty Halousek

A Comment noted. The preferred route in your area has been revised to option North 1 as described in the Supplement to the Draft EIS/EIR and shown in the Affected Environment Map in Section 1.1.3 of Volume 1 of this document. This newly adopted route does not cross your farm.

B See response to L-14 B.

L-150

SAN FRANCISCO CLEAN WATER PROGRAM

City and County of San Francisco
770 Golden Gate Avenue
(415)558-2131

Mailing Address P.O. Box 360, San Francisco, California 94101
(415)431-9430

December 31, 1986

9.2.0.12

Environmental Coordinator
California-Oregon Transmission Project
P. O. Box 660970
Sacramento, CA 95886

Gentlemen:

A, B Please send us one copy of the draft Environmental Impact Statement for the California Oregon Transmission Project. Your project could effect the economics of several energy projects under consideration by our agency and other agencies of the City and County of San Francisco, If there is a charge for the DEIS, please call me at (415) 558-2131 so I can arrange for payment.

Very truly yours,

David A. Jones

David A. Jones

A The requested document was sent to the commentor on January 8, 1987.

B Without knowing the specifics of any of the projects, it is difficult to evaluate the impact of the COTP on projects proposed by the City and County of San Francisco. The COTP is not anticipated to have effects on proposed electric utility projects to the extent such projects are reflected in the California utilities resource plans. The effect of the COTP on generation in California and on new combustion turbine capacity installation is discussed in the economic analysis in Appendix B to Volume 3A of the Draft EIS/EIR.

L-151

Positive Resolution of Powerline Problems P.R.O.P.P.

P.O. BOX 339 · BETHEL ISLAND, CALIFORNIA 94511 · 415-684-3362/884-2110

December 31, 1986

The Transmission Agency of Northern California,
James Beck, Chairman
The Western Area Power Administration,
William Clagett, Administrator
PO Box 661030
Sacramento, CA 95866

Reference: California-Oregon Transmission Project
Draft EIR/EIS

Gentlemen:

A P.R.O.P.P. is requesting, on behalf of the East Contra Costa County Area, an extension of the response period beyond the present February 3, 1987 cut off. C.E.Q.A. Section 15105 (a) allows over 90 days in unusual circumstances, and an eight volume EIR is an unusual circumstance. N.E.P.A. Section 40CFR -- 1506.10 (d) also allows the Lead Agency to extend the response period. The reasons for P.R.O.P.P.'s request are as follows:

B The lack of public input in the early Agency and Public Scoping meetings is one reason. The California Public Utilities Commission staff has already noted the lack of public input in its comments on the Committee Review Draft of the EIR/EIS. See item D.30 in September, 1986 Comments.

C To add to this we have been presented no evidence that the Agency and Public Scoping meetings of May, 1985 were advertised or noticed adequately to the public. Per C-OTP's Summary of June, 1985 "Agency Scoping Meeting Contacts," page 1554 T, Appendix C -- the only county agency contacted in Contra Costa was the Contra Costa County Resource Agency Conservation District. Since the entire area south of the river which has alternative routes is unincorporated, the lead agency was and is the Contra Costa County Community Development Department (CCCDD). The appropriate lead agency was not contacted. Further, the CCCDD has a standard notice list which was not used.

The Summary of Alternative Route Workshops dated February, 1986 shows again that efforts to involve the public were minimal and ineffectual. The November, 1985 Alternative Workshops were advertised in the Antioch Ledger, Contra Costa Times, and Tracy and Stockton newspapers. Further, the Ledger-Times advertisement contained a map captioned "Antioch Area." The papers that are most closely

A See response to L-130 C.

B See response to T-152 B.

C See response to T-152 F.

L-151 (continued)

C east county papers are the Brentwood News, the Bethel Island Beacon, Discovery Bay Soundings, and the Oakley Gazette. These papers were not used for advertising, nor were they furnished press releases.

In Appendix B of the Summary, page 923AA - "Telephone Networking Contacts," it shows that the Bethel Island Municipal Improvement District was contacted. The chairman of the board of directors, Howard Holmes, assures me that he is aware of no contact until May of 1986 when C-OTP asked to rent the BIMID hall for a public presentation. Since the

D meetings C-OTP held in east county in May, 1986 and November, 1986 were too late to influence the EIR/EIS or the route alternatives, the public input of the east Contra Costa County Area is almost totally lacking. We must make up for this now in our comments on the Draft EIR/EIS.

Further, although you have given us in excess of 45 days to comment, the communities received the documents one to two weeks into December, rendering us, with the holidays, only approximately 30 days to respond with written comments and 15 days to respond at the scheduled local public hearing.

In summation, due to the lack of meaningful early scoping sessions and workshops in our area, the document is severely flawed. The complexity of the issues require that we retain the specialized expertise of consultants to help us with our responses. The community feels it deserves an additional 45 day extension of the response period.

Very truly yours,

Constance Brady

Constance Brady, chair

cc: California Public Utilites Commission, Mike Burke, Regulatory and Environmental Coordinator
US Congressman George Miller
State Senator Daniel Boatwright
State Assemblyman Phil Isenberg
Contra Costa County Supervisor Tom Torlakson
Contra Costa County Community Development Department
Office of Planning and Research, Sacramento
California Energy Commission

D See responses to T-152 B and T-152 F. The comment period was extended to March 2, 1987.

L-151 (continued)

PROPP STEERING COMMITTEE

Chair: Constance Brady
Vice Chair: John Mass
Treasurer: Christine Jennelahn

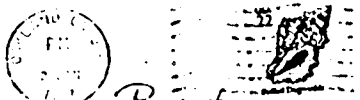
Organization	Representative
Discovery Bay Builders Discovery Bay Design and Environmental Review Committee	Roberta Fuss 4525 Discovery Pt. Byron, CA 94514 634-2409
Reclamation District 799	Bob Gromm PO Box 447 Bethel Island, CA 94511 684-2117
Reclamation District 2065	John Mass Jr. PO Box E Knightsen, CA 94548 684-2193
Bethel Island Municipal Improvement District	Jasper Sipes PO Box 85 Bethel Island, CA 94511 684-3238
Byron Chamber of Commerce	Ann Templeton 1229 Marina Circle Byron, CA 94514 634-4620
Bethel Island Chamber of Commerce	Ardith Wallace PO Box 263 Bethel Island, CA 94511 684-3650
Bethel Island Golf Course	Coreen Hornbeak PO Box 455 Bethel Island, CA 94511 684-2654
Byron Sanitary District	c/o Earl Wetzel PO Box 184 Byron, CA 94514 634-4416
Byron School District	Mary Beth Wolford Rt 1 Box 48 Byron, CA 94514 634-2128

L-151 (continued)

Organization	Representative
Bethel Island Area Association	Daniel C. Miller PO Box 860 Bethel Island, CA 94511 684-2375
Knightsen Community Council	Christine Jenneiahn Rt 1 Box 163NP Brentwood, CA 94513 625-4347
Small Farmers	Barbara deFremery & Leo Mantelli PO Box 102 Knightsen, CA 94548 625-3728
Small Farmers	Roger Cottle Rt 1 Box 164 Brentwood, CA 94513 625-1940
Small Rancher	Aaron B. Carpoff PO Box 114 Knightsen, CA 94548 625-3377
Large Farm & Livestock	Bob Dal Porto 5691 Marlin Dr. Byron, CA 94514 634-6289
Large Farm & Livestock	Helen Halsey Jersey Island Star Route Stockton 95209 684-2318
City of Brentwood	Art Gonzales 838 Railroad Avenue Brentwood, CA 94513 634-2312
At Large	Constance Brady, A.I.A. PO Box 339 Bethel Island, CA 94511 684-3362
	Christine Thresh PO Box 290 Bethel Island, CA 94511 684-2110
	James Halcomb, Mgt.Conslt.

L-153

P.O. Box 403
Bethel Island
Calif 94511



Calif.-Ore. Transmission Project
PO Box 660970
Sacramento, Ca. 95866

Jan 1-1987

Robt. W. Olson-
Having received the
Memorandum regarding.
The draft for Calif-Ore
Transmission-
I Protest the Pryffered
Alternate (B) because it would
be too close to my home on
Bethel Island-
Even the other Alternative (A+C)
route, would still not be
accepted-
A Interested Person-

A

A Comment noted. The preferred route passes to the west of Bethel Island.

L-155

Jan. 5, 1987

California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

TO WHOM IT MAY CONCERN:

A Please add my name to the long list of those opposing the proposed 500-KV line routes. We have spoken out against it since it's original proposal, and have given countless reasons for it to not be built on any private lands.

B I also wish to suggest that you consider the John Cross proposal, which is not even included in your Draft Environmental Impact Statement/ Environmental Impact report (EIS/EIR). It allows for the line to be located east of your proposed routes and on public lands.

Why have we had so many hearings, meetings, and correspondence; if you are not even going to consider our suggestions. The Cross proposal is a feasible and logical route. I expect a reply as to why you have not included this option in the Draft EIS/EIR.

Sincerely,

Robert L. Jackson
Marie Jackson

A Comment noted.

B See response to L-330 H.

L-157

WRITTEN COMMENT FORMS
FOR THE DRAFT EIS/EIR
FOR THE
CALIFORNIA-OREGON TRANSMISSION PROJECT
AND THE
LOS BANOS-GATES TRANSMISSION PROJECT

If you have comments on the Draft Environmental Impact Statement/Environmental Impact Report that you would like to have considered by the lead agencies, you can use this form to write them down. This form can be handed in to the court reporter at the meeting, or mailed to the Environmental Coordinator at the address below. Your comments must be mailed by February 3, 1987. Thank you.

A My name is Tim Bowen. I am a third generation Tulelake farmer; along with my father we farm my grandfather's homesteads. I oppose any further power-line construction in this area. Period. We are becoming
B an "Owen's Valley" of the North--forced to sacrifice our livelihoods & well-being with nothing in return. We will see no benefit from this line.
C An article in the Klamath Falls, Ore. Herald & News Paper reports that whatever Northwest power surplus does truly exist, it will be gone by the year 1997. Only 10 years distant. That eliminates any Project feasibility
D in my mind. Privately held land in Modoc County amounts to only 28%. Of this, the small percentage of deep quality soils and intensively farmed lands in Modoc County exists almost entirely in the Tulelake Basin. Any line built on your preferred route would be a desecration for many reasons: 1) The
E line would be placed directly upon the historic Applegate Trail (an extension of the California Trail) & cross the site where many early settlers met
F their demise--"Bloody Point." Crossing this is a sacrilege. 2) These lands were given to veterans of two World Wars for their ultimate sacrifices--this
G Project has no right crossing these lands. 3) Any cultural practice on the impacted farms & their neighbors will be curtailed. Aerial spraying,

(continued on back)

Hearing Date: January 5, 1987
Location: Newell Elementary School Building, Newell, Calif
Name/Address: Timothy John Bowen
P.O. Box 885, Tulelake, Calif 96134

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866
(916) 924-3995

A Your opposition to the COTP is noted.

B See responses to T-126 A and L-3 T for a discussion of the benefits of the COTP.

C Although the current firm power surplus in the Northwest and the possibility that it may be declining demonstrate the prudence of building the COTP on the planned schedule, the benefits of the COTP do not depend on continuation of the current firm power surplus in the Northwest. Additional benefits come from power available when river flows are better than critical dry conditions used for planning, the fact that California has its highest power demands in the summer whereas the northwest has its highest demands in the winter, and the fact that generating resources added in the Northwest to meet energy load growth will provide ability to meet peak demands in excess of the peak loads in the Northwest. No resources need be built in the Northwest for the purpose of making power available to sell in California. See also response to L-3 T.

D Comment noted. See response to L-330 G.

E See response to T-15 B.

F The claimed special status of these lands as veterans homestead entries or veterans bonus lands confers no protected standing under the applicable historical resources legislation and regulations.

G Agricultural practices can and do take place under existing transmission lines. See response to L-204 E. Impacts to agricultural lands will be minimized through the implementation of land use mitigation, such as maximizing the distance between towers in order to keep as many towers out of farm land as possible. See Section 1.1.5 of Volume 1 of this document for a discussion of adopted mitigation. See also response to T-4 G. Alternative irrigation systems are available that are compatible with transmission lines.

L-157 (continued)

G sprinkler irrigation in any form, weed control, planting, cultivating, & harvesting techniques will be either impossible, deadly, or chaotic.

H 4) The impact of the line on already depressed land values and an owner's ability to sell his property would be more than some farmers could or would be able to withstand. 5) The world is aware of the significance

I the Tulelake Basin holds for the migrating waterfowl of the Pacific Flyway. During the winter months we host the largest concentration of Bald Eagles in the lower 48 states; 500-600 Eagles are not uncommon. A 500 KVA line has no business running through this basin.

I have reviewed the EIS/EIR volumes at the Tulelake County Library and find them deficient on many counts. For the multitude of

J problems incurred in the construction and placement of this line, those which impact this basin are either poorly addressed or not at all.

While I oppose any further power line construction through

K Modoc/Siskiyou counties, in a worst case scenario I would hope the human sensibilities of those of you involved in the decision making on the building of this line will grasp the logic of the "John Cross Alternative"-- east of the basin proper.

Finally, please note that along with other Tulelake residents & organizations I pledge both my time and money in the fight to prevent construction of a power line through our basin.

G (cont.) In the event the property owner is precluded from agricultural activities, he will be compensated through the easement acquisition process. See also response to L-14 B. Also see mitigation measure IV.A.7 in Section 1.1.5 of the Final EIS/EIR.

H As stated in Section 3.8.2.4 of Volume 2A of the Draft EIS/EIR, the value of the encumbrance resulting from the transmission line easement will be established by appraisal and property owners will be compensated for the value of their losses. This process is intended by law to keep the property owner financially "whole." See also the response to L-184 A.

I The Draft EIS/EIR notes that the Klamath Basin is highly significant as a waterfowl and bald eagle use area. Potential collisions with waterfowl and eagles were considered in determining a corridor within the study area and in selecting a preferred route within the Klamath Basin area. Routes were selected considering wildlife impacts, conversations with numerous state and federal biologists (e.g., Hainline and Stone pers. comm.), local residents, and reconnaissance by biologists hired by the COTP. It was concluded that the selected route will not have significant impacts on waterfowl and bald eagles.

J Comment noted. The lead agencies believe that these impacts have been addressed in the Draft and Supplement to the Draft EIS/EIR.

K See response to L-330 H.

L-159

WRITTEN COMMENT FORM
FOR THE DRAFT EIS/EIR
FOR THE
CALIFORNIA-OREGON TRANSMISSION PROJECT
AND THE
LOS BANOS-GATES TRANSMISSION PROJECT

If you have comments on the Draft Environmental Impact Statement/Environmental Impact Report that you would like to have considered by the lead agencies, you can use this form to write them down. This form can be handed in to the court reporter at the meeting, or mailed to the Environmental Coordinator at the address below. Your comments must be mailed by February 3, 1987. Thank you.

Enclosed is a Written Expansion of the Oral Remarks I made at the January 7, 1987 COTP Public Hearing at Round Mountain, California. Also included is a copy of the oral Presentation.

Hearing Date: January 7, 1987

Location: Round Mountain, California

Name/Address: Dale McCleskey Dale L. McCleskey
P.O. Box 324, Big Bend, CA 96011
(916) 337-6920

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660978
Sacramento, CA 95866
(916) 924-3995

L-159 (continued)

Dale L. McCleskey
P.O. Box 324
Big Bend, CA 96011
(916) 337-6920

WRITTEN EXPANSION OF ORAL REMARKS MADE AT COTP PUBLIC HEARING ON JANUARY 7, 1987 AT ROUND MOUNTAIN, CALIFORNIA

The California-Oregon Transmission Project (COTP) is seriously flawed in its concept, organization, and implementation.

CONCEPT

A This Project is predicated on assumptions of increasing power demands throughout the State of California. It also assumes that extra power will be available from the Northwest hydroelectric projects--such as the Bonneville Power Administration (BPA). In fact, there is every indication that conservation will reduce the demand and the Northwest will be unable to meet current contract requirements; let alone, provide "excess" power to California. Some estimates show that the BPA will be at full delivery in 1991 to its existing customers. 1991 is the estimated completion date of the COTP.

ORGANIZATION

What is particularly frightening and defies all logic is the manner in which this Project is organized, and the authority that is inherent.

B COTP was created as the operational arm of the Transmission Agency of Northern California (TANC). TANC is vested by the California Public Utilities Commission with authority to approve the Environmental Impact Report (EIR), and thus, the Project at the state level. TANC's partner is the Western Area Power Administration (Western), who has federal authority to approve the EIR, and thus, the Project. Both TANC and Western are participants in the Project; and, in our opinion, are unable to consider without bias the merits of the Project.

C TANC and Western participate in:

- Developing Project
- Writing EIR
- Reviewing EIR
- Determining adequacy of EIR
- Final approval of Project.

D In essence, the State of California and the Federal Government has given a legal mandate to a group of utility companies to build a transmission line on any route they desire, simply by proving that the final route chosen is the least destructive of their other alternatives. As example, this permits COTP to ignore Shasta County recommendations to place the transmission line in Northeast Shasta County, where it would minimize environmental and economic damage.

There is not a single elected and thus responsible official involved in considering the real public interest. The final decision on this Project will be made by bureaucrats.

A Reductions in energy demand through conservation was included in the COTP's analysis of the capacity needed in California. California has been a national leader in the area of conservation planning and incentives. The utilities in the state have had incentive programs, as well as other types of projects, which were designed to assist their customers in instituting conservation measures. The effects of these activities, as well as future programs, are included in the demand/supply projections of the utilities. The results of conservation were factored into the analysis in the Draft EIS/EIR representing the needs of the utilities before the COTP.

Although the current firm power surplus in the Northwest and the possibility that it may be declining demonstrate the prudence of building the COTP on the planned schedule, the benefits of the COTP do not depend on continuation of the current firm power surplus in the Northwest. See response to L-3 T for a more complete discussion of project benefits as related to firm surplus Northwest energy.

B The COTP is a project being studied by the public and private utilities of California in cooperation with the Western Area Power Administration. TANC, a joint powers agency of fifteen municipal utility and irrigation districts, is one participant in the project. Neither TANC nor its members are regulated by the CPUC. The CPUC does regulate the investor-owned utilities, three of whom are participants in the project. TANC and the CPUC have an interagency agreement for review of the Los-Banos Gates Project that is being sponsored by the Pacific Gas and Electric Company.

C As public agencies, TANC and Western must remain unbiased in the conduct of NEPA and CEQA processes. That responsibility is built into both NEPA and CEQA for the numerous instances in which government agencies propose to carry out projects or actions.

D The route suggested by Shasta County is discussed in the Draft EIS/EIR Volume 2A, page 2.4-9.

L-159 (continued)

Written Expansion of Oral Response
made at COTP Public Hearing
Page 2

IMPLEMENTATION

The implementation of this Project has been equally flawed. Extremely poor judgment is reflected in the route. The present recommended route is in some of the most productive and ecologically sensitive timber lands in the state. The COTP has chosen its present route because it is the shortest and most economically feasible. But this cannot justify a 200 foot clear cut from the Oregon border to Redding, California. If the economics only make sense by using such a destructively wasteful route, then the real need is not there. The day has passed when this nation can afford to recklessly destroy our precious natural resources in the name of progress. The COTP EIR failed to even respond to Shasta County's detailed plan to mitigate this terrible carnage by siting the Project in less sensitive areas (pg. 2.4-9).

The environmental harm this Project will cause is devasting. Critical habitat will be eliminated and permanently altered. The route is over many very steep slopes and canyon edges that will result in catastrophic erosion. The transmission line will require an attendant maintenance road, that will further open secluded wild lands to human intrusion. The recommended route passes over the Pit River canyon:

- A treasure trove of animals and plants
- Significant archealogical areas (many unmapped)
- Historical sites (indian crossings, ferry landings, early settler and logging sites).

There are many previously undisclosed indian burial sites. The local indians have been very reluctant to reveal ancient indian burial and cultural sites, for fear that "pot hunters" and well meaning archealogists will vandalize and exploit them. This region has been protected by the extreme ruggedness of its terrain and its subsequent remoteness. The transmission line proposes to cross the canyon three times in less than ten miles. The long-term environmental damage in this area will be horrendous, and further impacted by the unusually high rainfall (100 inches annually).

The area adjacent to the Pit River canyon, the Flat Woods and Cove areas, already have three major transmission lines. Additionally, four new small hydroelectric projects were manipulated through the system against local public opinion.

The flawed development of route considerations is symbolized by the resulting impact on our small community. The enclosed position paper was presented at the COTP Public Hearing in Round Mountain, California on January 7, 1987. The presentation was hastily prepared because of the sloppy way in which we were notified. We had no knowledge of the final recommended route until the Draft EIR was distributed in late December 1986. We believe that we have been treated very badly and perhaps illegally. COTP has set February 3, 1987 as the last date for written input, and expects to make an internal route finalization by the end of February 1987. The Final EIR will be issued by the end of March 1987. The Project expects final approval or disapproval (based on the EIR as reviewed by TANC and Western) to be made by early summer. The point is that we, as private citizens and small home owners, have been brutally circumvented. Our small community believes that we have been denied due process.

E Comment noted. The COTP has conducted a routing process that has involved study of natural and human resources, economics, engineering disciplines, as well as state and federal agencies and the general public.

F See response to L-159 D. The Shasta County route was eliminated from further consideration because crossings of the existing Intertie were determined to not meet Project objectives. See also response to T-69 F.

G The public comment period on the Draft EIS/EIR was extended to March 2, 1987. A Supplement to the Draft EIS/EIR was published in late June 1987 containing a new route option (North 4) developed in consultation with Mr. McCleskey. Comments on the Supplement were due August 17, 1987. The North 4 route option was subsequently adopted as part of the Project preferred route.

L-159 (continued)

PRESENTATION TO COTP
ROUND MOUNTAIN, CALIFORNIA -- JANUARY 7, 1987

My name is Dale McCleskey; address is P.O. Box 324, Big Bend, CA 96011; telephone (916) 337-6970. I'm one of seven owner/residents on the rim of Pit 7. We are in the direct route of N-8 Alt-1. Our unique community of 160 acres is backed up to the Pit River rim and is surrounded by private timber companies and PG&E property. We are a developed community with only a few small undeveloped parcels. Besides the seven year-around homes, we have three summer homes and two year-around homes under construction. N-8 Alt-1 crosses five parcels, four of which are owner occupied. None of these parcels are larger than 20 acres, consequently, a 200 foot clear cut would devastate them. The majority of the community is retired with most receiving Social Security. We are a society of very divergent individuals with one thing in common, an intense desire to live in harmony with nature. We look at our ownership as a guardianship to protect a very beautiful, unique and delicate area.

H

We are opposed to the Transmission Project as presently conceived because it will destroy a lovely and unusual area and will equally destroy our life savings, our property values.

I

We resent that due process has not been properly followed. We were unaware of the Project's general route until the middle of December, and only after obtaining a copy of the EIR at Christmas were we aware of the recommended route and its implications. Several of our permanent residents are away for the holidays and totally unaware that decisions affecting their homes are being made. We have had insufficient time to review the EIR, to adequately obtain legal counsel and organize ourselves to properly present our case.

J

We further resent that the Project has given apparent priority to planned future real estate developments and totally ignored a fully-developed community (Pg. 3.6-29 and Fig. 4-20).

K

We perceive this Project and this meeting to be a "railroad" effort to force this Project through regardless of public opinion and the environmental costs.

We are further opposed to this Project because it is in prime timber country and will result in the permanent eradication of valuable and what should be a renewable resource. Shasta County estimates that every mile of transmission line will result in the permanent removal of 25 acres of timber land. How can we measure this loss through the lifes of our children, grandchildren and subsequent generations?

L

Additionally, this Project will be an ecological disaster on the Pit River rim because of the destruction of habitat, the erosion that will result when the ground cover is damaged (we receive over 100 inches of rain annually) and the insidious damage from opening the area to further human intrusion.

M

We have the following recommendations:

N

First, move the Project to Eastern Shasta County as recommended by the Shasta County Board of Supervisors (N-12G refers).

O

Or, return to the original EIR route N-8E, using the existing transmission route that has already damaged the country.

P

Or finally, shift to the west of our community and establish a new route in consultation with us.

In summary, we insist that N-8 Alt-1 be eliminated or redrawn. We will cooperate in redrawing that route but we will not cooperate in the rape of our homes, our life savings, and an uniquely beautiful area.

Thank you.

H Your opposition to siting the proposed transmission line across your community is noted. Adoption of the North 4 routing option as the preferred route avoids your community.

I See response to L-159 G.

J See response to L-159 G.

K See response to L-159 G.

L Under worst case conditions where the full 200-foot right-of-way will be cleared for construction and operation of the Project, each mile of the COTP would occupy approximately 24 to 25 acres of easement. See response to L-179 C.

M See response to L-184 F.

N See response to L-159 F.

O Route segment N-8E is discussed in detail in Volume 2A of the Draft EIS/EIR, along with all other route segments that did not become part of the preferred route. In particular, route segment N-8E was considered to be susceptible to erosion and slumpage as experienced along the nearby existing Intertie route. Mr. McCleskey's letter apparently refers to those existing poor conditions.

P See response to L-159 G.

L-169

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A opposed we own 10 acres close to the project where we plan on building a home

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Broddick, Loris & Gloria
927 Adams Avenue
Los Banos, CA 93635

A The Los Banos-Gates Project has tried to avoid residential areas during the identification of proposed route segments, and to align routes so as to have a minimal impact in areas where residential impacts cannot be avoided.

L-171

WRITTEN COMMENT FORMS
FOR THE DRAFT EIS/EIR
FOR THE
CALIFORNIA-OREGON TRANSMISSION PROJECT
AND THE
LOS BANOS-GATES TRANSMISSION PROJECT

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A I would like To Thank you For NOT picking
The Shasta Valley Route as the preferred route.
B As was pointed out in the Hearing in Yreka
on Jan. 6, 1987, there are many gaps in
your information concerning this route which
make it even less desirable than currently
noted in your report. I remain totally opposed
to any Transmission project in this area.

John V. Crechriou

Hearing Date: 1/6/87
Location: Yreka, Ca
Name/Address: John Crechriou
P.O. Box 985
Grenada, Ca

Mail to:

Environmental Coordinator
California-Oregon Transmission Project

A Comment noted.

B Comment noted. See responses to L-325 regarding missing information on the Shasta Valley routes.

L-172

WRITTEN COMMENT FORM
FOR THE DRAFT EIS/EIR
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Thank you.

A We appreciate the tentative selection of the western alternative D for the California-Oregon Transmission Project. This seems to be the least environmentally objectionable of the alternatives, and of course, everyone wants it a far from themselves as possible.

We have never favored projects of this type. We feel strongly that if as much effort would go into developing solar energy as goes into elaborate hydroelectric and transmission line projects, everyone would be much better off. In the meantime, we must have all the energy we need by being a bit more saving in its use.

B This statement, brought out at the hearing, that there is a surplus of energy at Bonneville, but lines must be in five years, makes the entire Calif-Ore Transmission Project seem completely unnecessary.

C The entire need for the Project should be reexamined. None can afford any more of pensive boondoggles! We do not think the transmission line should be built at all.

Hearing Date: Jan. 6, 1987
Location: Yreka, Ca.
Name/Address: Mr & Mrs Donald S. Teague
11106 Apsley Rd., Montague, Ca 96064

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866
(916) 924-3995

A Your support for the preferred route is noted.

B See responses to L-3 T and L-157 C.

C Your opposition to the COTP is noted.

L-173

WRITTEN COMMENT FORMS
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A I am pleased that the Draft EIS/EIR has eliminated the route through Shasta Valley as a preferred route. As a teacher, I was very concerned that the Shasta Valley route would negatively impact an educational resource unique to the area.

B Specifically, I was worried that a field trip trail and study area would be destroyed by construction of power transmission lines. The area near Table Rock is rich in Shasta Indian Archaeological artifacts, geologic formations, plant and animal life, natural beauty, and Siskiyou County history. My classes and others take an annual field trip to this location. Preparation for the trip, the field trip itself, and the follow-up activities make for an incredible across-the-curriculum learning experience. Thank you for not taking this away.

Hearing Date: January 6, 1987
Location: Yreka, CA
Name/Address: Jerome E. Jerch
1181 North St., Yreka, CA 96097
(916) 842-3787

Mail to:

A Comment noted.

B Comment noted. See response to T-75 E.

L-174

WRITTEN COMMENT FORMS
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A The proposed Calif-Ore. Transmission line should be placed where the impact on the environment including farm land, and plant life, and wildlife will be the least. I am happy to find that you have not chosen Shasta Valley for a line as I feel this area ~~should~~ would be the most environmental impacted of any of the routes considered.

B If this line is being built ~~promarily~~ principally for So. Calif it appears that a route thru Nevada would be the most direct and economical and much of it through unpopulated, low value land where the environmental impact would be less.

Hearing Date: Jan. 6, 87
Location: Yreka, CA
Name/Address: James E. Elsea
134 So Lango Way Yreka, 96097

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

A Comment noted.

B The COTP Participants include many utilities in northern California, though ratepayers throughout the state will benefit. See the response to T-126 A.

A route through Nevada would not be able to utilize the upgrade of the existing Western 230 kV lines from Redding to Tracy, which is a key environmental benefit of the COTP. See also the response to T-69 F.

L-175

WRITTEN COMMENT FORMS
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A Thank-you for not picking the Shasta Valley route by Table Rock for the number one choice for the power line. Please try to choose one of the eastern most corridors that will disturb mostly sage brush. The EIS/EIR
B failed to note many important issues such as cultural sites of the Shasta Indian Tribe, Bald
C Eagle Nesting areas, and other fragile animal habitats. The beauty of the area would be
D destroyed by the huge towers that would be visible for miles around. If it is necessary to construct this line, please keep it out of our Shasta Valley.

Hearing Date: January 6, 1987
Location: Yreka Community Theatre
Name/Address: Gregory A. Resech
P.O. Box 858 Montague, Ca. 96064

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866
(916) 924-1095

A Comment noted.

B COTP staff and consultants undertook an extensive Native American consultation program during the project route evaluation phase. COTP ethnologists consulted sources such as ethnographic accounts and records of public agencies including the Bureau of Land Management, the Native American Heritage Commission, and the U. S. Forest Service to identify sensitive Native American heritage sites.

The study program also involved requests by mail, through group meetings, and in individual interviews that Native Americans identify heritage sites near the proposed routes that transmission line construction might affect. COTP staff consulted with members of the Shasta Nation during this process. A total of 47 Native American heritage sites were identified within the transmission line study corridors in the Shasta Nation traditional territory. These sites and their locations are listed in the Native American Consultation Study report (Wirth Environmental Services 1986) that was prepared for the project. Site-specific information in this report is not released to the public because of the sensitive nature of the Native American heritage sites and the need to maintain site location confidentiality. Representatives of the Shasta Nation were afforded the opportunity to review the site information gathered before the report was compiled.

C Based on extensive contacts with agency biologists and others, we believe that all known bald eagle nests near proposed routes were analyzed for impacts except as discussed in the response to L-333 B. Nests within five miles were considered as having potential to be impacted.

D The Draft EIS/EIR acknowledges that Alternative A in the Northern Section of the COTP would be highly visible and would intrude on the scenic quality of the Shasta Valley. The commentor's preference for a route that avoids this area is noted.

L-176

To: California-Oregon Transmission Project
P. O. Box 660970
Sacramento, California 95866

My name is Clarissa Dierksen. I am part owner of the 160 acres Dierksen propeety and the Round Mtn Ranch on Buzzard Roost Road.

A Your plans call for putting another line next to the existing line through our ranch. I am against the project going through our

B property due to soil conditions, erosion, terrain aesthetic value and harrassment. We already have 5 lines (4 are giant metal towers) through our ranch and we know the inconveniences of these already here. We don't wish anymore. I am an honors graduate of U.C. Davis in the field of range management.

C Enclosed are pictures taken in the month of January, 1987, on our ranches of evidence of our objections. The land is not overgrazed. I have been managing this land since 1974. Construction of power lines cause immense soil damage and permanent scars on the land. In addition the land on our ranches is very unstable and the power line path and

D road has caused much slippage and erosion. The constructors of the last power lines (in 1953) built unstable roads without water bars and without reestablishing vegetation. These are still eroding today. Also your maintenance men do not use your roads but use our ranch roads causing damage. I have to maintain my own roads. We also get much trespassing since people believe property under power lines is public. The pictures prove all this. On the back of each picture is an explanation of it. They are all taken underneath the lines, except the ranch road damage (3 pictures). The power lines are an eternal inconvenience to live with and cause extra work for the land owner.

Clarissa Dierksen
P. O. Box 10
Round Mountain, CA 96084

Barbara Hale (partner)
P. O. Box 157
Round Mountain, CA 96084

Dated: January 27, 1987

A Comment noted. The Project has adopted a number of mitigation measures which are listed in Section 1.1.5 of Volume 1 of this document. Subsection II lists measures related to geological hazards such as unstable slopes, and soils problems such as erosion.

B Comment noted.

C Ms. Dierksen's photos indicated surficial slumping and erosion near the existing PGandE 230 kV lines on her property. The COTP preferred route is wide enough to allow selection of a centerline away from the problem area. Based on this information from Ms. Dierksen and Ms. Hale, geotechnical consultants visited the area and provided a report on the area to the COTP.

The soils mitigation measures presented in Section 1.1.5 of Volume 1 of this document are designed to minimize erosion, slippage, compaction subsidence, and differential settlement of soils.

D One of the important environmental considerations in transmission line design is the planning of access roads. Methods will be employed in design and constructing the access roads to incorporate water bars and revegetation techniques along with other erosion control practices described in Section 1.1.5 of Volume 1 of this document. These specify that water bars and rapid revegetation of disturbed areas will be used to minimize the potential for problems such as those the commentor has identified. Private ranch roads may be used only if that is agreed to by the landowner and a suitable easement is negotiated along with consideration for the use of that road and the cost of its maintenance.

L-177

WRITTEN COMMENT FORM
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A

We Intervene only because we own land in this area that we oppose the Project. Preliminary years experience on electrical lines and circuits up to 300,000 volts, and am appalled by the idea that the existing transmission routes is not being automatically selected for the new Project as well. It is grossly inefficient and typically wasteful of public utilities companies to simply ignore existing transmission routes and to start from scratch.

ROUTE AFFECTING OUR COMMUNITY N-8 ALT-1

Glen C. Sollid
Norma J. Sollid

Hearing Date: _____

Location: _____

Name/Address: _____

_____

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660978
Sacramento, CA 95866
(916) 924-3995

A Comment noted. Existing transmission line corridors were considered beginning early in the siting process. The Phase I Report summarized in Section 1.0 of Volume 2A of the Draft EIS/EIR describes how existing transmission lines factored into the definition of both the overall study area and the 2- to 5-mile wide corridors in which 1,500-foot wide routes were subsequently identified.

One of the environmental benefits of the COTP, as proposed, is that it parallels existing 230 kV lines between the Round Mountain area and the Redding area, and then consists of an upgrade of an existing 230 kV line between Redding and the Sacramento Delta resulting in significantly reduced environmental impacts.

Constructing a third 500 kV line within the existing 500 kV corridor, or very close to the existing corridor, would certainly appear much easier than what has been proposed. Unfortunately, to do this would place all three 500 kV transmission lines so close together as to expose all of them to a common failure should an emergency outage occur. It is contemplated that should emergency outages occur within the existing corridor, 2,400 MW of Northwest hydro will be instantaneously tripped to compensate for this loss. More instantaneous generation tripping may result in the loss of firm electrical load in Montana, Idaho, Utah, Arizona, or other places upon the interconnected high voltage transmission system. If the emergency outage involves only two lines in the corridor, then the third line can continue to carry 2,400 MW, but if the third line were also involved in the emergency, only 3,200 MW could be carried by all three under normal conditions before the emergency for the system to remain stable.

The objective of the COTP is to increase the amount of power transmitted by 1,600 MW to a total of 4,800 MW. Thus, a new corridor is required; otherwise the COTP is not worthwhile. Should such an emergency involve all three lines without reducing the transfer level aforehand, a catastrophic and wide spread loss of electricity in the major cities throughout the 14 Western United States would result. For many reasons, a reliability criteria has been established to avoid re-occurrence of the 1964 New York blackout with its widespread catastrophic consequences. To meet the WSCC Reliability Criteria for System Design, the third line must be separated from the existing two.

L-178

WRITTEN COMMENT FORMS
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A

My Comment Concerns the noise pollution projected at the sub stations connected to the Gronsmissions lines We live 4 miles from the Round Mt. sub and since the power was turned on there have been hazards by the noise coming from it. I feel that people living near the proposed subs on this transmission route should be aware that there will be a noise problem unless the sub is at least a mile from habitations and some sort of noise barrier be erected. Noise level of the areas of construction should be checked by qualified personnel at different times in a 24 hour period. And decibel reading after construction should be taken. Round Mt where it first began to operate

Hearing Date: Jan. 7, 1987
Location: Round Mt. Calif
Name/Address: Joseph Bertolozzi
P.C. Box 26 Round Mt. Calif 96084

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866
(916) 924-3995

A Modern substation design standards require corona free hardware on all bus work and overhead conductors which keep audible noise at a minimal level. See also response to L-329 C1.

L-179

WRITTEN COMMENT FORM
FOR THE DRAFT EIS/EIR
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A 1. Permission is (still) NOT granted permission to enter my property - Shasta County (Millville) Parcel # 060-090-06!

B 2. Based on information given 7 Jan 87 meeting - the "line" if it travels on the east corridor adjacent the PG&E line would cut my property in half rendering it useless for building/habitation & my - you will have to buy the whole Parcel!

C 3. Appears by testimony ~~submitted~~ by others revealed there (Agencies) are in opposition to this line, i.e. loss of timber production,
D BLM require a five (5) mile seperation of lines (yours would be 200 feet from the (eastern PG&E) existing lines, Bonneville
E (Power) unable to sell outside its area by 1990's, etc.

F 4. As I understand, Physiologists are (still) studying effects (damage) to human cells by the radiation from the high tension lines.

N.S. Fileccia

Hearing Date: 7 Jan '87
Location: Redding, California
Name/Address: N.S. & B.D. FILECCIA
3862 Palm Ave., San Diego CA 92154-4668

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866
(916) 924-3995

A Comment noted.

B See response to L-330 U14.

C Construction of the transmission line along any of the alternative routes will result in a loss of timber production. The estimated amounts of these losses are presented in the Draft EIS/EIR, Volume 2A, Tables 3.6-9 and 3.8-8. Impacts are also summarized in the Draft EIS/EIR, Volume 1, Tables 4.1-1 to 4.1-5. The estimated timber of the currently preferred route relative to the alternatives is summarized in Tables 1A and 1B in the Summary of Volume 1 of this document. One of the many factors that weighed in the selection of Alternative North D was the reduced impact to prime forestland.

D We have been working with BLM on routing of the COTP and are unaware of the 5-mile requirement. See the response to L-177 A.

L-179 (continued)

D (cont.) The objective of the COTP is to increase the amount of power transmitted by 1,600 MW to a total of 4,800 MW. Thus, a new corridor is required; otherwise the COTP is not worthwhile. Should such an emergency involve all three lines without reducing the transfer level aforehand, a catastrophic and wide spread loss of electricity in the major cities throughout the 14 Western United States would result. For many reasons, a reliability criteria has been established to avoid re-occurrence of the 1964 New York blackout with its widespread catastrophic consequences. To meet the WSCC Reliability Criteria for System Design, the third line must be separated from the existing two.

E See response to L-3 T.

F See responses to L-330 F3 and SL-51 A.

L-180

WRITTEN COMMENT FORMS
FOR THE DRAFT EIS/EIR
FOR THE
CALIFORNIA-OREGON TRANSMISSION PROJECT
AND THE
LOS BANOS-GATES TRANSMISSION PROJECT

If you have comments on the Draft Environmental Impact Statement/Environmental Impact Report that you would like to have considered by the lead agencies, you can use this form to write them down. This form can be handed in to the court reporter at the meeting, or mailed to the Environmental Coordinator at the address below. Your comments must be mailed by February 3, 1987. Thank you.

A I am opposed to another powerline construction project in our area. I consider it unnecessary and a public nuisance. I do at most it! Please send me

B a copy of the Draft EIS/EIR plan or report so that I can make more specific comments. Please advise me of public hearing dates and locations.

Hearing Date: _____

Location: _____

Name/Address: Robin Keehn
PO Box 284
Montgomery Creek, CA 96065

Mail to:

A Comment noted.

B A response was sent to the commentor on January 13, 1987.

L-181

WRITTEN COMMENT FORMS
FOR THE DRAFT EIS/EIR
FOR THE
CALIFORNIA-OREGON TRANSMISSION PROJECT
AND THE
LOS BANOS-GATES TRANSMISSION PROJECT

If you have comments on the Draft Environmental Impact Statement/Environmental Impact Report that you would like to have considered by the lead agencies, you can use this form to write them down. This form can be handed in to the court reporter at the meeting, or mailed to the Environmental Coordinator at the address below. Your comments must be mailed by February 3, 1987. Thank you.

A With miles of surrounding uninhabited lands, it seems the present proposed route, resulting in the ruination of a community of seven to nine private residents, unthinkable.

Not only is this route a personal infringement of rights; but the infringement on the natural habitat as well, that which drew us all here initially.

B The loss of trees would encourage erosion (100 inches of rain annually), would no longer protect the abundance of animals and would totally destroy property value. There is also a health threat, as some agencies maintain close proximity to such high voltage implies.

C I think your not allowing sufficient time to prepare and respond most unfair to those of us whose lives and property you propose to alter irrecoverably. (Your December 5, 1986 letter, post-marked December 16, 1986 was not received until January 8, 1987 as I was vacationing during that time.)

I will not sit idly and permit this personal intrusion and watch the ensuing damaging results.

Hearing Date: January 7, 1987
Location: Round Mountain, California
Name/Address: Mary Jane Vinzant Mary Jane Vinzant
P.O. Box 80, Big Bend, California 96011

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660978
Sacramento, CA 95866
(916) 924-3995

A We believe that route option North 4, which is included in the Supplement to the Draft EIS/EIR, and has been adopted as the preferred route, reduces potential impacts to your community.

B Impact information is presented in the Phase III portion of Volume 2A of the Draft EIS/EIR. Section 3.2.2 discusses potential impacts to earth resources, Section 3.4.2 discusses vegetation, Section 3.5.2 discusses wild life, and Section 3.8.2 discusses socioeconomics. See response to L-330 F3 regarding health effects.

C The public comment period was extended to March 2, 1987. See also responses to L-130 C and L-159 G.

L-182

LARRY J. MEYER, D.D.S., INC.

1/7/87

Gentlemen,

A I wish to express my appreciation for choosing the eastern corridor for the California - Oregon Transmission line. It would have been a grave injustice to put the line through Shasta Valley and I want you to know that you have made a wise decision for recommending the Malin - Bartle route.

Sincerely,

Larry J. Mey

518 NORTH MAIN STREET · YREKA, CALIFORNIA 96097 · TELEPHONE (916) 842-1689

A Comment noted.

L-183

5933 Chabot Crest
Oakland CA 94618
Oakland CA 94618

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Dear Sir:

We own a 160 acre parcel near Antelope Sink (close to Macdoel CA) which appears to be close to alternate routes B and C for the proposed transmission line.

A Our plans are to retire to our home there in the near future. They also include probable subdivision of the property into scenic home sites with the availability of an air strip. The transmission line not only would be unsightly and perhaps make our property unsaleable, but it would also impose a hazard for the air strip.

We hope the transmission line will not pass within sight of our property and will follow the preferred route where lines already exist and where property like ours and that of our neighbors will not be so heavily affected.

Respectfully,

Richard Tomaselli

A The preferred route, Alternative D, avoids the Macdoel area. Its selection was due in part to the proximity of Butte Valley Alternatives B and C to the communities of Dorris and Macdoel.

The COTP has noted your concern involving the proposed transmission line and the planned air strip and will include it in the list of "Airports and Airstrips Potentially Affected by Routes" that is contained in Table 3.6-17, Volume 2A of the Draft EIS/EIR. See Section 1.2.3 of Volume 1 of this document for the addition of a statement to Table 3.6-17 regarding the referenced airstrip.

L-184

Dale L. McCloskey
P.O. Box 324
Big Bend, CA 96011
(916) 337-6920
(After 6:00 pm)

January 7, 1987

Ms. Laura Edlin, Public Affairs Director
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Dear Ms. Edlin;

A I am writing concerning the California-Oregon Transmission Project (DOE/EIS - 0128, SCH # 85040914) of November 1986. I am one of seven owner/residents on the rim of Pit Seven. We are in the direct route of N-8 Alt-1. Our unique community of 160 acres is backed up to the Pit River rim and is surrounded by private timber companies and PG&E property. We are a developed community with only a few small undeveloped parcels. Besides the seven year-around homes, we have three summer homes and two year-around homes under construction. N-8 Alt-1 crosses five parcels, four of which are owner occupied. None of these parcels are larger than 20 acres, consequently, a 200 ft clear cut would devastate them. The majority of the community is retired with most receiving Social Security. We are a society of very divergent individuals with one thing in common, an intense desire to live in harmony with nature. We look at our ownership as a guardianship to protect a very beautiful, unique and delicate area.

We are opposed to the Transmission Project as presently conceived because it will destroy a lovely and unusual area and will equally destroy our life savings, our property values.

B We resent that due process has not been properly followed. We were unaware of the Project's general route until the middle of December, and only after obtaining a copy of the EIR at Christmas were we aware of the recommended route and its implications. Several of our permanent residents are away for the holidays and totally unaware that decisions affecting their homes are being made. We have had insufficient time to review the EIR, to adequately obtain legal counsel and organize ourselves to properly present our case.

C We further resent that the Project has given apparent priority to planned future real estate developments and totally ignored a fully-developed community (Pg. 3.6-29 and Fig. 4-2D).

D We perceive this Project and the meeting held at Round Mountain, California on January 7, 1987 to be a "railroad" effort to force this Project through regardless of public opinion and the environmental costs.

E We are further opposed to this Project because it is in prime timber country and will result in the permanent eradication of valuable and what should be a

A Real estate value can be affected by zoning, neighboring land uses, and the economy in general. Property owners will be compensated in the easement acquisition process for land rights acquired as well as damages to their property.

As stated in Volume 2A, Section 3.8.2.4 of the Draft EIS/EIR, regarding neighboring properties, "Research on the effects of transmission line property values neither demonstrates nor disproves a negative effect. Much of the research done to date is not conclusive and has methodological flaws..."

The issue of effect of a transmission line on residential properties close to but not within the right of way has been the subject of academic, real estate, and utility research for more than two decades, but the results of the research performed remains inconclusive. Most studies have concluded that property values off the right of way were not appreciably affected by the presence of a transmission line (U. S. Department of the Interior, Bonneville Power Administration, 1987. The role of the Bonneville Power Administration in the Pacific Northwest power supply system. Appendix B: BPA power transmission. Portland, Oregon).

Mountain Western Research prepared a report for BPA on a comprehensive literature review on property value effects of transmission lines. Their research found that 5 of the 27 studies reviewed concluded that there was an adverse effect, 5 concluded no effect on property values, 7 concluded no significant adverse effect, and 10 were inconclusive or internally contradictory (Mountain West Research, Incorporated, 1982. Electric transmission line effects on land values: A critical review of the literature. Preliminary draft, prepared for the Bonneville Power Administration. Billings, Montana).

B See responses to L-130 C and L-159 G. Section 1.1.7 of Volume 1 of this document describes the scoping process for the COTP. The lead agencies believe that due process has been followed.

C In most cases, equal weight was given in the routing process to [illegible] have been filed with the county.

L-184 (continued)

Ms. Laure Edlin, Public Affeira Director
January 7, 1987
Page 2

E renewable resource. Shasta County estimates that every mile of transmission line will result in the permanent removal of 25 acres of timber land. How can we measure this loss through the lifes of our children, grandchildren and subsequent generations?

F Additionally, this Project will be an ecological disaster on the Pit River rim because of the destruction of habitat, the erosion that will result when the ground cover is damaged (we receive over 100 inches of rain annually) and the insidious damage from opening the area to further human intrusion.

We have the following recommendations:

G First, move the Project to Eastern Shasta County as recommended by the Shasta County Board of Supervisors (N-12G refers).

H Or, return to the original EIR route N-8E, using the existing transmission route that has already damaged the country.

I Or finally, shift to the west of our community and establish a new route in consultation with us.

In summary, we insist that N-8 Alt-1 be eliminated or redrawn.

We will cooperate in redrawing that route but we will not cooperate in the rape of our homes, our life savings and an uniquely beautiful area.

Sincerely yours,

Dale L. McCleskey

Dale L. McCleskey

D Comment noted. See response to L-159 G.

E Comment noted. See response L-179 C.

F The COTP is very concerned about potential erosion hazards in the Pit River area. On Page 3.2-18 of Volume 2A it is indicated that very high rainfall factors and steep slopes may result in an accelerated rate of soil erosion and a potentially significant impact. However, mitigation measures adopted for the COTP (see Section 1.1.5 of Volume 1 of this document), which include close spacing of drainage control structures, a reduction in average road grades, avoidance of wet weather construction, the use of helicopter construction, the use of straw or hay mulch, temporary and permanent revegetation programs and anchoring towers to bedrock, would reduce soil erosion impacts to a level which is less than significant.

G The Eastern Shasta County route was considered but not selected due to reliability concerns of the COTP. This route would require the COTP to cross the existing AC Intertie transmission lines. Because these crossings are believed to be unreliable, this option was considered to not meet the intent of the COTP to provide reliable transmission facilities. See also response to T-69 F.

H See response to L-159 O.

I See response to L-159 G.

L-186

Sir: 1-12-87

In regard to the new 500KV Power line to be constructed in No. California.

There is not going to be one place it can be put where someone will not complain about its presence.

A For the thought of defense purposes & having power, the 3 lines should not run together or anywhere close to each other. They should be at least 50 miles away. This will also help it from being vandalized (blow up - shoot insulators, etc.) at the same time.

In short, having 3 lines that close together is just not a wise idea.

Tommy A. Thompson
P.C. Box 29
Cassel, CA. 96016

A Comment noted. See response to L-177 A.

L-188

Jan. 10, 1987
Rt. 2 Box 803
Klamath Falls, OR 97603

Dear sirs:

I believe your environmental analysis concerning the powerline alternative east of Newell is seriously deficient.

A The Cross alternative, which was stressed at the Newell public hearing, is environmentally superior and must be fully analyzed. That alternative was proposed by John Cross, Modoc County Planning Commission chairman. Details of it are contained in his comments.

That alternative keeps the line off prime farmland and doesn't offset that benefit with other adverse impacts.

In addition, the preferred alternative has gaps and false assumptions.

B Volume 2A, page 3.6-28, agriculture, says a minimum threshold of a half-mile was used to determine if a line crossing has a significant impact. That is seriously wrong. Even a few feet can be a significant impact, depending on the lines location.

A half mile of line can cross more than $400,000 worth of farmland. It should not be assumed there is not a significant impact based on distance.

Also in that volume, the analysis on farmland including pages 3.6-3 through 3.6-6 and 3.6-21 through 3.6-24; and 3.10-15 and 16 is defective.

C Long-term affects on farmland aren't adequately addressed. Cumulative economic effects based on the engineered life of the line need to be addressed.

Also, an analysis is needed of the possibility of forced changes in cropping patterns for fields the line crosses such as no longer being able to grow seed crops.

Long term economic effects that need to be analyzed include additional costs for irrigation and weed and insect control.

D The possibility and cost of mitigating measures also needs further analysis. For example, the draft refers to increased erosion if the line is run east of the farmland. That could be

A See response to L-330 H.

B A minimum significance threshold of one-half mile was chosen in order to eliminate situations where only a small corner of a field was affected. We agree that a crossing of several feet could make farming more difficult, depending on the line's orientation and irrigation practices. See also response to T-30 C.

C An analysis of the cumulative economic effects for the life of the COTP is found in Table 3.6-12, Volume 2A of the Draft EIS/EIR, Section 3.6, page 3.6-38. The last entry in the table presents the long-term economic impact on agriculture per route segment over the life of the COTP (assumed to be 50 years) in constant dollars. See also responses to L-41 C, L-204 E, L-330 Q1, T-175 A, T-175 D, T-175 E, and T-175 G.

D Section 1.1.5 of Volume 1 of this document includes mitigation measures for earth resources. Subsection II.A describes measures specific to soils. The cost of mitigation is included in the estimated cost of constructing the COTP. Measures will also be initiated to speed the reestablishment of vegetative cover in sensitive areas where erosion is a problem. The COTP will work closely with land management and regulatory agencies to establish a specific timeline for revegetation activities on a site by site basis.

L-188 (continued)

D

mitigated by planting grass to stabilize the soil.

Additional analysis of the areas I have referred to is available in the comments submitted by the Klamath-Modoc counties powerline committee.

Sincerely,
Barbara Christy

Barbara Christy

L-189

Jan. 9, 1987

Environmental Coordinator:

Re: California-Oregon Transmission Project

A As residents and landowners in the Shasta Valley, we oppose the installation of the transmission lines in our area.

B We have recently worked very hard to build a new home here, where we plan(ed) to stay., not only will the power lines devalue our property, but they may have an "un-healthy" effect on our lives and those of our children.

C

D

Thanking you in advance,

Doran and Cindy Austin

6305 Frontier Dr., Montague, CA

Shasta Valley, Siskiyou County

A Comment noted. The preferred route will avoid the Shasta Valley.

B Comment noted.

C See responses to L-184 A and T-82 C.

D See responses to L-330 F3 and SL-51 A.

L-190

WRITTEN COMMENT FORM
FOR THE DRAFT EIS/EIR
FOR THE
CALIFORNIA-OREGON TRANSMISSION PROJECT
AND THE
LOS BANOS-GATES TRANSMISSION PROJECT

If you have comments on the Draft Environmental Impact Statement/Environmental Impact Report that you would like to have considered by the lead agencies, you can use this form to write them down. This form can be handed in to the court reporter at the meeting, or mailed to the Environmental Coordinator at the address below. Your comments must be mailed by February 3, 1987. Thank you.

MY NAME IS STEWART LEBARON. MY WIFE - MARJOLAINE - AND I OWN SHASTA COUNTY PARCEL # 027-250-07, 5 ACRES, AND WE'VE LIVED HERE FOR MORE THAN 10 YEARS. WE AND 5 OTHER FAMILIES OWN PARTS OF 160 ACRES OF PRIVATE LAND ON THE EDGE OF THE FLATWOODS OVERLOOKING THE PIT RIVER BETWEEN PIT 6 AND PIT 7 DAMS, AND SURROUNDED BY PG&E AND OTHER TIMBER COMPANIES.

A N-8 ALT 1 GOES DIRECTLY THROUGH OUR 160 ACRE COMMUNITY. I ~~ARE~~ AND MY NEIGHBORS FRANK JOHNSON AND DALE MCCLESKEY HAVE ALREADY MET WITH OUR LAWYER AND WE WON'T QUIT UNTIL WE GET YOU OUT OF HERE. WE WILL TRY TO STOP YOUR PROJECT TOTALLY;

B OR MOVE IT TO EASTERN SHASTA COUNTY, WHERE THERE IS LESS TIMBER AND PEOPLE; OR AT LEAST KEEP YOU FROM DESTROYING OUR HOMES -

C OUR LIVES AND ESSENTIALLY OUR SAVINGS. ALSO, THERE IS ALREADY AN EASEMENT FOR YOUR LINES. USE IT! (OVER)

Hearing Date:

Location: ROUND MOUNTAIN COMMUNITY CENTER 1/7/87

Name/Address: STEWART LEBARON
BOX 113 MONTGOMERY CREEK CA
96065

Mail to:

Environmental Coordinator
California-Oregon Transmission Project

A As a result of the input from Mr. LeBaron and other landowners on the edge of the Flatwoods area overlooking the Pit River between Pit 6 and Pit 7, we have identified a new route option (North 4) for the transmission line to the west and subsequently out of the 160 acre community. It is presented and analyzed in the Supplement to the Draft EIS/EIR. North 4 has been adopted as the preferred route.

B Comment noted. See responses to L-159 F and T-69 F.

C We are not able to route adjacent to the existing Intertie because of reliability considerations. Please refer to Section 1.1, pages 1.1-2 and 1.1-3 of Volume 1 of the Draft EIS/EIR for previous discussions concerning transmission system reliability. See also response to L-177 A.

L-190 (continued)

OF ALL THINGS THIS FLAT DOESN'T NEED ANY MORE 500 KV LINES AND TOWERS, OR ANY MORE CLEAR CUTTING. YOU AND PG&E ARE TRYING TO DESTROY THIS FLAT. IT'S A MESS UP HERE IN THESE WOODS! YOU SHOULD SEE IT. IT'S A SHAME TO DO ANYTHING ELSE UP HERE. YOU PEOPLE WITH THE $ WILL NEVER SEE THE DESTRUCTION YOUR $ IS DOING. BUT WE SEE IT AND HAVE HAD TO LIVE WITH IT AND NOW WE'RE GOING TO FIGHT YOU PEOPLE. I AM NOW WRITING TO MY ELECTED REPRESENTATIVES AND I'M SURE YOU WILL SOON HEAR FROM THEM AND OUR LAWYER.

Stewart LeBaron

L-192

Santa Fe Pacific Timber Company

January 15, 1987

Mr. Robert A. Olson
Transmission Agency of
Northern California
P. O. Box 660970
Sacramento, CA 95866

Dear Mr. Olson:

Please refer to the draft environmental documents for the proposed California-Oregon Transmission Project.

For the following reasons, I am requesting that the comment period be extended for two months:

A 1. First and foremost, considering the sheer size, weight and complexity of the documents, there simply is not enough time to conduct a thorough study and comment by February 3rd.

B 2. The documents were not published in a timely manner and more time should have been allowed for comment, once the documents were mailed.

C 3. The documents arrived during the winter period which precluded field review of matters requiring on-the-ground study.

D 4. Some of the forest landowners in Shasta and Siskiyou Counties have not received the draft documents even though they have been requested for some time.

We believe this request to be both reasonable and necessary.

Sincerely,

James B. Nile

J. B. Nile
Director, Government Affairs
and Lands

Copy to: Senator John Doolittle
Assemblyman Stan Statham
Congressman Wally Herger
Public Utility Commission
Att: Mr. Mike Burke

A The public comment period was extended to March 2, 1987.

B The initiation of the public comment period followed the mailing of the Draft EIS/EIR to a comprehensive set of document repositories such as local libraries and planning departments throughout California and Oregon. At the same time, documents were mailed to individuals and groups who had requested copies.

C Comment noted.

D Mr. Nile was contacted to obtain the names of those to whom he referred. None were identified who had not earlier been sent a copy.

L-193

LAW OFFICES
GERMINO, LAYNE, BRODIE, RUNTE & MAGUIRE
A PROFESSIONAL LAW CORPORATION

D OLIVER GERMINO (1903-1978)
DONALD M. LAYNE
C. WILLIAM BRODIE
JOHN O. GERMINO
JOHN A. RUNTE
DAVID B. MAGUIRE*
DONALD O. GERMINO
EDWARDO M. AMARAL
J. SCOTT JORDAN
SUSAN B. F. SOLOMON
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MARIANNE C. ROSSI
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2800 EL CAMINO REAL
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PALO ALTO, CALIFORNIA 94306-0610
TELEPHONE (415) 857-9811

1341 EAST PACHECO BOULEVARD
POST OFFICE BOX 88
LOS BANOS, CALIFORNIA 93635
TELEPHONE (209) 826-8024

JOHN H. HALL, JR.
OF COUNSEL

PLEASE REPLY TO
PALO ALTO

January 16, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Gentlemen:

The undersigned represents Mr. and Mrs. Sheldon Moore, whose mailing address is Route 1, Box 9, Byron, California. My clients own approximately 600 acres of real property about five or six miles southeast of Byron, said real property being located along
A the south side of the Clifton Court Forebay. In reviewing the documentation made available to us to date, it appears that it is proposed that your contemplated transmission line go through my clients' property. As a result, I appeared at the hearing held on January 13, 1987, at Brentwood, California, to make certain comments on the record regarding this proposal. It is the purpose of this letter to set forth in writing these comments to assure that they will be addressed by your agency.

My clients' property is presently agricultural in use and has the potential of various other uses. Adjacent to their property on the north is property owned by the State of California, which has
B no present use and, due to its size and configuration, will never have a use. It is my suggestion that this land owned by the State of California be utilized for those transmission lines and towers presently proposed to go across my clients' real
C property. I enclose an exhibit which depicts the southern portion of Clifton Court Forebay, the State of California property in red, and my clients' property with what I believe to be the proposed route of the transmission line through my
D clients' property, in orange. If the State property, for some reason, is unacceptable to you, then I suggest you place these lines and towers in the Clifton Court Forebay as a second

A Comment noted.

B Your suggestion to utilize land owned by the State of California has been investigated. This option is not being considered due to environmental considerations, construction cost, and adverse effects on a residence located on the Bethany-Byron Road. Also, the California Department of Water Resources has stated that transmission lines on their land will conflict with the operation and maintenance of the Forebay and future development plans of the Clifton Court Forebay and South Delta area. See response to SL-76 D.

C The map attached to Mr. Germino's letter correctly depicts the approximate location of the proposed transmission line immediately adjacent to and on the east side of the two existing

L-193 (continued)

LAW OFFICES
GERMINO, LAYNE, BRODIE, RUNTE & MAGUIRE
A PROFESSIONAL LAW CORPORATION

D alternative to my clients' property. I would appreciate your written response concerning my suggested alternatives, since it would appear clearly that either of these alternatives would provide the least private injury to my clients at no additional cost to your agency and possibly a savings, especially when you consider the excessive cost to you to purchase a right of way through my clients' property.

E In addition to the foregoing, please advise us as to the extent of the firm power commitments to date received by your agency, which will be utilizing this proposed transmission system.

Yours truly,

John O. Germino

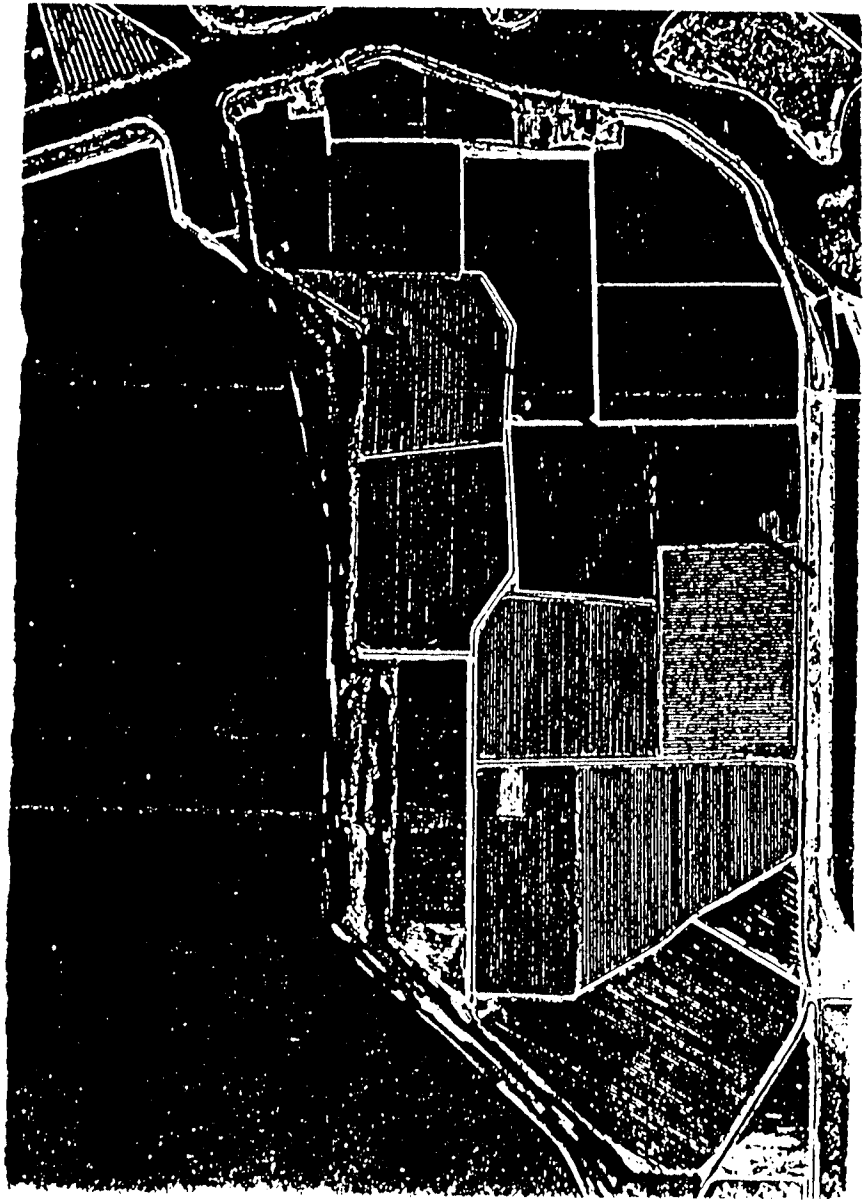
JOG:lt
Enclosure

C (cont.) transmission lines crossing the Moore's property. We believe the proper location of the line in this case is adjacent to the existing lines rather than at a separate location surrounding the Moore's property. We believe much less interference will occur to the farming operations, especially any aerial application, if the lines are all in one location.

D This suggested alternative was evaluated with the California Department of Water Resources and found to be inconsistent with current plans for the long term development and plans for the expansion of the Clifton Court Forebay. See attachment to letter SL-76. A response was sent to the commentor on July 9, 1987.

E At this time, the Transmission Agency of Northern California has no firm power commitments from Northwest utilities. Such arrangements may be made by members of the Agency after a decision is made whether to proceed with construction of the California-Oregon Transmission Project.

L-193 (continued)



L-195

Malin Chamber of Commerce

MALIN, OREGON

— Visit Our Famous Park —

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

January 17, 1987

Dear Sirs:

This letter is to inform you of our position in regards to the final EIR/EIS draft. Please be sure to include our comments in your evaluation of the placement of the 500 KV power line for the California-Oregon Transmission Project.

A We feel that the placement of this line should <u>not</u> be on any private, irrigated farm land whatsoever. The hazards and economic hardships created by doing so have been adequately pointed out to you previously by others. Since

B this line is a public utility and is of virtually no value to the residents

C in this area, it is our desire that the line be placed on public land. Therefore, we are recommending that you use the "John Cross Alternative" route.

Thank You,

Richard Clark

Richard Clark-President

Steve Fablanek

Steve Fablanek-Treasurer

A Comment noted.

B For a discussion of the project benefits to ratepayers, see responses to L-329 A, L-330 B, and T-126 A.

C See response to L-330 H.

L-196

TO: Project Managing Director California Oregon Transmission Project

FROM: Louie Melo
408 E. Alma St.
Mt. Shasta, Ca. 96067

SUBJECT: Some Points of View Related To Economic Considerations

INTRODUCTION

My brief report to you will address itself to some of the incomplete and/or vague economic considerations that when translated to support the major project may cause more problems than have been bargained for. While this writer would agree that it is nearly impossible to call attention to detail points, it is, nevertheless, bothersome to find data that appears vague, incomplete, illogical, and/or just confusing.

The PROJECT

The project has been presented to the public as the "California Oregon Transmission Project" and its major goal was to reach for surplus electrical energy that is presently available north of the California line. In addition, such a project would enable the public and private electrical generating organizations to work toward an intertie or grid system that, in effect, would create a more efficient distribution system . To accomplish this a 300 mile -- 500 kV transmission line has been proposed that will start north of the Oregon border and terminate at a mid point in California.

Actually this proposed project is designed to incorporate an electrical intertie and/or grid system that will service the western area from the Canadian border to the Mexican border. A While this writer believes that such a complex system could be economically beneficial to everyone concerned, he does not understand why the entire area was not studied in terms of the area's respective ability to contribute energy to such a system as well as receive energy from the Pacific Northwest.

B Cost estimates presented range from 464 millions to over 700

A The COTP is recognized in federal legislation (P.L. 98-360) as an important addition to the interconnected bulk transmission system for the western states. It is not an energy producer, but rather a means for improving the existing transmission grid. The alternative of generating electricity instead of obtaining energy from out-of-state sources is addressed in responses to L-306 CC and L-306 F2 et.seq.

L-196 (continued)

B millions. It depends on what is included toward the ultimate goal. In a like sense, how can the planners indicate with confidence that the consumers will save an estimated 23 million dollars each year over other suggested systems when other systems were hardly mentioned.

The System

As a result of the proposed goal with its somewhat limited reviews, the entire report is, in effect, directing nearly all of its effort toward justifying the use of cheap hydro-electric energy found in the Pacific Northwest.

Secondary objectives do include possible seasonal exchange of power, diversification of power resources, transmission reliability and possible reduction in the use of oil or gas by California utilities.

Action for this drive was supported by the Secretary of Energy and authorized by "Title III of the Public Law 98-360". Such support is easily approved if a project appears to be for the public good.

While Californians are the major recipient of the electrical energy in question, very little research time or comparative data has been written as to what Californians have to offer toward the total system.

We Californians

C While nearly everyone will agree that California will certainly need more electrical energy during the next 20 or 30 years, it seems, to this writer, that its own resources should have been evaluated before asking the Pacific Northwest to become a significant supporter of electrical energy without some effort on our part.

California has some of the same hydro-electric possibilities that are found in the Pacific Northwest. For example the major rivers are located within:

1. The Cascade Range
2. The Klamath Mountains
3. The Sierra Nevada Range
4. The Coast Range

B See response to L-344 B. A number of alternatives, both individually and collectively, were analyzed against the COTP. The analysis in the COTP Draft EIS/EIR does not conclude that exactly $23 million will be saved each year. It concludes that the COTP will save money, possibly more than twice the annual cost of the COTP for ratepayers under most reasonable assumptions about the future.

The economic discussion of alternatives is included in Volume 3A of the Draft EIS/EIR, Appendix B, Section 10.0, pages 96-106.

C See responses to L-196 A and L-306 BB through L-306 MM.

L-196 (continued)

Some of the above mentioned areas are already contributing toward our Electric Power needs along with flood control, agricultural support, recreation, etc. A review of our hydro-electric potential still tells this writer that California can add to its own electric grid networks of power dams without destroying the state's natural environment. It seems that some of our people just want to let "Goerge" (Pacific Northwest) do it. For example, the Army Corps of Engineers have been ready to tame the erratic flood pattern of the Russian River for some twenty years. Such a dam, as with other dams, would include a hydro-electric system, create new stable uses for the impounded waters, provide added recreation to that broad area of California, etc. To date, it seems that Californians in that area would rather get themselves flooded during wet winters and also ask the Secretary of Energy to bring required energy from the Pacific Northwest. In short, what can our Californians do for themselves before crying for help and willing to spend three quarters of a billion dollars.

It must also be mentioned that the report provided very little space to other sources of electrical energy. While we know that California has used oil and gas systems as their old standby, it has, during recent years, added geo-thermal, nuclear fuel, and wind power, wood waste, city wastes (garbage), etc. It's well known that some of these are now playing a significant role in the energy world.

Conclusion

Something worth thinking about----

1. We already have the "Pacific Northwest-Pacific Southwest intertie system. Can this system be modified or upgraded to handle the power exchange, as well as the surplus power when available?
2. Has anyone or an organization studied the potential added power growth that is still possible in California?

D See responses to L-196 A and L-306 BB through L-306 MM.

E See responses to L-196 A and L-306 BB through L-306 MM.

F For a discussion of transmission alternatives including upgrades see the Draft EIS/EIR Volume 1, Section 2.5, and Volume 3A, Appendix B, Section 10.2.1.

G The California Energy Commission studies the question of new power development potential in California on a regular basis. Utilities also perform similar studies. See Appendix B to Volume 3A of the Draft EIS/EIR for a discussion of forecasts of power demand in California.

L-196 (continued)

H 3. We tell each other that surplus power is very cheap, therefore very desirable. When the entire system is in place, will the surplus power still be classified as surplus and cheap. Will the current users accept a multi-price system?

I 4. We hear about costs ranging from 400 million to over 700 million. Have all the losses of forest and other land revenue been taken into account?

J 5. If other high voltage transmission systems can deliver their respective energy along a rather narrow route, why is this system being designated to do otherwise? Line safety just doesn't seem strong enough.

H Although the current firm power surplus in the Northwest and the possibility that it may be declining demonstrate the prudence of building the COTP on the planned schedule, the benefits of the COTP do not depend on continuation of the current firm power surplus in the Northwest. Additional benefits come from power available when river flows are better than critical dry conditions used for planning, the fact that California has its highest power demands in the summer whereas the northwest has its highest demands in the winter, and the fact that generating resources added in the Northwest to meet energy load growth will provide ability to meet peak demands in excess of the peak loads in the Northwest. No resources need be built in the Northwest for the purpose of making power available to sell in California. See also the response to L-3 T.

In regards to the multi-price system, California purchasers of electricity from the Northwest pay prices based on established rates set by the Bonneville Power Administration or fixed in contracts between Northwest suppliers and California purchasers. Thus the system is already a "multi-price" system. These prices are designed to recover the costs incurred by the seller. To the extent that power produced in the Northwest is surplus to the needs of Northwest consumers, sales to California will continue to produce revenue that will lower costs for Northwest ratepayers.

I An allowance for the costs of acquiring rights of way have been included in the COTP cost estimate, including estimates for the cost of forest and other lands taken out of production through the easement acquisition process. Also included is an allowance for the cost of mitigation for environmental issues.

J See response to L-177 A.

L-197

CALIFORNIA AVIATION COUNCIL
P.O. Box 331, Los Altos, CA 94023-0331
(415) 594-9300

SINCE 1948
CAC
VOICE OF GENERAL AVIATION

January 20, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Re: EIS/EIR- Aviation Element

Dear Sir/Madam:

A In reviewing the Index and Tables of Contents of all volumes of the EIS/EIR, I was unable to locate any reference to an aviation element. Although reference is made in Volume 2B to Impacts on Aerial Applications, no reference is made to airports.

Our Council is concerned with preservation of California's public use airports. We view each such airport as a part of the overall transportation system. We are concerned with any potential encroachment or interference which might adversely affect the utility of an airport.

B We would be concerned with any portion of the COTP which would encroach on a public use airport, or, which would present a flight hazard for aircraft using an airport.

I have received information informally that portions of COTP might affect certain of California's airports. For this reason, I recommend that an aviation supplement to the EIS/EIR be prepared.

Very truly yours,

Jay C. White, President

JCW/wj

A The COTP's potential impact on airports and airstrips is discussed on pages 3.6-8 and 3.6-56 in Volume 2A of the Draft EIS/EIR and is presented in Table 3.6-17 in Volume 2A of the Draft EIS/EIR. Routing evaluations were conducted such that existing and planned airstrips were avoided to the extent possible.

B See response to L-197 A.

L-198

WRITTEN COMMENT FORM
FOR THE DRAFT EIS/EIR
FOR THE
CALIFORNIA-OREGON TRANSMISSION PROJECT
AND THE
LOS BANOS-GATES TRANSMISSION PROJECT

If you have comments on the Draft Environmental Impact Statement/Environmental Impact Report that you would like to have considered by the lead agencies, you can use this form to write them down. This form can be handed in to the court reporter at the meeting, or mailed to the Environmental Coordinator at the address below. Your comments must be mailed by February 3, 1987. Thank you.

I am writing to let you know I feel about that Transmission Project you are putting down through Shasta County
A I don't like to see all the timber timber
B sized ~~[illegible]~~ destroyed as well as the game
I live on the rim of a canyon and you have
it coming right through my property
C and I don't care much I think you could
at least put on a different route
I would prefer if you would take it
down the east side of Shasta County.

I have paid taxes all my live in Shasta County.

Vernon Joiner
Box 6 Big Bend Calif
96011
TELL-337-6828
916

Hearing Date: _____
Location: _____
Name/Address: _____

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660978
Sacramento, CA 95866
(916) 924-3995

A Comment noted. Certain mitigation measures will be implemented to help minimize the impacts to forestry and wildlife resources. These are presented in Section 1.1.5 of Volume 1 of this document. See also response to L-179 C.

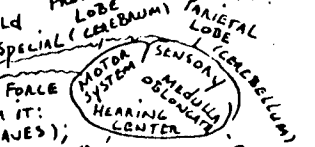
B As the result of input from the other landowners in the area along with Mr. Joiner, COTP has presented and analyzed in the Supplement to the Draft EIS/EIR a new route option (North 4) for the transmission line to the west of the group of houses on the Pit River canyon rim. North 4 has been adopted as the preferred alternative. We believe that this alternative route will greatly reduce the potential interference with these residences.

C A route suggested in the east side of Shasta County is discussed in the Draft EIS/EIR, Volume 2A, page 2.4-9. See also response to L-159 F.

L-199

C.I.A. MIND-DRUG EXPERIMENTS FOR 'PSYCHOLOGICAL WARFARE', CREATING JOBS', 'TECHNOLOGIES' AND 'CRIME' IN THIS MASONIC-SYSTEM OF SLAVERY. THE SANE (MR) VS. THE LIARS, AND THE STUPID WHO WOULD CAUSE THE demise OF THE HOLY BIBLE AND THE U.S. CONSTITUTION WITH A SECRET TECHNOCRACY.

THE BRAIN'S LOBES



THE MIND-CONTROLLER (WHOSE RANGE IS ASTRONOMICAL), SYNCHRONIZES SPECIAL MICROWAVE FREQUENCIES TO THE BRAIN, CREATING AN ELECTRO-MAGNETIC FORCE FIELD IN WHICH THE NATURAL ELECTRO-CHEMICAL ENERGY EMITTED FROM IT: (THOUGHTS, FEELINGS AND MEMORIES, COMMONLY KNOWN AS 'BRAINWAVES'); is RETRIEVED BY REMOTE CONTROL, decoded AND STORED BY its MICRO-COMPUTER CHIPS FOR INTELLIGENCE PURPOSES ETC.. EVERYTHING RETRIEVED FROM A VICTIM'S BRAIN BY A MIND-CONTROLLER COMES IN AUDIO-VISUAL JUST LIKE A TELEVISION SET. AND AN OPERATOR CAN ACTUALLY CONTROL AN UN-SUSPECTING VICTIM LIKE A ROBOT SIMPLY BY REGULATING AND CONTROLLING THE INTENSITY OF THE ELECTRONIC BRAIN STIMULATION HE'S RECEIVING THEREBY SETTING HIS MOOD WITH INDUCED SIMULATED STATES OF 'BLIND RAGE', 'ANGER', 'PAIN', 'FEAR', 'PLEASURE', 'EXCITEDNESS', 'CALMNESS', 'DROWSINESS' OR 'SLEEP'. THEN TRANSMITTING MIND-BOGGLING 'SUGGESTIONS' OR 'COMMANDS' DIRECTLY INTO HIS HEARING-CENTER TO TRICK HIS MIND INTO BELIEVING THAT THEY ORIGINATED WITHIN ITSELF, AND ARE HIS OWN THOUGHTS AS HIS PERSONALITY is BEING BLATANTLY, OR SUBLIMINALLY ALTERED WITH THESE BRAINWASH AND THOUGHT-CONTROL TECHNIQUES. PSYCHOTROPIC MEDICATIONS ARE USUALLY PRESCRIBED TO THOSE 'HEARING VOICES' IN ORDER TO ENHANCE THE CHEMICAL REACTION IN THE BRAIN TO THE STIMULATION, AND TO KEEP THE IGNORANT THINKING THAT THEY ALONE ARE THE CAUSE OF, OR CURE TO THEIR MENTAL PROBLEMS HERE IN GEORGE ORWELL'S AMERICA, HITLER'S SPIRITUAL ROME AND THE PROPHECY'S GREAT BABYLON: (REV. 2: 8-11, 18; 11-13). STREET NIGGA/CON-MAN/MUSLIM. A.C.L.U. 633 S. SHATTO PL., L.A., CA. 90005. 12/30/86

THE CALIF. DEPT. OF CORRECTIONS USES THIS NAZI-SCIENCE AND Jesus Christ C-16977, D-39023
SYSTEM OF MIND-CONTROL TO INSTITUTIONALIZE LIES AND -A POLITICAL PRISONER:
PEOPLE WITH POLITICS AND RELIGION "FOR THE CONTROL OF LIFE".
THEY ALSO BRAINWASH PEOPLE TO "BE PUNKS", "GO CRAZY" OR "COMMIT SUICIDE".
"NOT GUILTY EVER, NOLO CONTENDERE- "REMEMBER NUREMBURG!"
ALWAYS." Anthony Ware, THE WORD OF God, MADE FLESH, IN THE SPIRIT OF TRUTH AND PROPHECY.

A

A See responses to L-199 B, L-310 L, L-330 F3, and SL-51 A.

L-199 (continued)

BRAINWASH - TO SUPER-IMPOSE THE "WILL" OF ONE OVER THAT OF ANOTHER WITHOUT HIS PRIOR KNOWLEDGE OR CONSENT; (USING HYPNOSIS, MIND-BOGGLING, DRUGS ETC.); FORCING OR TRICKING HIS MIND INTO "DESIRING" TO DO THINGS THAT WOULD ORDINARILY BE REPULSIVE TO IT. SINCE AUG. 1980, PRISON GUARDS ETC., AT SOLEDAD, HAVE BEEN USING ONE OF THEIR PORTABLE MIND-CONTROLLERS ON ME IN HOPES OF "CORRECTING MY THINKING." BUT THEY FAILED, AND ON MAR. 2, 1984, I GOT JUDGE WINSTON JR. (LONG BEACH CT.) TO ORDER THEM TO STOP THIS CRIMINAL CONSPIRACY AGAINST ME. HOWEVER, THEIRS IS SUPPOSEDLY STILL A "POLICE", "WATER GATE", AND "NATIONAL SECURITY SECRET" OF HOW THEY USE PARA-PSYCHOLOGY TO CREATE THE "PERFECT SLAVES" FOR THE SYSTEM, SO THEY JUST DIS-REGARD HIS ORDER AND CONTINUE DENYING ME THE "FREEDOM OF THOUGHT."

THIS MESSAGE IS INTENDED FOR ANYONE CONCERNED,
AND I WON'T BE SURE YOU'VE RECEIVED
IT UNLESS YOU RESPOND.

"A MAN IS A MIND."

CORRECTIVE THINKING, AND BEHAVIORAL SCIENCE...
SOUL TRANSFERENCE!

B [THESE MICROWAVES CAN CAUSE "HEADACHES", "RINGING IN THE EARS", "GOOSEFLESH" AND ANY KIND OF "PSYCHOSOMATIC ILLNESS" IMAGINABLE; "CANCER", "AIDS" ETC... OF COURSE IT'S OBVIOUS WHY "SECRECY LAWS" ARE NEEDED TO PROTECT THE HONORABLE MEN FROM THEIR SYSTEM OF "GENOCIDE" FOR SCIENCE, AND MONEY. THE REASON FOR ME CONSTANTLY TELLING PEOPLE THIS IS THAT I DON'T LIKE IT, AND SIMPLY BY "SCANNING AN AREA" THEY CAN INVADE YOUR MIND TOO!

PHOTO COPY AND SPREAD THIS EVERYWHERE.

B The proposed line will not produce microwaves. The COTP power line will be designed to operate at the power frequency of 60 Hertz. The COTP communications system may operate in the microwave communication frequencies as licensed by the Federal Communications Commission. These systems are widely used in California. Brain electrical activity is at a very low frequency.

L-200

NICK J. LIVAK*
JON J. CAMPISI
PAUL A. PELOSI
ANTHONY H. SANTUCCI*
DAVID C. JOHNSON
*A PROFESSIONAL LAW CORPORATION

LAW OFFICES
Livak, Campisi, Pelosi,
Santucci & Johnson
AN ASSOCIATION INCLUDING PROFESSIONAL CORPORATIONS

THE MORSE MANSION
981 FREMONT STREET
POST OFFICE BOX 29
SANTA CLARA, CALIFORNIA 95052
AREA CODE 408
TELEPHONE 984-8555

January 13, 1987

Western Area Power Administration
1825 Bell Street
Suite 105
Sacramento, California 95825

Attention: Jose Vigil

RE: THE CRIPPLED CHILDREN'S SOCIETY
OF SANTA CLARA COUNTY, INC.

Dear Mr. Vigil:

Our law offices represent The Crippled Children's Society of Santa Clara County, Inc., a California Non Profit Corporation, who is the owner of three-eighths (3/8) interest in real property in Contra Costa County near Bethel Island.

A It is our understanding that your proposed power lines may interfere with the use and development of our property.

B Apparently your initial title search failed to reveal The Crippled Children's Society as the landowner. Accordingly, they did not receive notice of your intended project until recently. We, therefore, have not had the time or the opportunity to fully

C investigate your proposal, and are unable at this time to do anything except to convey to you my client's strenuous objection to any route which would cross any part of our property.

D We believe that the development of our property, and adjacent properties, is reasonably imminent and that alternate routes could provide your agency with a suitable right of way over much less valuable land.

A Further review of the route through this area, which includes the Crippled Children's Society's property, led to the identification of a new route option, South 1, which is presented and analyzed in the Supplement to the Draft EIS/EIR. South 1, which has been adopted as the preferred alternative, significantly reduces the potential for impact to the property, since it generally follows the western property boundary. The previous preferred route crossed through the property at an angle.

B The County Assessor's records were used to obtain landowner names on the alternatives being considered. The parcel owned by the Crippled Children's Society of Santa Clara was shown on the Assessor'r records as being owned by Burnette and Betty Ballonten, et al. Based on subsequent conversations and investigations, the Crippled Children's Society of Santa Clara will now be listed as the landowner for this parcel.

C Comment noted.

D See response to L-200 A.

L-200 (continued)

LAW OFFICES
Livak, Campisi, Pelosi,
Santucci & Johnson
A PROFESSIONAL ASSOCIATION

Western Area Power Administration
Attention: Jose Vigil

RE: THE CRIPPLED CHILDREN'S SOCIETY
OF SANTA CLARA COUNTY, INC.

January 13, 1987
Page Two

Please call me if you have any questions.

Very truly yours,

NICK J. LIVAK, INC.

NICK J. LIVAK

NJL:dc

L-202

National Parks & Conservation Association

1701 Eighteenth Street, N.W. Washington, D.C. 20009

RUSSELL D. BUTCHER
Regional Representative
SOUTHWEST & CALIFORNIA
Box 67
Cottonwood, AZ 86326
(602) 634-5758

(202) 265-2717

January 22, 1987

RE: CALIFORNIA-OREGON
TRANSMISSION PROJECT

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, California 95866

Dear Sir:

National Parks and Conservation Association, a private nonprofit membership organization founded 68 years ago to promote the protection, enhancement, and public understanding of the National Park System, has carefully reviewed the two-volume Draft EIS/EIR document of November 1986 on the California-Oregon Transmission Project. We wish to offer the following comments for your consideration and for the record of the Project.

Our particular interest is focused upon transmission line segments N-10M1, N-10L, and N-10K--segments that would be within the viewshed of Lava Beds National Monument, in northern California.

A We are deeply concerned that a large-scale 500kV powerline in the "preferred" route location would be visible under at least good atmospheric conditions to visitors at various key places within Lava Beds National Monument and within the monument's Congressionally established wilderness. Given the open character of the terrain that permits visitors to view and enjoy broad panoramas, there is no doubt whatever that a project on this scale will often be visible and will present a sharp contrast to the natural landscape of the national monument and its wilderness expanse.

B We note that the document (pages 3.7-12 and 3.7-13 in Volume 2A) suggests that nonspecular conductors (and other mitigating measures) could be utilized to reduce light reflection from the powerline facility. This is an excellent suggestion and one that has been quite successfully applied on powerlines in other

A See response to L-3 B and L-3 D.

B Nonspecular conductors will be used to reduce the reflectiveness of the transmission line over long distances. This is detailed in the visual resources mitigation measures, Section 1.1.5 of Volume 1 of this Final EIS/EIR.

L-202 (continued)

2-NPCA re California-Oregon Transmission Project
Draft EIS/EIR

B parts of the country where 345 and 500 kV lines have been placed through particularly sensitive scenic areas.

C Our Association urges, however, that the "preferred" alternative actually be shifted farther eastward--both so it will be less visible from within Lava Beds National Monument and so it will be within or adjacent to the existing 500 kV powerline corridor.

Concerning the latter objective, we have noticed a distinct effort on the part of major power companies and public land management agencies in the Southwest to bring utilities facilities such as powerlines, natural gas lines, etc., into defined and designated utilities corridors--this, in part, to prevent the proliferation of such facilities across the landscape and restrict them to certain stretches of terrain. We have actively participated in meetings and discussions on this subject--indicating our support for this fundamental objective. In one major instance in Arizona, we even witnessed the opposition to running a new 500 kV line in a new location instead of running it adjacent to an existing 500 kV facility...opposition by both the major power company and the federal agency responsible for citing decisions.

D We suggest that the arguments in your Draft EIS/EIR regarding wide separation of the new line from existing lines runs counter to arguments we have considered carried great weight elsewhere, and we strongly urge your serious re-evaluation of this matter. Utilizing the existing corridor, it seems to us, makes eminently good sense, and could result in many benefits. Notable among these, from our viewpoint, is reducing (perhaps eliminating) the visual impact this line could have upon Lava Beds National Monument.

E We appreciate this opportunity to comment.

Sincerely,

Russell D. Butcher

cc: Lava Beds Nat'l Mon.

Russell D. Butcher
California/Southwest Representative
Box 67, Cottonwood, AZ 86326

C Changes in the preferred route will result in greater distances from the Lava Beds National Monument eastern and southern boundaries. See response to L-3 B.

D See response to L-177 A.

E See response to L-3 B.

L-203

Neumiller & Beardslee
A PROFESSIONAL CORPORATION
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FIFTH FLOOR WATERFRONT OFFICE TOWER II
509 WEST WEBER AVENUE
STOCKTON, CALIFORNIA 95203
(209) 948-8200

MAILING ADDRESS
P.O. DRAWER 20
STOCKTON, CALIFORNIA 95201-3020

REFER TO FILE NO.

January 23, 1987

California-Oregon Transmission
Project
Post Office Box 660970
Sacramento, California 95866

Attention: Environmental Coordinator

Re: Draft EIS/EIR for California-Oregon Transmission Project in Los Banos-Gates Transmission Project: Routes Under Consideration for the California-Transmission Project 0128 SCH No. 85040914.

Dear Sir or Madam:

A, B

This office represents Herbert and Joyce Speckman, owners of Coney Island, real property that may be adversely impacted by the above referenced transmission project. On behalf of the Speckmans, this office has reviewed the draft EIS/EIR and finds that that document is legally inadequate as a matter of law, and respectfully requests that changes be made in the same so that it can meet the minimum standards established by the National Environmental Protection Act and the California Environmental Quality Act. Our written comments to the documents are numerous and are summarized herein.

In its essence, the alternate course of the transmission line identified by the nomenclature South Alternate B would cross Coney Island and cause adverse environmental impacts. To the contrary, South Alternate A or South Alternate C would not cause the same impacts and my clients have no objections to these alternate routes.

C, D

It is our opinion that the finding contained in the draft Report to the effect that South Alternate B is the most environmentally sound alternative is arbitrary and capricious, and contradicts evidence disclosed in the study. For these reasons, the Report cannot be certified by the Agency as being legally adequate.

A The preferred alignment and an option both were both located on Coney Island. In response to public comments, we consulted with the Department of Water Resources regarding the possibility of using state land on the eastern side of Clifton Court Forebay. The attachment to SL-76 indicates that this previously preferred route is not feasible.

B A fundamental requirement of federal law is that the EIS present the environmental consequences of the proposed action and its alternatives in comparative form, thus defining the issues and providing a clear basis for choice among options by the decisionmakers and the public. Also, the EIS shall inform decisionmakers and the public of the reasonable alternatives which would avoid or minimize adverse impacts. State EIR guidelines require that the EIR describe a range of reasonable alternatives to the project and evaluate the comparative merits of the alternatives.

In reviewing the adequacy of an EIS, federal courts hold that it must give a reasonable and balanced discussion sufficient to permit an informed choice of alternatives. A federal court has said the 'rule of reason' applies as to a reasonably thorough discussion of the significant effects of the probable environmental consequences. The California courts use virtually the same language when they indicate that although EIRs are not required to be perfect or to discuss project alternatives beyond what is realistically possible, an EIR must produce information sufficient to permit a reasonable choice of alternatives so far as environmental aspects are concerned. Thus, an EIR must contain a sufficient degree of analysis to provide decisionmakers with information to allow them to intelligently take account of environmental consequences.

L-203 (continued)

B (cont.) The adequacy of the Draft EIS/EIR in this respect depends on whether the selection and discussion of alternatives fosters informed decisionmaking and informed public participation. The Draft EIS/EIR cannot, for example, be considered inadequate due to a disagreement over its conclusion that one alternative is environmentally superior to the others. The lead agencies feel that the Draft EIS/EIR as amended by this Final EIS/EIR is adequate.

C State EIR guidelines point out that disagreement among experts does not make an EIR inadequate. The selection of the environmentally superior route was based on many different factors. Certain environmental factors of another route may be better than those same factors of the environmentally superior route. The lead agencies, however, must make their decision based on the consideration of all environmental factors. On this basis, South B is the environmentally superior alternative.

D Comment noted. See responses to L-203 B and L-203 C.

L-203 (continued)

E For instance, because South Alternate B is longer, and causes a greater short-term and long-term loss per route mile by $1,700.00 per mile. South Alternate B also crosses more miles of agricultural preserve land and more miles of irrigated crop land than South Alternate A. In addition, South Alternate A traverses the least amount of organic soil, whereas South Alternate B traverses nearly four times the amount of organic soils. Thus, South Alternate A is better from the perspective of earth/resources/geographic hazards.

F The draft Report also concludes that South Alternate A is superior from the perspective of protecting and preserving wildlife. Specifically, there is a much greater chance for wildlife collisions from South Alternate B than from South Alternate A.

G The Report thus suggests that South Alternate A has a number of attributes making it the superior alternate. This allegation appears to be the product of the writers of the draft document as opposed to a conclusion that is based upon sound reasoning. However, the Report contains a conclusion that South Alternate A, South Alternate B, and South Alternate C do not differ substantially from one another.

H Even more difficult to understand is the Report's major conclusion that South Alternate B is identified as the environmentally superior alternative. Certainly there are attributes of South Alternate A and South Alternate C making those superior alternatives, and yet without any analytic bridge or intermediate rationale, South Alternate B is identified as the superior alternative. (Of course, it is less than coincidental that South Alternate B is also the route that is preferred by the Agency.)

At only one portion of the Report does it disclose the basis for finding South Alternate B to be the environmentally superior alternative. Specifically the Report in a major conclusion provides that, "B was identified as the environmentally preferred alternative because it minimized impacts to developed and planned land uses."

This is a legally incompetent conclusion for several reasons. First, it flies in the face of other statements in the Report suggesting that other alternatives were superior.

Second, it disregards factors other than developed and planned urban land uses. Why should developed and planned land uses be the variable for deciding which alternative is superior? There is absolutely no analytic framework to justi-

E South Alternative A has a higher short-term and long-term agricultural, economic impact than Alternative B. Looking at the figures presented in Tables 4.1-6 and 4.1-7, Volume 1, Draft EIS/EIR, the weighted average agricultural economic impact per mile for Alternative A is $2,360 and $1,750 for Alternative B.

Alternative B does cross more agricultural preserve land and more organic soil than Alternative A. However, Alternative B was chosen the preferred route after weighing all resource considerations.

F This statement is true. However, after weighing all resource considerations South Alternative B was selected as the preferred route. See also response to L-203 G.

G The statement is correct regarding the conclusion that South Alternative A, South Alternative B, and South Alternative C do not differ substantially from one another. However, since Alternative B minimizes impacts to developed and planned land uses and avoids Discovery Bay and Bethel Island, this route was selected as the preferred alternative. See also response to L-203 H.

H The lead agencies' identification of South Alternative B as the preferred route was based in large part on its earlier identification as the environmentally superior alternative. The procedure used to make these comparisons of routing alternatives on an environmental basis is described in detail in response to L-371 E.

The results of the comparisons are listed in the following tables. The first table presents the grades and ranking given to each alternative according to each discipline. The second table presents the results of overall rankings given to the alternatives which take into account the views of all disciplines, not just those of the individual specialist. The last table presents a brief description of particular issues which were important to the decision-making process for each discipline. See also responses to L-203 C, L-41 C, L-204 E, and T-30 C.

L-203 (continued)

H

fy an emphasis upon developed and planned land uses as a basis for making these decisions.

Third, the Report totally neglects the impact of this project to farming. The design of the transmission lines across farmland will take valuable farmland out of production, (and more so under Alternate B than the others), will make cropping rows more difficult, and will increase costs due to uncertainties of irrigation practices due to the transmission poles. The impact to agricultural land is neither quantified nor qualified in the body of the Report thereby skewing the analysis in favor of the alternative that crosses farmland as opposed to urban land. Unless the Report assigns a value to the impact to agricultural lands, the Report is little more than a self-serving document that does not fulfill the goals and objectives of environmental laws. Finally, the conclusion is incompetent in that by avoiding urban land and designing the transmission line across agricultural property, the condemnation expense to the Agency will be the least. As a recent California Court of Appeals case clearly enunciated, cost may not be a distinguishing factor between alternatives.

Q

I

Finally, the treatment of the Coney Island alternatives is extremely unsatisfactory. To start with, the alternative that "parallels existing crossings" and is "not expected to add substantially increased impacts" was not adopted as the environmentally superior alternative. There is no underlying analytic framework for disregarding this alternative. Specifically, there are a number of problems with the Coney Island property that makes it unsuitable for use by the project.

J

First, there is an access problem. The bridge and the roads internal to the island are privately maintained and the Agency will have to condemn the bridge as well as the roads in order to have access to install and maintain the poles.

K

Second, the area is widely used as a sanctuary for wildlife and the possibility of wildlife collisions with the transmission lines is increased substantially.

L

Third, the installation of the lines will cause a serious aesthetic problem which is totally ignored in the Report.

M

Fourth, the existing levees do not meet FEMA 100-year flood standards so the property is vulnerable to flooding.

N

Fifth, maintenance in the event of flooding may be difficult. It is quite possible that in event of a major flood, it will be too expensive for the landowner to rehabilitate the property. If the island remains flooded, it will be impossible for the Agency to maintain its lines without substantial maintenance work.

H (cont.)

TABLE 1
SUMMARY OF DISCIPLINE REPORTS
SOUTH

Title	ALT A		ALT B		ALT C	
	LETTER GRADE	RANK	LETTER GRADE	RANK	LETTER GRADE	RANK
General	--	--	--	--	--	--
Water	B	2	B	3	B	1
Visual	B	1	C	2	C	3
Vegetation/Wildlife	B	1	C	2	C	3
Socioeconomics	B	3	B	2	B	1
Land Use	C	2	C	1	D	3
Cultural Resources	B	2	B	3	B	1
Soils/Geology	B	1	B	2	B	3
Public Involvement	--	2	--	1	--	3

TABLE 2

GROUP SCORES

SOUTH

Title	ALT A*	ALT B*	ALT C*
Participant A	2(1)	1(2)	3(3)
Participant B	2(1)	1(2)	3(3)
Participant C	1(1)	2(2)	3(3)
Participant D	2(1)	1(2)	3(3)
Participant E	2(1)	1(2)	3(3)
Participant F	2(1)	1(2)	3(3)
Participant G	2(2)	1(1)	3(3)
Participant H	2(1)	1(2)	3(3)
Participant I	2(2)	1(1)	3(3)

*Scores in parentheses reflect ranking if proposed transmission line is moved to within 100 feet of existing 500 kV line west of

L-203 (continued)

H
(cont.)

TABLE 3

RATIONALE/ISSUES

1. GENERAL: (No specific comments)

2. WATER: Alt. B. is preferred because it avoids Discovery Bay and Bethel Island. Alt. A would be preferred if problems associated with Discovery Bay could be eliminated or reduced to a level of insignificance.

3. VISUAL: Alt. A parallels existing transmission line ROW and therefore lowers the overall contrast with existing conditions. However, this alternative will be located close to Discovery Bay and Bethel Island. Mitigation could reduce the effects.

4. VEGETATION/WILDLIFE: All alternatives have some waterfowl collision potential, but Alt. A has 7 miles versus 20 miles in Alt. B and C.

5. SOCIOECONOMICS: All alternatives have short-term agricultural economic effects. All alternatives have significant social effects due to the number of access roads per corridor mile. However, Alt. C is shorter than Alt. B. and the overall impacts in Alt. A are greater than either B or C.

6. LAND USE: Alt. B. is best since it is further from Discovery Bay than Alt. A and avoids Bethel Island. Alt. A would be preferred if problems associated with Discovery Bay could be eliminated or reduced to a level of insignificance.

7. CULTURAL RESOURCES: Alt. C has the lowest sensitivity to prehistoric resources, but this is not a large difference.

8. SOILS/GEOLOGY: Alt. A crosses the least amount of organic soils. This alternative is also the least sensitive to liquefaction.

9. PUBLIC INVOLVEMENT: Alt. B was rated as more publicly acceptable due to the impacts of Alt. A on Discovery Bay. Alt. A would be preferred if problems associated with Discovery Bay could be eliminated or reduced to a level of insignificance.

L-203 (continued)

Q It appears that the California Court of Appeals case Mr. Herum is referring to is San Bernardino Valley Audubon Soc'y, Inc. v. County of San Bernardino. This case is discussed above in the response to L-203 B. As there pointed out, the court in this case held that "an EIR must produce information sufficient to permit a reasonable choice of alternatives so far as environmental aspects are concerned." Under this standard, the court ruled that the EIR being reviewed was inadequate: "the EIR does not contain the required sufficient degree of analysis to provide decision-makers with information to allow them to intelligently take account of environmental consequences." Contrary to Mr. Herum's comment, the court did not enunciate a rule that cost may not be a distinguishing factor between alternatives.

I Segment S-8F, to which the commentor is referring, was eliminated because it did not meet separation requirements from the existing 500 kV Intertie. Section 4.1.8 (page 2.4-6) of Volume 2A of the Draft EIR/EIS provides an explanation for the elimination of segment S-8F. An analysis on separation requirements is contained in the referenced Sargent and Lundy report titled "Centerline Separation Reliability Analysis for 500 kV Transmission Lines".

J Access would be negotiated as part of the easement for use of the property. Every effort would be made to negotiate a fair arrangement with the landowner. See also response to L-14 B.

K The potential exists for waterfowl collisions with transmission lines throughout many parts of the Delta. See response to L-117 C.

L See response to L-15 E.

L-203 (continued)

O Therefore, other alternatives that avoid Coney Island should be considered by the Agency, as they are certainly more environmentally sound then the one proposed by the draft Report.

P In conclusion, the Report is incomplete and inadequate, and cannot lawfully be certified. The Report's skewed analysis away from urban areas distorts the true environmental impacts and in some cases disregards impacts to agricultural lands.

Respectfully submitted,

NEUMILLER & BEARDSLEE, A
PROFESSIONAL CORPORATION

By _____
STEVEN A. HERUM

SAH/km

cc: Mr. and Mrs. Herbert Speckman

M The COTP is coordinating its planning with the U. S. Army Corps of Engineers and state and local planning agencies. Possible impacts to floodplains by construction or potential hazards to COTP facilities that may be located in a floodplain are being carefully considered in siting and design.

N See response to T-139 S.

O See response to L-203 A.

P See responses to L-203 B and L-203 C.

L-204

Neumiller & Beardslee
A PROFESSIONAL CORPORATION
ATTORNEYS AND COUNSELORS
FIFTH FLOOR WATERFRONT OFFICE TOWER II
509 WEST WEBER AVENUE
STOCKTON, CALIFORNIA 95203
(209)948-8200

MAILING ADDRESS
PO DRAWER 20
STOCKTON, CALIFORNIA 95201-3020

January 23, 1987

California-Orégon Transmission
Project
Post Office Box 660970
Sacramento, California 95866

Attention: Environmental Coordinator

Re: Draft EIS/EIR for California-Oregon Transmission Project in Los Banos-Gates Transmission Project: Routes Under Consideration for California-Transmission Project 0128SCH No. 85040914.

Dear Sir or Madam:

This office represents the Estate of Furtado, which owns a ranch of approximately 300 acres and is generally identified by the street address of 5840 Lindeman Road, Byron, California.

A, B It is our understanding that by virtue of the preferred alternative (Alternative B), the transmission line will traverse the subject property. In our opinion, this act will cause significant environmental damage that has not been adequately studied in the context of the pending Draft Environment Impact Statement/Environmental Impact Report, and for that reason we wish to comment as follows.

By way of background, the land in question is regarded as prime agricultural land and is the benefit of a contract with the State of California for water.

There is a considerable amount of wildlife that uses the property during migratory periods and the property is currently devoted to farming.

C, D Completely absent from the Draft EIS/EIR is any reference to disruption of farming patterns and efforts due to the construction and maintenance of the transmission lines. The major conclusion in the report that Alternate B was preferred because it "minimized impacts to developed and planned land uses" contains an obvious bias in overstating the potential

A The alternatives under study one 1,500-foot wide routes. The transmission line would be located on a 200-foot right-of-way within the 1,500-foot study route.

B Comment noted.

C Disruption of farming patterns and practices due to the construction of transmission lines is discussed in Section 3.6.2.2 in Volume 2A of the Draft EIS/EIR under Potential Short-term impacts. See also responses to L-41 C and T-175 A.

D Each of the alternatives have agricultural impacts which were carefully considered. Alternative A was not chosen as the preferred alternative due to its combination of extensive agricultural and residential impacts and due to the proximity to the Discovery Bay community. Alternative B still has substantial impacts, particularly on agriculture, but, in comparison with the other alternatives, has the least overall impact. See response to L-203 H.

L-204 (continued)

D impacts to developed urban areas and understating the impact to this State's most significant industry, agricultural.

E Common farming practices are significantly inhibited by the interposition of transmission lines across farmland in that it severely disrupts cropping patterns. Farming practices must be altered to accommodate "unusual" or "broken up" rows of crops. In addition, there can be a substantial interference with orderly irrigation practices with the transmission line interfering with irrigation practices. These problems are very real, significantly decreasing the productivity of agricultural lands, yet there is no mention of these consequences in the environmental impact documents nor is there a single effort to quantify the significance of such impacts.

F It is our opinion that the finding contained in the draft Report to the effect that South Alternate B is the most environmentally sound alternative is arbitrary and capricious, and is contradictory with the evidence disclosed in the study itself. For these reasons, the Report cannot be certified by the Agency as being legally adequate.

G

H For instance, because South Alternate B is longer, and causes a greater short-term and long-term loss per route mile by $1,700.00 per mile. South Alternate B also crosses more miles of agricultural preserve land and more miles of irrigated crop land than South Alternate A. In addition, South Alternate A traverses the least amount of organic soil, whereas South Alternate B traverses nearly four times the amount of organic soils. Thus, South Alternate A is better from the perspective of earth/resources/geographic hazards.

I The draft Report also concludes that South Alternate A is superior from the perspective of protecting and preserving wildlife. Specifically, there is a much greater chance for wildlife collisions from South Alternate B than from South Alternate A.

J The Report thus suggests that South Alternate A has a number of attributes making it the superior alternate. This allegation appears to be the product of the writers of the draft document as opposed to a conclusion that is based upon sound reasoning. However, the Report contains a conclusion that South Alternate A, South Alternate B, and South Alternate C do not differ substantially from one another.

E The impact of transmission lines on common farming practices, including irrigation and aerial activities is discussed in Section 3.6.2.2. in Volume 2A of the Draft EIS/EIR under Potential Long-term impacts. Due to the size and diverse agricultural conditions found in the project study area, a lost crop revenue approach was chosen over a production cost approach for analysis of agricultural impacts. Each alternative was then compared on a consistent basis. An analysis of costs for practices such as irrigation around transmission lines would be informative, but the additional data would not have affected the results of the comparison of the alternatives. See also response to L-41 C.

F See response to L-203 C.

G See response to L-203 D.

H See response to L-203 E.

I See response to L-203 F.

J See response to L-203 G.

L-204 (continued)

K Even more difficult to understand is the Report's major conclusion that South Alternate B is identified as the environmentally superior alternative. Certainly there are attributes of South Alternate A and South Alternate C making those superior alternatives and yet without any analytic bridge or intermediate rationale, South Alternate B is identified as the superior alternative. (Of course, it is less than coincidental that South Alternate B is also the route that is preferred by the Agency.)

At only one portion of the Report does it disclose the basis for finding South Alternate B to be the environmentally superior alternative. Specifically the Report in a major conclusion provides that, "B was identified as the environmentally preferred alternative because it minimized impacts to developed and planned land uses."

This is a legally incompetent conclusion for several reasons. First, it flies in the face of other statements in the Report suggesting that other alternatives were superior.

Second, it disregards factors other than developed and planned urban land uses. Why should developed and planned land uses be the variable for deciding which alternative is superior? There is absolutely no analytic framework to justify an emphasis upon developed and planned land uses as a basis for making these decisions.

Third, the Report totally neglects the impact of this project to farming. The design of the transmission lines across farmland will take valuable farmland out of production, (and more so under Alternate B than the other), will make cropping rows more difficult, and will increase costs due to uncertainties of irrigation practices due to the transmission poles. The impact to agricultural land is neither quantified nor qualified in the body of the Report thereby skewing the analysis in favor of the alternative that crosses farmland as opposed to urban land. Unless the Report assigns a value to the impact to agricultural lands, the Report is little more than a self-serving document that does not fulfill the goals and objectives of environmental laws.

Finally, the conclusion is incompetent in that by avoiding urban land and designing the transmission line across agricultural property, the condemnation expense to the Agency will be the least. As a recent California Court of Appeals case clearly enunciated, cost may not be a distinguishing factor between alternatives. V

K See response to L-203 H.

V See response to L-203 Q.

L-204 (continued)

L Finally, the treatment of the Coney Island alternatives is extremely unsatisfactory. To start with, the alternative that "parallels existing crossings" and is "not expected to add substantially increased impacts" was not adopted as the environmentally superior alternative. There is no underlying analytic framework for disregarding this alternative. Specifically, there are a number of problems with the Coney Island property that makes it unsuitable for use by the project.

M First, there is an access problem. The bridge and the roads internal to the island are privately maintained and the Agency will have to condemn the bridge as well as the roads in order to have access to install and maintain the poles.

N Second, the area is widely used as a sanctuary for wildlife and the possibility of wildlife collisions with the transmission lines is increased substantially.

O Third, the installation of the lines will cause a serious aesthetic problem which is totally ignored in the Report.

P Fourth, the existing levees do not meet FEMA 100-year flood standards so the property is vulnerable to flooding.

Q Fifth, maintenance in the event of flooding may be difficult. It is quite possible that in event of a major flood, it will be too expensive for the landowner to rehabilitate the property. If the island remains flooded, it will be impossible for the Agency to maintain its lines without substantial maintenance work.

R Therefore, other alternatives that avoid Coney Island should be considered by the Agency, as they are certainly more environmentally sound then the one proposed by the draft Report.

S In conclusion, the Report is incomplete and inadequate, and cannot lawfully be certified. The Report's skewed analysis away from urban areas distorts the true environmental impacts and in some cases disregards impacts to agricultural lands.

T Therefore, we respectfully ask that the Environmental Impact Report not be certified as being adequate and that

L See response to L-203 I.

M See response to L-203 J.

N See response to L-203 K.

O See response to L-15 E.

P See response to L-203 M.

Q See response to T-139 S.

R See response to L-203 A.

S See responses to L-203 B and L-203 C.

T Request noted. See responses to L-203 B and L-203 C.

L-204 (continued)

U additional work be completed so that environmental impacts can be fully studied and analyzed.

Respectfully submitted,

NEUMILLER & BEARDSLEE, A
PROFESSIONAL CORPORATION

By Steven A Herum
STEVEN A. HERUM

SAH/km

cc: Ms. Evelyn Costa

U Environmental impacts were further studied during preparation of the Supplement to the Draft EIS/EIR and the Final EIS/EIR. The results of the studies are reflected in this document through changes in the preferred route and responses to public comments.

L-205

1/23/87.

Mr. James W. Buck + Mr. David G. Coleman.

Concerning the Ca. Oregon Transmission Project.
Being over a 20yr. resident of Bethel Island, Ca. I just find it hard to believe sensible people would even think of going them with this project.
Our Island being so small, completely surrounded by water, and one bridge to leave by.
Plus so many people now living here.
We own a little more than an acre here and there is such an abundance of wild life on our little spot.
A They are crowded out from all ready too much building in this area, and trying very hard to hold on against hopeless odds.
They were here 1st and need a few places left in the Delta to even survive at all.
We are elderly people, but used to grow most of our food on this rich soil.
We also know a lot about peat soil, and the lasting effects of fire-how it can burn years underground + strip to different locations without people being aware and can render the soil useless for many years if not forever.
Having had a fire a few short years ago here between us + the one bridge out, we were in a few minutes of loosing everything we had plus our land, as it would have took many years to become livable again.
We aren't on the water front, but across the road from the levee.

A The COTP, with the currently preferred route, will not impact wildlife habitat on Bethel Island. Small amounts of habitat will be disrupted in the surrounding area to the west due to placement of towers and construction of access roads. Wildlife species that currently use Bethel Island are expected to continue to be present if the transmission line is constructed. See also response to L-203 K.

L-205 (continued)

B Stop and think what an undiscovered electric wind dammed in our all most constant wind could have caused.
And we do have strong winds here as you must be aware of, we've had to reroof our homes three times from wind damage.
We've lost six grown trees on our place from wind. one fell on another's land fell across a canal a few years back, and tore up all our back fence across property. and last week in the hi wind another tree fell across another part of the canal making a pretty fair bridge, so far, no one repairs or repays these damages.
But what im fixing to write alarms me more than all these other things.
Last summer some sort of crew having to do with geography was on the Island for days of surveying. we refused to give permission on our land.
But either six or more large trucks and equipment was moving across the Island at some time next to our property line. and our whole home shook & trembled, shaking small objects to the floor. more then any earth quake shocks ever made. It made you feel the Island was either going to sink or turn over, a constant trembling.

C This Island isn't large enough or sound enough to bear any effects of this ca. or. Project

D Also it is supposed to be part of Indian burial grounds.

B See response to L-53 B.

C The preferred alternative does not cross Bethel Island. Some earth vibration may be experienced from equipment during the construction period, but once the line has been installed there should be no detrimental effects on Delta islands due to the loads imposed by the line. If required, special foundations will be used for any unusual soil condition.

D Extensive ethnological studies were conducted for the COTP. These involved interviews with Native Americans to determine locations of Native American cemeteries and other sites of heritage significance. These studies did not result in identification of Native American cemeteries known to descendants of tribes that traditionally occupied Bethel Island. They did result in the identification of a historically known Native American settlement on Bethel Island that is located within 3.4 miles of the proposed S-8D route (Table 3.9-3, Volume 2A, of the

L-205 (continued)

D (cont.) It is possible that cemeteries not identified by Native Americans occur along the proposed route. Once the final alignment is selected, COTP archaeologists will search the proposed right-of-way on foot to locate prehistoric Native American cemeteries, habitation sites, and other kinds of archaeological sites. COTP staff will then review the plan for the placement of transmission towers, access roads, and construction laydown areas to avoid these sites if possible, or to develop measures to mitigate unavoidable impacts.

The archaeological sensitivity of each proposed route has also been taken into consideration in planning the routes and in preparation of the Draft EIS/EIR. Table 3.9-4 of Volume 2A of the Draft EIS/EIR, for example, lists route Segment S-8D, which crosses Bethel Island, as having an estimated sensitivity for prehistoric archaeological sites of 3.7 (on a scale of 1 to 5 with 5 highest). These ratings were developed using existing archaeological site survey records to identify especially sensitive areas.

L-205 (continued)

E please don't do this to us;
we don't want to relocate at our age. As we moved here for the peaceful quite we found here Plus at that time, cheap property after my Husband became disabled from back injurys see in WW2.

F There has to be other more stable places with out so many people on such a small space. I'm not educated for all the technical things of your plans, but I do have common sense, and a lot of this sure Doesn't add up that way. If this goes thru, and involves this small bit of land, I would bet you will never be able to surmount all the things you will run into. Even our sewer system is constaly causing problems.

Too many of natures laws will be ignored, and we the people that live here with no other place we can afford to go will pay the price.

G The Island is supposed by nature to be under water, and man will never be able to make it into the firm, stable soil needed for your kind of project.

we don't have many years left I am a cancer, bad heart, patient and love so much to look across our small plot of land for all life, our small friends and the many song birds that line here the year around. Terrible to think of having to exchange (our Plans)

E The Project preferred alternative does not cross Bethel Island. COTP planners will strive to avoid impacting any residents. Should it become necessary to relocate individuals, they are entitled to specific benefits which includes assurance of comparable housing under federal relocation assistance laws.

F See response to L-205 C.

G See response to L-205 C.

L-205 (continued)

all this for maybe the horrid sounds of mines
e.t.c. forever covering up the quite and peace.
yours Sincerely,

Mr. & Mrs. Truman & Lurene Bookout

Residence
4095 Stone Road.
Bethel Island ca. Phone No.
94511. 415-684-2450.
mail add.
Box 81 Bethel Island
ca. 94511.

L-206

Tulelake Chamber of Commerce

January 23, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, California 95866

A The Tulelake Chamber of Commerce would like to go on record as supporting the C.W. "John" Cross proposal for the powerline route.

Sincerely,

Rosemary Myers
President

RM/wo

In the Heart of Hunting and Recreation Wonderland

A The John Cross Alternative has been evaluated in the Draft EIS/EIR under the name of the Copic Bay Option. See the Draft EIS/EIR Volume 1, page 2.1-18 and page 4.1-41. The Copic Bay Option accomplishes the objectives of the John Cross Alternative and is more acceptable from an engineering standpoint since it maintains an adequate separation between the COTP and the existing Intertie. See also response to L-330 H.

L-207

January 7, 1987

Dear Sirs:

A I am against any transmission line through any part of Siskiyou Co.

Sincerely
Melinda Pelman

A Comment noted.

L-208

JOSEPH F. SPIELER
211 SHEARWATER
FOSTER CITY, CAL.
94404

From the
desk of...J.F. SPIELER

1-25-87

Mr James W Beck
Transmission Agency of N Cal
PO Box 760970 Sac Ca

Dear Mr Beck.

Me & my family own a small parcel of land E of College on El Prado ave.

A Please inform me the significance of your letter. I certainly hope there is no

B plan to run a power line thru our property, to our financial detriment.

C If possible may I ask for a diagram of the route the line will take in my area.

Thank You

Sincerely
J.F. Spieler

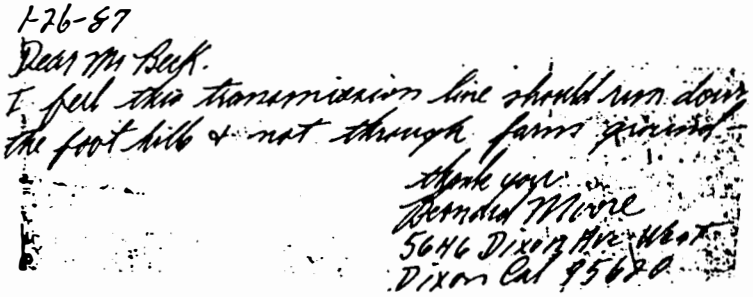
Reference: Your letter of 1/19/87

A Responses were sent to the commentor on February 23, 1987 and March 6, 1987.

B See responses to L-14 B and T-82 C.

C A route map was sent to the commentor on February 23, 1987. A detailed project map was subsequently sent on March 6, 1987.

L-209



1-26-87
Dear Mr Beck.
I feel this transmission line should run down the foot hill & not through farm ground.
thank you.
Bernard Moore
5646 Dixon Ave West
Dixon Cal 95620

A See the Draft EIS/EIR, Volume 2A, Section 2.0 (Routing Investigations Report), page 2.4-1.

L-211

16780 Livorno Drive
Pacific Palisades, CA 90272
January 26, 1987

Mr. Robert A. Olson
Project Managing Director
California – Oregon Transmis-
sion Project
P.O. Box 660970
Sacramento, CA 95866

Dear Mr. Olson:

A B I am writing to you in regard to your memo of 5 December 1986. The maps included with the memo were of such small scale I could not determine if the project would affect my property at Millville. The property in question is described as follows: "East 1/2 of Section 12, Township 31 North, Range 3 West, Mount Diablo Base and Meridean and that portion of West 1/2 of Section 12 lying South of Whitemore Road, Township 31 North, Range 3 West, Mount Diablo Base and Meridean." I would appreciate if your office could advise me regarding this. I am seriously concerned because a few years ago Pacific Gas & Electric crossed my property with their transmission lines much to the detriment of the development of this acreage.

Respectfully,

Richard K. Nystrom

Richard K. Nystrom

RKN/ga

A Comment noted. Larger scale maps were made available to property owners, such as the commentor, who contacted COTP staff. Larger scale maps were also included in the Draft EIS/EIR in Volume 1 and Volume 2A.

B A response was sent to the commentor on February 4, 1987.

L-212

To: Rick Lund
California-Oregon Transmission
Project
Environmental Coordinator

January 26, 1987

From: Michael A. Mattia
P.O.Box 370
Round Mountain, Ca. 96084

Subject: The Draft EIS/EIR
Comments

Sir:

I attended your meeting on January 7,1987, in Round Mountain, California. May I say I am not happy to find out about a project as big as this, with as much impact on my family and our property as this one does, through a flyer I recieved on the 12th of December, 1986. Especially since it announced the SECOND meeting on this. Most of your major work had allready been done. Your Moderator at the January 7 meeting even stated that that meeting was for comments only, not questions. Its not like P.G.& E. doesn't have my address, they bill me every month.

A

Now for my comments. My home and property are located where your new transmission line intersects the existing 230 KV lines. The legal discription is AP#029-580-01, at the intersection of Sections 26, 27, 33, and 34; Township 34 North, Range 1 West; a portion of the east one-half of the north east one-quarter of that section. This location is shown on the EIS/EIR map on page 4-1E, map-B, Alternative N9-D, I believe.

I would like to find out on which side the new conductors will run after they converge with the existing 230 KV lines. Will the new conductors stay North or North-East of the existing lines? Or will they cross over to the South or South-West side? My family and I live on property that will be directly in line with your transmission lines as they run south past Round Mountain. You proposal shows the lines intersecting the existing 230 KV lines adjacent to or on Our property.

B

Additionally I would like to request that you run the lines further to the West. Your present alternative will run cross country directly towards our Livingroom windows. We're not happy about having our view destroyed. Its one of the reasons we bought this house. In addition, if your lines cross over the existing lines, you'll have to clear my

A We regret that all potentially affected persons did not see the announcement for the first meeting, however, many did. Announcements were published in regional newspapers in hopes of reaching as many persons as possible. See Section 1.1.7 of this Final EIS/EIR.

B A response was sent to the commentor on February 20, 1987.

L-212 (continued)

C Additionally I would like to request that you run the lines further to the West. Your present alternative will run cross country directly towards our Livingroom windows. We're not happy about having our view destroyed. Its one of the

D reasons we bought this house. In addition, if your lines cross over the existing lines, you'll have to clear my

E timber, which I can't afford. You'll also have to place your towers on a fairly steep side hill, which you don't want either.

F I would also like to state, we will also require mitigation for any interferance the new system of lines may cause with any of our communications equipment, television reception, or radio equipment (Refering to but not limited to AM/FM, CB, Short-Wave, or Scanner reception). I am a Fire Captain, Emergency Command Center Officer, for the California Department of Forestry and Fire Protection at Redding Headquarters, and follow whats happening in the county on my off hours.

Thank You,

M.A. Mattia

M. A. Mattia
P.O. BOX 370
Round Mountain, Ca.
96084

P.S. MR. LUND, PLEASE FORWARD A COPY OF THIS TO MR. JOHN S. FORMAN FOR ME.
THANK YOU.

COPY TO NANCY H. WEINTRAUB
WESTERN AREA POWER ADMINISTRATION
1825 BELL ST.
SACRAMENTO, CA., 95866

AND CALIFORNIA PUBLIC UTILITIES COMMISSION
SACRAMENTO, CA.

C Alternative routes west of the Round Mountain area were considered early in the routing process. The Phase I Report, as summarized in Section 1.0 of Volume 2A of the Draft EIS/EIR, and the Phase II Routing Report, as presented in Section 2.0 of Volume 2A of the Draft EIS/EIR, provide further explanations on these alternatives.

D The preferred route for the COTP permits the line to be located on the west side of the existing lines and for it to parallel them, but not cross them, in the vicinity of Mr. Mattia's property. The line will change from a northeasterly direction to a northerly direction along the boundary between Sections 27 and 28. By selective clearing as a mitigation effort in the area, the view of the transmission line can be lessened. See Section 1.1.5 of Volume 1 of this document for a description of adopted mitigation for reducing visual impacts.

E The side hill construction requirement will be considered during final design, but there is no current indication that an undesirable sidehill placement would be necessary. Since towers are designed for use with a variety of leg extensions to accommodate large variations in side slope, steep side hills are not a serious obstacle in finding suitable tower locations.

F Comment noted. See response to L-330 H3.

L-213

WRITTEN COMMENT FORMS
FOR THE DRAFT EIS/EIR
FOR THE
CALIFORNIA-OREGON TRANSMISSION PROJECT
AND THE
LOS BANOS-GATES TRANSMISSION PROJECT

If you have comments on the Draft Environmental Impact Statement/Environmental Impact Report that you would like to have considered by the lead agencies, you can use this form to write them down. This form can be handed in to the court reporter at the meeting, or mailed to the Environmental Coordinator at the address below. Your comments must be mailed by February 3, 1987. Thank you.

My name is Clarissa Dierksen. I am part owner of the 160 acre Dierksen property and the Round Mtn Ranch on Buzzard Roost Road. Your plans call for putting another line next to the existing line

A through our ranch. I am against the project going through our property due to soil conditions, erosion, terrain, aesthetic value and harrassment.

B We already have 5 lines (4 are giant metal towers) through our ranch and we know the inconveniences of these already here. We don't wish anymore.

I am an honors graduate of U.C. Davis in field of range management. Enclosed are pictures taken in the month of January 1987 on our ranches of evidence of our objections. The land is not overgrazed. I have been mana-

C ging this land since 1974. Construction of power lines cause immense soil damage and permanent scars on the land. In addition the land on our ranches is very unstable and the power line path and road has caused much

D slippage and erosion. The constructers of the last power lines (in 1953) built unstable roads without water bars and without reestablishing vegetation. These are still eroding today. Also your maintenance men do not use your roads but use our ranch roads causing damage. I have to maintain my own roads. We also get much trespassing since people believe property under power lines is public. The pictures prove all this. On the back of each picture is an explanation of it. They are all taken underneath the lines, except the ranch road damage.() of them.) The ~~poor~~ power lines are an eternal inconvenience to live with and cause extra work for the land owner.

Hearing Date: _____

Location: _____

Name/Address: Clarissa Dierksen
P.O. Box 10
Round Mtn, CA 96084

Barbara Hale (partner)
P.O.Box 157
Round Mtn, CA 96084

Clarissa Dierksen

Barbara Hale

Jan. 27, 1987

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866
(916) 924-3995

A See response to L-176 A.

B Comment noted.

C See response to L-176 C.

D See response to L-176 D.

L-214

Cheryl Shields
COTP
P.O. Box 660970
Sacramento, CA. 95866

January 27, 1987

Dear Ms. Shields :

On behalf of the Modoc County/Klamath County Powerline Committee, I am writing to express the following two concerns :

A

1. I've reviewed the transcript for the Newell public hearing on 1-5-87, and have found two errors that should be corrected in order to prevent misinterpretations of the testimony :
   a. Page 14, line 23 : The words "Planning Commission" should be corrected to read "Powerline Committee".
   b. Page 78, line 1 : The word "lands" should be changed to read "lines".

2. When I phoned you at your residence on 1-16-87 to express my concern about the inappropriateness of having a TANC surveyor on Tulelake Basin farmland trying to get approval of access agreements from the farmers to allow entry onto private farmland to do survey work for the so-called "Preferred Alternative", you assured me that he was not a surveyor, and that his purpose was to get approval for botanists to look for rare, endangered or threatened plants. You indicated that the same botanical work would be done for the Cross's Alternative.

   I've since been informed that at your subsequent meeting with the farmers on 1-21-87, a TANC engineer was present who indicated that the purpose of the access agreements is indeed to do survey work for the so-called "Preferred Alternative".

B

In case the message hasn't already been made eminently clear, the Tulelake Basin farmers do not consider the so-called "Preferred Alternative" or any other alternative which crosses private irrigated farmland in the Tulelake Basin to be acceptable, and intend to do everything within their power — including litigation if necessary — to attain their objective.

A Thank you for pointing out the errors in the Newell public hearing transcript. The corrections are made in Volume 3 of the Final EIS/EIR under comments T-9 A and T-29 D.

B Comment noted.

L-214 (continued)

C Therefore, the Modoc County/Klamath County Powerline Committee considers any such survey work on private irrigated farmland to be totally premature and inappropriate prior to completion of the EIS/EIR process and conclusion of the applicable statutes of limitation. My previous specific formal request regarding this issue is included on page 27 of the Newell public hearing transcript, which reads as follows : "In closing, on behalf of the Modoc County/Klamath County Powerline Committee, I want to make the following requests for the record : ... 7. That the Lead agencies keep their survey crews off the prime farmland in the Tulelake Basin until at least the planning and approval process has been completed and all statutes of limitation have expired."

It would be greatly appreciated if you would honor that request, since to do otherwise would reflect an arrogant and irresponsible disregard for (1) the purpose, intent and procedural requirements of Federal and State environmental law, and (2) the wishes of the affected private property owners. The Tulelake Basin farmers deeply resent and distrust the COTP Lead Agencies for several of their past actions (and inactions), and the conflicting information which we received regarding the surveyor problem is just one more example of an unnecessary and unfortunate action which further aggravates that resentment and distrust.

D In closing, we would greatly appreciate it if you would restrict any further survey work in the vicinity of the Tulelake Basin to the Cross's Alternative route. We would be glad to assist your surveyors in identifying and gaining access to that area.

Sincerely,
Douglas G Peterson
Douglas G. Peterson
Environmental Consultant

cc : Michael C. Miller, Attorney at Law, MCKCPC
Paul Techirky, California Chairman, MCKCPC
Bill Graham, Oregon Chairman, MCKCPC
John Cross, Chairman, Modoc County Planning Commission

C The purpose of the COTP field work prior to the issuance of the Final EIS/EIR is to confirm the feasibility of the preferred route and to support the schedule for the COTP. The field work is intended to gather both engineering and environmental data as part of the planning process. One of the specific purposes of field survey work in the Tulelake Basin is to investigate the location of a 200-foot wide centerline within the 1,500-foot wide preferred route that would minimize impacts to cultivated farmland. Survey work is being done with the permission of landowners.

D See response to L-214 C.

L-215

EDWARDS RANCH
ROUTE 1, BOX 639 HIGHWAY 99 E.
RED BLUFF, CALIF. 96080

January 29,1987

Laura Edlin
Public Affairs Director
The Western Area Power Administration and
The Transmission Agency of Northern California
P.O. Box 660970
Sacramento, CA 95866

Regarding: Public comment on the Draft EIS/EIR alternative route in the Red Bluff area.

Dear Mrs. Edlin:

A The Draft EIS/EIR of the alternative route (south east of Sacramento river), in the Red Bluff area, along Antelope creek, does not recognize the fact that there are Sand Hill cranes,Bald Eagles, migrating deer herds, wild pigs, Indian grave yards, and spawning areas for Salmon and steel head along the

B alternative route. In addition the area has been studied from time to time as a possible location for a low level flood protection dam.

Very truly yours,

W. James Edwards

A In the Red Bluff area, the COTP consists of upgrading an existing transmission line which is by far the most acceptable and least environmentally damaging alternative. The upgrade portion of the COTP is located west of Red Bluff and the Sacramento River, and does not cross Antelope Creek.

According to California Department of Fish and Game biologists and independent researchers (Schlorff and Littlefield, pers. comm.), sandhill cranes make little use of the valley floor north of Chico; most use is east of the Sacramento River. Bald eagle use is addressed in the Draft EIS/EIR and provides further detail in the Biological Assessment prepared for the U. S. Fish and Wildlife Service (USFWS) as required by the federal Endangered Species Act (Jones and Stokes Associates 1987). Effects of the transmission line on deer herds in the foothill areas were assessed, but impacts were not considered significant. Similarly, feral pigs would not be significantly affected. Archaeological surveys will be performed in all areas where surface disturbance may affect cultural resources.

B Comment noted.

L-216

WRITTEN COMMENT FORMS
FOR THE DRAFT EIS/EIR
FOR THE
CALIFORNIA-OREGON TRANSMISSION PROJECT
AND THE
LOS BANOS-GATES TRANSMISSION PROJECT

If you have comments on the Draft Environmental Impact Statement/Environmental Impact Report that you would like to have considered by the lead agencies, you can use this form to write them down. This form can be handed in to the court reporter at the meeting, or mailed to the Environmental Coordinator at the address below. Your comments must be mailed by February 3, 1987. Thank you.

A After attending several meetings in Klamath Falls, Or & Tulelake, Ca on the proposed line, and reading reports of those meetings in Oregon and northern California, I feel the logical EIS/EIR conclusion should be "NO" to the project.

The impact on the Oregon/Northern California areas is overwhelmingly negative. We are asked to participate in a selection process to pick the least negative route, setting neighboring communities against each other. Then, if a route is selected, those along the abandoned routes sigh with relief & feel they have won their "battle", when in fact we have all lost.

B Those of us between the source and destination should have been able to answer the question "Do You WANT TO BE HIT?" before "WHERE DO YOU WANT TO BE HIT?"

C I passed through the "destination" area in California recently & feel this line will transplant some of our productivity, environmental beauty, & safety to that area over our objections — NOT FAIR

Hearing Date: _____

Location: _____

Name/Address: Richard Halonick
6737 Kimberly Ct
Klamath Falls, Or 97603

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866
(916) 924-3995

A Comment noted.

B The COTP will benefit all areas along the preferred route that are serviced by utilities in the Pacific Northwest and in California. In the commentor's case, the Klamath Falls area is serviced by Pacific Power and Light Company, which will benefit from an increased market for its surplus power, thereby providing increased revenue from the sales to wholesale customers in California. This increased revenue potentially will reduce the need for additional revenue from other Pacific Power and Light customers, and will help stabilize retail rates in the Northwest. For a discussion of Northwest benefits see the response to L-329 A. Nonetheless, residents of the areas in which the physical facilities will be located have legitimate concerns for the immediate physical impacts to their communities. The routing process and proposed mitigation, although they cannot eliminate all impacts, are designed to minimize them.

C Comment noted.

L-217

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A I strongly oppose the proposed plan of the COTP & would like to be kept informed meetings & proposed Alternative Regarding this matter.

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

G. Sani
P.O. Box 326
Byron, CA 94514

A Comment noted. Your name has been added to our mailing list.

L-218

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A New resource access should be a primary consideration and a condition for providing 2700 MW of additional capacity should be completion of WPPSS Plants 1 and 3

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Howard C. Elmore
Consultant
1706 Eastmont

A See response to L-196 H for a summary concerning the availability of existing power resources in the Pacific Northwest to provide power for sale outside of the region without the need to construct new resources for this market.

L-219

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A eletrical power should stay in Oregon let the people move to oregon and use the eletrical power here

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Laurie Grupe
5225 Highway 66
Ashland, OR 97520

A Over time, it is anticipated that the population in the Pacific Northwest will increase and the current surplus will decrease. One of the unique benefits of the COTP is its ability to provide more revenue to the Pacific Northwest to offset the Northwest ratepayers' power costs and help meet future power needs during winter conditions in the Northwest, while providing lower cost power to utilities in California. See response to L-329 A for more discussion of this benefit.

L-220

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A Since alternate routes are apparently available, I would be more comfortable if transmission lines did not pass over Bethel Island.

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Carlos Ruling
917 Edinburgh Street
San Francisco, CA 94112

A Comment noted. The COTP preferred route passes to the west of Bethel Island.

L-222

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A If you cannot put one 500 kv line
underground put towers underground and leave
the beauty of the Gate alone - let the
B ultimate user pay the costs - don't rape
our scenic beauty

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

DARRELL B EDWARDS
58 SOTELO AVENUE
PREDMONT CA 94611

A See response to L-307 I.

B Comment noted. The ultimate users would pay for the electricity delivered by the COTP, including the cost of mitigation measures to reduce overall environmental impacts. See also response to L-15 E.

L-223

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A Strongly urge: (1) keep all lines in
existing corridors (2) increase
B diameter of the ground wire or eliminate
Avoid silica thru migration rotted + birds

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Raptor Research Foundation, Inc
U.S. Fish and Wildlife Service
Laurel, MD 20810

A See response to L-177 A.

B One-half inch static wire weighs approximately 0.5 pounds per foot. If the diameter of the wire were increased to one inch or 1 1/2 inches the transmission towers would need to be redesigned and substantially strengthened. Such towers require more steel making them more visible and affecting the visual resources of an area. A more feasible mitigation may be to mark the static wire in critical areas with brightly colored balls. This mitigation measure will be employed where, in consultation with the State Fish and Game Departments and the U. S. Fish and Wildlife Service, it is determined to be effective.

L-224

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A I DON'T WANT TO SEE YOUR TRANS-MISSION LINE PASSING OVER BETHEL ISLAND OR JERSEY ISLAND

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Leo H. Clifford
2860 Dutch Slough Road
Oakley, CA 94561

A Comment noted. The preferred route passes to the west of Bethel Island, but does cross over the middle of Jersey Island. See Section 1.1.3 of Volume 1 of this Final EIS/EIR for maps showing the preferred route.

L-225

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A East Contra Costa County (Oakley, Brentwood and Discovery Bay) is the fastest growing region of the entire San Francisco Bay Area. It is UN-THINKABLE to put high power lines over houses and schools in a ~~populated area~~

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Adele L. Weldman
[illegible] Willow Lake Road

A Routing evaluations for the COTP are discussed in Volume 2A, Section 2.0 of the Draft EIS/EIR. Homes and schools were avoided where it was possible. It is expected that the selection of a 200-foot wide easement within the 1,500-foot wide route will avoid houses in all but a few cases. See also the response to L-96 A.

L-226

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A It seems like a good idea and one that will be for the future!

I would like my name removed from the mailing list. _____

For more information, please contact Leura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Taylor, ~~Walter~~ & Mildred M. TAYLOR
1454 Via Loma Dr.
Walnut Creek, CA 94598

A Comment noted.

L-227

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

Please keep me on the mailing list. I have properties on Bethel Island, in Antioch, and Cottonwood. Your information is appreciated. A Information regarding "mitigation" to property owners would be of great value also.

I would like my name removed from the mailing list. _____

For more information, please contact Leura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you. Thank You Spotts

Julia L. Spotts
5992 Bethel Island Road
Bethel Island, CA 94511

A Discussion of mitigation to property owners is provided in the Final EIS/EIR, Volume 1, Section 1.1.5. Actual payments for the right-of-way will be negotiated with the landowner based on appraisals, use of the land, and the acreage of the easement required. Every effort will be made to negotiate an acceptable price with the landowner. See also response to L-14 B.

L-229

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

A I would like to make the following comments:

Don't Rape Contra Costa so we can send electricity to Southern Calif

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Darrell B. Edwards
58 Sotelo Ave.
Piedmont, CA 94611

A Contra Costa County is served primarily by PGandE, one of the COTP Participants. Ratepayers in Contra Costa County will therefore share in the benefits of the COTP as will ratepayers served by other utilities in Southern California. See response to T-126 A.

L-231

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A [Sudden to say we are already unhappy with numerous projects in area that have spoiled our beauty and tranquility

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Elaine Mirick
1324 Fernside Blvd.
Alameda, CA 94501

A Comment noted. See also response to L-15 E. The visual resource mitigation measures in Section 1.1.5 of Volume 1 of this Final EIS/EIR are specifically proposed to reduce visual impacts. Visual impacts cannot always be totally mitigated, but they can be reduced in many cases.

L-232

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A [If you expand the Transmission lines to 200' you'll be in my barn

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Mr. Dan Hathcock and
Mrs. J. M. Hathcock
6202 Circle C Lane
Dixon, CA 95620

A The width of the right-of-way along the upgrade will generally remain the same, only the height of the towers will increase. The original easement was specifically for a 230 kV transmission line. Western will be negotiating with the landowners to change the easements to allow for a 500 kV transmission line within the existing rights-of-way.

L-233

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A [PG&E have 3 transmission lines cut go through my land now. next to Los Banos Sub Station. I don't want any more unless I get paid annual rent.

I would like my name removed from the mailing list. Vernon Freeman

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995

Clip this page, fold it in thirds, and return it to us. Thank you.

Freeman Vernon, Jr.,
2525 E. Pacheco Blvd.
Los Banos, CA 93635

A See response to T-37 I.

L-234

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A [We do not want power lines near our homes on Bethel Island Ca.

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Dave and Joyce Decato
P.O. Box 411
Bethel Island, CA 94511

A Comment noted. The preferred route passes to the west of Bethel Island.

L-235

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

A I would like to go on record as being strictly against any portion of this transmission line running through the farm land on the eastern edge of the Tulelake Basin. John Prosser Tulelake, former and home owner.

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

Mr. & Mrs. John Prosser
Rt. 1, Box 219
Tulelake, CA 96134

A Your opposition to the COTP preferred route on the eastern edge of the Tulelake Basin is noted. A new route option (North 1) east of the town of Malin, Oregon, and just south of the California-Oregon border, has been identified that is to the east of the preferred route but remains west of the existing AC Intertie. This new route option, the Loveness-Graham Option, is addressed in the Supplement to the Draft EIS/EIR and has been adopted as part of the preferred route.

L-236

YOUR COMMENTS COUNT

Your views are important. Please return the form below if you have comments, suggestions, or questions about the proposed Project.

Newsletters are issued periodically. We welcome additional names for the mailing list. If you want us to remove your name from the mailing list, please indicate below.

I would like to make the following comments:

THE CONSTRUCTION OF ADDITIONAL PWR LINES SEEMS TO BE EXPANDING NORTH ALSO (ENC. STORY) *

A — JUST HOPE ALL THE MONEY IS AVAILABLE OVER THE LONG TERM

I would like my name removed from the mailing list. _____

For more information, please contact Laura Edlin, Public Affairs Director at (916) 924-3995.

Clip this page, fold it in thirds, and return it to us. Thank you.

B — THINK THE CONSERVATION PRACTICE SHOULD CONTINUE.

Gerald L. Doobins
N 5002 Madison
Spokane, WA 99205

BPA may halt its weatherization program

By Michael Murphy

In search of budget-cutting solutions to help fund regional electricity rate increases next year, the Bonneville Power Administration is looking into the possibility of terminating its residential weatherization program.

BPA Public Affairs Director Ed Money said Friday that BPA Administrator Jack Ferd has asked the conservation staff to "throw here, if he wanted to, a phaseout of Bonneville's fiscal level support to residential weatherization could be accomplished.

"But," Money added, "he said there to do it in such a way that the responsibility for residential weatherization would be turned over to local utilities, with, perhaps, BPA assistance in off-budget financing."

Any budget moves that require ratepayer a would end pay for the programs directly through their rates.

While elimination of the residential weatherization program would have an extensive impact on the region's electricity or any picture, it would be no substantial effort to the Spokane area. Washington Water Power Co. officials say WWP does not participate in BPA's weatherization program, and that removal of electricity WWP buys from BPA is unlikely.

Several BPA employees have volunteered extra weeks in the Northwest during the past week charging that Ferd has already made the decision to drop the program and had told the conservation staff to come up with data to justify that action.

Money said, however, that no decisions had been made.

"It's only at the conceptual stage. The administrator is after the information that would enable him to make decisions one way or the other," Money said.

BPA's weatherization program, which was funded at $50 million last year and $27 million this year, is an integral part of the Public Conservation Energy Power Plan.

Before the energy crunch of the 1970s, electricity produced by dams in the Northwest was cheaper than it was to create, in fact, that it was not cost effective to insulate and weatherize homes. All that changed when the region began building nuclear and coal-generating plants in order to attract perceived future energy shortages.

Those plants were so expensive that BPA and other regional power planners determined it would be cheaper to establish energy cuts in homes and public buildings in order to slow electricity demand that they produced.

Through its programs, BPA offers funds to state and individual utilities which use the money to provide grants or low-interest loans to encourage residential weatherization.

The program was established, though, along with many others ensuring the region would continue to experience electrical shortages. That has not occurred. The region has a power surplus, and already all and gas has developed in California market where Bonneville usually sells its excess power. The result is that Bonneville finds itself in a financial bind.

"Utilities all over the region are telling us they don't want a wholesale rate increase next October," Money said. "Our initial proposal was to increase rates 15 percent."

The alternative is to cut expenses, and Money said Ferd is considering cuts in all areas.

"Those that are costing currently your consumer programs for power loans, cutting back on staff and making really painful decisions," Money said, "you have to look at everything."

The Northwest Power Planning Council is charged with predicting and planning energy resources for the region over the next 20 years. The conservation programs is an integral part of that plan.

Debby Mosher, information director for the council, said they, too, have heard the rumors that BPA is about to scrap the program.

While it might not make budgetary sense to continue a full-scale conservation program in a time of energy surplus, Daley said the council feels the program should not be dismantled.

"The rationale that the conservation conservation program should be continued at a reduced rate," she said, "is enough of a program now that to phase us out if we have a breakthrough and we need the power, the program can be quickly revved up."

The BPA employees working the phone calls on personal concerns that ratepayers in the conservation program combined with proposed BPA interest in non-federal Washington Public Power Supply System nuclear plants 1 and 3, represents a "return to the 1973-74 era at Bonneville when we were back-hand in developing a nuclear resource," at the expense of other alternatives.

Money said that isn't true.

"We recently formally commenced to decommission," Money said. "We are engaged in a study to determine what the value of WPPSS 1 and 3 actually is. We will be releasing the results on that next Thursday and I think you'll see from that we are very aggressive about the future of conservation energy."

SATURDAY, DEC. 6, 1986 — The Spokesman-Review Spokane Chronicle — PAGE A8

A The COTP will produce long-term benefits which are expected to be greater than the long-term costs. Development of the COTP is not inconsistent with conservation efforts. To the extent the COTP provides for an enhanced market for sales of surplus power from the Northwest, additional revenue will be available to the Northwest in the near term and the long term. Additional revenue to the Northwest from power sales outside the region would help the financial status of BPA, which in turn would help contribute to BPA-sponsored conservation programs.

B See responses to L-3 S, L-236 A, and L-322 B. To the extent that development of the COTP reduces the cost of power to California utilities, it is possible that conservation measures that would be feasible only with higher electricity prices would be deferred.

More conservation may be possible in the Northwest as a result of the COTP if increased revenue from additional sales by the Northwest utilities is applied to conservation measures. See the following discussion of the BPA weatherization program as an example.

With respect to the news clipping attached to L-236; if BPA were receiving additional revenue from the COTP, budget constraints might be less likely to cause reductions in BPA conservation programs.

L-237

To COTP: DELLEDERA

A (1) WHAT INTEREST DOES THE CITIES OF ANAHEIM, BANNING RIVERSIDE, AZUSA, CERITOS & VERNON HAVE IN A TRANSMISSION PROJECT THAT TERMINATES IN NORTHERN CA.?

B (2) HOW MUCH OF THE 500 kV AC TRANSMISSION IS DEDICATED TO THE LAWERENCE LIVERMORE & SCANDIA NATIONAL LABS?

C (3) WHAT INTEREST DOES THE CARMICHAEL WATER DISTRICT HAVE IN THIS PROJECT?

D (4) WHO OWNES COTP?

A WRITTEN RESPONSE IS SINCERELY APPRECIATED

Steven Delledera

STEVEN DELLEDERA
5730 SINGING HILLS AVE
LIVERMORE CA 94550

A The Participants from Southern California cities will receive power from the Pacific Northwest through the transmission systems of the Pacific Gas and Electric Company and Southern California Edison Company. The cities' electric utility systems are interconnected to these transmission systems, allowing an industry practice known as "wheeling" to occur.

A response was sent to the commentor on December 19, 1986.

B The Western Area Power Administration has a 100 MW allocation of transmission capability on the COTP which is on behalf of the Department of Energy Laboratories and federal wildlife refuges. However, none of the capability of the 500 kV lines is dedicated specifically to the Lawrence Livermore or other national laboratories by name.

A response was sent to the commentor on December 19, 1986.

C The Carmichael Water District is one of a group of water and irrigation districts and agencies in California which jointly have the equivalent of a 50 MW allocation of transmission capability in the COTP. Carmichael Water District is entitled to 0.0625 percent or approximately 1 MW of transmission capability on the COTP.

A response was sent to the commentor on December 19, 1986.

D The COTP will be owned by the Participants as described in the Summary of Volume 1 of this Final EIS/EIR.

A response was sent to the commentor on December 19, 1986.

L-243

October 27, 1986

To: California - Oregon Transmission Project and/or To Whom It May Concern

Subject: Power Transmission Health Hazards

The burden of proof of 500 K.V. lines, or more, lies in the hands of the power transmission of industry; not, in the hands of the people. The little published hazards of electric power transmission lines are quite normal of the short-sighted materialistic greed of the corporate giants. This is nothing less than criminal. All health hazards should be properly addressed in the environmental impact statement. To not pursue all health matters in the field of biological effects would be immoral and illegitimate. A

Running these 500 K.V. their, already, planned 1,500,000 K.V. transmission lines is only using the Tulelake area residents as guinea pigs and, in turn, could turn their rich farm land into a wasteland when the true health hazards of these lines are studied, further; not, by the power companies, (fox in the chicken coop, fake, health studies), but studies made by private unbiased research. I challenge the wisdom of semi-secret government and industry decision making. B

Since, cancer and cardiovascular disease are taking the #1 spot in the death rate in America and they are increasing at a catastrophic per-capita rate (faster than any other 20th. century degenerative disease), it is time to stop this concept of energy at any price and, instead, adopt policies of conservation, rather than waste. We must balance, between the ill-planned forces of industry, a livable environment and curtail such sledge-hammer threats as the power of eminent domain. Tulelake area interests should not be sacrificed to the electric power needs of metropolises, hundreds of miles, away. "Field pollution" which surrounds all of us in the form of high voltage power lines is a health threat to all. C D

Sincerely,

Andrew R. Gigler

Andrew R. Gigler

4230 South Sixth Sixth Street

Klamath Falls, Oregon 97603

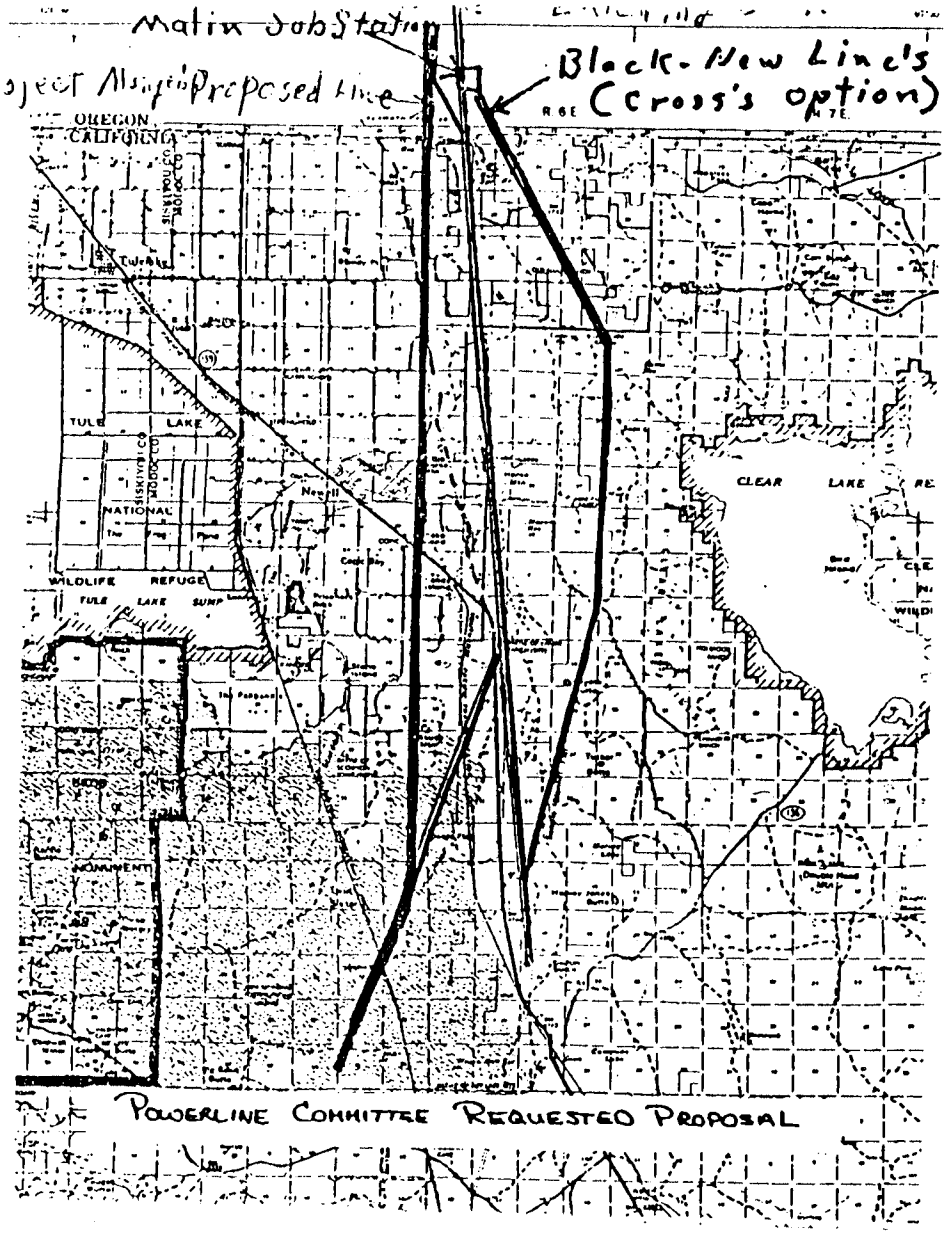
A See responses to L-330 P3 and SL-51 A.

B Studies of electric fields by Pennsylvania State University revealed that field strengths far above those that will result from the COTP did not cause harm to plant growth or yield. Other studies by Purdue University in higher field strengths have confirmed this.

C See the responses to L-3 S, L-236 B and L-322 B.

D Electromagnetic fields are associated with all electric devices and appliances. Strength of the field decreases with distance from the object. The World Health Organization and other scientific review panels have reviewed existing data on the subject. See also response to L-330 P3.

L-243 (continued)



L-244

Environmental Coordinator
Calif-Ore. Transmission Project
P.O. Box 660990
Sacramento, Ca. 95866

Dear Sirs -

I have always refused to buy a home, anywhere - where the transmission lines are over head.

A This should certainly tell something - the power lines will decrease our property values!

Up to this time, many people are interested in moving to Bethel Island, a water community. We know that people retiring are attracted to the island, and not only the older people. Young people, too, love it, and are buying either for year around living or weekend and vacation homes.

We know this because of first hand information - we have

A The commentor is addressing the aesthetic or visual impacts of transmission lines. Visual impacts of transmission lines are recognized and evaluated in the Draft EIS/EIR. These evaluations played a major part in the selection of the preferred route, the goal being to minimize the overall visual impact of the Project consistent with other environmental and engineering objectives.

The commentor states that they avoid the purchase of property near transmission lines or where transmission lines are overhead, which implies that a similar reaction from many others would have an effect on property values. The COTP will not go over anyone's house. This is accomplished first by the routing process wherein residences and other buildings are avoided where possible, and second, by the relocation process sponsored by the COTP if avoidance of residences is not possible.

While the overall visual impacts may be minimized, some residents will have to look at transmission lines placed near them. This is an unavoidable impact and is considered for all alternative routes in the Draft EIS/EIR. The question of whether this has any impact on nearby property values has been studied with the results indicating that, over the long term, there is no significant effect on property values. See also responses to L-184 A and T-82 C.

L-244 (continued)

one of our homes for sale.

B The Cosip-Oregon Transmission project people would have everyone believe that we are not here! And neither is the wild life, they say.

C After all, this is a beautiful + serene area with many birds, ducks, pheasants, geese and all kinds of wild life. And also there are many people here! Bethel Island is the most populated island in the Delta.

So after many years of never buying a home under the transmission lines, they now threaten to plant them in our front yard!

Keep them out of our area, please.

Sincerely
Janice G. Haines

Home owner 4024 Stone Rd. B.I., Ca.

B Comment noted. Wildlife resources were extensively inventoried and analyzed in the route selection process. See Section 3.5 of Volume 2A of the Draft EIS/EIR for a discussion of the analysis.

C Comment noted. The preferred route does not cross Bethel Island.

L-245

February 3, 1987

James W. Beck, Chairman
Transmission Agency of Northern California
P.O. Box 660970
Sacramento, CA 95866

Dear Mr. Beck:

As residents of Round Mountain, California on Fenders Ferry Road, we would like to file a protest against your lines coming through our area particularly since we already have numerous P G & E lines here.

A Also we want to advise you that your surveyors entered our land without permission from us but duped our tenant into opening the gate for them. Just because you are a huge outfit with millions of dollars doesn't mean you can do anything you want and walk all over private citizens.

B Take your money and build your lines where they are not ruining everyone's property.

C We feel there is enough empty land this transmission line could pass through without ruining residential property. We have worked hard all of our lives to buy and improve our property and hoped to spend our retirement here.

D If your lines come through here it would totally ruin our land since we already have a P G & E right-of-way across it.

E We truly hope you will consider placing your lines in unoccupied land and consider the rights of private citizens!.

Sincerely,

John E. & Mildred Russak

John E. & Mildred Russak
Box 126
Round Mountain, Ca.
96084

A We regret any miscommunication between our surveyors and your tenant. Our surveyors have conducted their activities in a responsible, professional manner, but there may have been a misunderstanding.

It is our desire to coordinate the location of the transmission line with affected property owners. Through such negotiation and cooperation, tower placements can result in as minimum impacts as possible.

B See response to L-245 A.

C Comment noted. The COTP has been routed through unoccupied land to as great an extent as possible, given project requirements and constraints. See also responses to L-159 P, L-177 A, and T-69 F.

D As part of the final design and alignment of the COTP in your area, Project planners will work with landowners to site the line so that impacts to private property will be minimized.

E Comment noted.

L-247

WRITTEN COMMENT FORMS
FOR THE DRAFT EIS/EIR
FOR THE
CALIFORNIA-OREGON TRANSMISSION PROJECT
AND THE
LOS BANOS-GATES TRANSMISSION PROJECT

If you have comments on the Draft Environmental Impact Statement/Environmental Impact Report that you would like to have considered by the lead agencies, you can use this form to write them down. This form can be handed in to the court reporter at the meeting, or mailed to the Environmental Coordinator at the address below. Your comments must be mailed by February 3, 1987. Thank you.

Dear Sir:

A [I am opposed to the Transmission Project. My views are the same as the other resident/owners.

Hearing Date: Feb 3 1987

Location: Rim of the pit 7

Name/Address: Lyle Hanson
Box 94 Montgomery Creek Ca. 96065

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866
(916) 924-7205

A Your opposition to the COTP is noted.

L-248

Beth A. Elmore
P.O. BOX 1045
Burney, Calif. 96013

The California-Oregon Transmission Project
P.O.BOX 660970
Sacramento, Ca. 95866

Feb. 2, 1987

To the Environmental Coordinator:

A After reading the California-Oregon Project EIS/EIR Draft I feel I must reiterate ourobjections to the proposed transmission lines going through The Cove area. Lines N-8D and N-8Alt.3 are the most objectionable of the N-8 lines.

B We are concerned about the protection of the Natural environment and inhbitants of Cove. As well as the protection of Native American homes and archeological sites.

C The EIS//EIR mentions protecting the Bald Eagle along the river crossings of the N-8 lines. But just as important is the fact that N-8D and Alt.3 are in the middle of an area inhabited by these and other large birds with potential for destroying these birds. They live and hunt in these areas. Right of ways would destroy perching sites as well as feeding sites. The lines themselves are highly dangerous to these birds flying and hunting in The Cove. Not only are the birds in danger. But the lines will effect the deer population as well as other animals. Line N-8D runs straight through the most inhabitable lands of Cove. Both animals and humans will be disturbed, if not destroyed by the lines N-8D and Alt.3. We do not want to see these large birds destroyed by man. Line N-8Alt.2 would seem to be the least dangerous of the N-8 lines near The Cove.

I have attatched a letter dated June 16, 1986 to Western Area Power Administration with a list of Archeological sites attatched to it. In addition to these documented sites is a new report(not listed) documenting Heicksen's SHA-253 site and surrounding areas This new documentation was done by Eric Ritter Archeologist of the Bureau of Land Management Redding, California. This recording was done August 8, 1986 therefore it was not listed in my letter of June 16, 1986.

F This site appears to be near or in the route of N-8D and is a very old site in need of protection. For verification of site value please contact Mr. Ritter.

It is very hard to walk anywhere in Cove without finding evidence of Native American occupancy. Especially along the N-8D and N-8Alt.3 routes. Not all sites are documented but that does not mean they don't exist. There was one unofficial report of an arrowhead found along route N-8D which is beleived to be over 13,000 yrs. old. None

G of the archeological reports can be complete because new evidence is exposed every month and year by the weather's effect on the soil. It also takes years not days to thoroughly cover each inch of ground. In the Cove area sites have been discovered in areas not normally thought of as potential site areas. So deductive reasoning of site areas is not suitable as the sole identification of potential sites. The Cove was so thickly settled the sites are thick also.

A Your opposition to COTP routes N-8D and N-8 Alt.3 is noted. The COTP preferred route is to the west of the Cove, across the Pit River along route N-8 Alt.2.

B See response to L-248 R.

C The Draft EIS/EIR recognizes that N-8 D and N-8 Alt. 3 areas are used by bald eagles. However, potential collision in these areas is believed to be less than on the selected route N-8 Alt.2 because eagles are most likely to collide when distracted during foraging. Analysis of the preliminary designs for the selected route in the Pit River area indicates that the height of the wires at crossings of the river are greater than typical flight heights of foraging eagles. This, and the fact that bald eagle use of the areas around the crossings is relatively low, suggest that the potential for collisions is not significant along the preferred route (Jones and Stokes Associates 1987).

Deer occur on all routes in the Pit River area. Where feasible and effective, road closures will be made to prevent human disturbance in areas where potential impacts are significant.

D In addition to the COTP preferred route, a new route option (North 4) has been identified that would pass further to the northwest of The Cove area. This new route, which is presented in the Supplement to the Draft EIS/EIR and in Volume 1 of this Final EIS/EIR, has been adopted as part of the preferred route.

E See response to L-248 C.

F Thank you for bringing archaeological site SHA-253 to our attention. Cultural resource surveys of the proposed route will be conducted in 1987. However, N-8D is not the preferred route.

Potential impacts to significant cultural resources will be assessed following an intensive survey of the preferred route by qualified professional archaeologists, as stated in Section 3.9.3 of Volume 2A of the Draft EIS/EIR. Impacts to significant cultural resources will be mitigated, following the procedures outlined in Section 1.1.5 of Volume 1 of this Final EIS/EIR.

L-248 (continued)

H The entire length and width of The Flatwoods and The Cove are filled with archeological evidence. Our heritage is extremely important to us and by law is entitled to protection. The procedures outlined for protection of potential sites in the EIS/EIR section 3.1.5 Mitigation Measures Page 3.9-14 are inadequate. There should be a Native American observer on site every minute of the operation to attempt to identify potential sites as well as being on hand when a site is accidentally uncovered by workers. No sites should be disturbed at all once discovered. Certainly no evidence should be removed. Graves should definitely not be relocated. The lines should be moved not the sites.

I On Northern Section Map figure 3.0-1 proposed line N-8Alt.3 goes straight through The Roaring Creek Rancheria. The rancheria is covered with Native American Archeological sites. We also do not want to live with the sight of these huge transmission lines in our front yards.

J The danger potentials are another thing we do not want to live with,

K and there are dangers. The Tables 3.6-15 N-8Alt.3 lists 2 homes within 1,000 ft. of Alt. 3. Are these the homes on the Rancheria? The Rancheria is full of home sites for our children and grandchildren. We do not want any transmission lines restricting our family's home sites.

L The EIS/EIR Addresses route N-8D as being inaccessable to the Pit River therefore of not much concern as far as recreation. It does not take into account all of the recreational activities utilizing the meadows,woods, and creeks that are an integral part of Cove. N-8D runs straight down the middle of these areas. We want these "recreational" areas protected not destroyed.

M To minimize the potential for disturbing Native American sites and concerns we believe proposed route N-8Alt.2 is the best to use. To avoid most of the objections Alt. 2 is the one we would recomend for use. We do not want N-8D and N-8Alt.3 to be used at all.

Beth A. Elmore

Beth A. Elmore

G See response to L-248 F.

H Native Americans will be consulted and involved in the mitigation of impacts to cultural resources, as stated in Volume 1, Section 1.1.5 of this Final EIS/EIR.

The Memorandum of Agreement among TANC, Western, the California and Oregon State Historic Preservation Offices and the Advisory Council on Historic Preservation details the specific methods by which the cultural resource mitigation will be implemented. A copy of the MOA is included as Appendix H of Section 1.5 of Volume 1 of this Final EIS/EIR.

I Comment noted. See response to L-248 R.

J Comment noted. Electrical effects are addressed in Section 3.10 of Volume 2A of the Draft EIS/EIR. See also responses to L-330 F3 and SL-51 A.

K The homes are not located within the rancheria.

L Route segment N-8 D is not part of the preferred route.

M Route segment N-8 Alt.2 is part of the preferred route. A new route option to the west of N-8 Alt.2 and N-8 Alt.1, the McCleskey option (North 4), has been identified and included in the Supplement to the Draft EIS/EIR and this Final EIS/EIR, and has been adopted as part of the preferred route.

L-248 (continued)

Beth A. Elmore
P.O.Box 232
Montgomery Creek, Ca.
96065

California-Oregon Transmission Project
William H. Clagett, Administrator
Western Area Power Administration
P.O. Box 3402
Golden, Co. 80401

June 16, 1986

Dear Sir:

N O It appears from the maps handed out on June 5, 1986 at a public meeting held in Round Mountain, that the transmission line N-8A & N-8C go right through the area known as The Cove. I know there are numerous Native American archeological sites in this area. All of these sites must be protected. The Cove is an Archeologicaly sensitive area which should be protected at all costs. There were Native Americans, Madesi band of the Pit River Tribe, all over this area. The land is thick with archeological findings because the Madesi have been here since time immemorial. There are a few sites documented by Archeologists in the Cove. These are by no means all of the areas which should be documented. But certainly the areas already documented should be protected. And any future sites should be protected by not going through the Cove with the Transmission lines.

P

Q The line also appears to go through the Roaring Creek Rancheria. We object very strongly to any transmission lines going through the rancheria. There are Madesi band Pit River Indians living on the rancheria now. They do not want the line to go through the rancheria. There are also Archeologicaly sensitive areas all over the rancheria.

R The rights of Native Americans to preserve their lands should be protected at all costs.

We do not want the transmission lines to go through any portion of Cove.

I have attatched a list of Archeological sites pulled from Archeological reports on the Cove area. These are not all the sites that exist. Only ones that have been documented.

Beth A. Elmore
Beth A. Elmore

N Comment noted. Route segments N-8A and N-8C are to the north and west of The Cove area.

O Archaeologically sensitive areas will be identified and protected during route selection for the COTP. See response to L-248 F.

P A cultural resource survey will be conducted prior to construction to identify archaeological sites along the proposed transmission line route that must be protected. See response to L-248 F.

Q The preferred route passes to the west of the Roaring Creek Rancheria.

R Native Americans' input and comments on the planned Project have been and will continue to be solicited until the siting and construction of the COTP is complete. The purpose of the Native American consultation study was to gather data on cultural resources during the routing evaluations for the COTP. As a result of the Native American consultation program, Project planners designed a new route, which is now part of the preferred route, that avoids crossing the Roaring Creek Rancheria.

cc: sent to: James W Buck, chairman
[illegible] of Northern California

L-248 (continued)

From report by Martin H. Heicksen for the University of California and the Pacific Gas and Electric Company, August 1962.

S Sha-242: living area, Sha-243: living area, Sha-244: living area, Sha-245: living area, Sha-252: living area, Sha-253: living area, also area adjoining this site up hill from it consists of dense living area and an old grave., Sha-254: living area, Sha-255: Living area, and cemetary., Sha-256: living area, Sha-257: living area, Sha-258: living area, Sha-259: Jumping Rock, Traditional religious significance,. Sha-263: Village living area, Sha-265: living area, Sha-143: living area, Sha-144: liiving area, Sha-145: living area, Sha-148: living area, Sha-154: living area and cemetary., Sha-157: living area of large village., Sha-142: living area, Sha-155: living area, Sha-146: living area, Sha-147: living area.
From Mapping Project Ethnographic Inventory Shasta-Trinity National Forest Mendocino National Forest (Corning and Stonyford RD) Redding Resource Area, Bureau of Land Management USDA, FS Contract # 53-9A28-0-3130, by Theodoratus Cultural Research, Fair Oaks, Ca, June 1985.
1. Bald Place on Mountain: religious area(this is a Pit River site not a Yana site, Madesi Band of the Pit River Tribe); 'ak'uyhtca: Sweathouse site(this site is directly above the Patterson Cemetary, but not next to the Patterson place. It is located Northeast across Cove Road from the Patterson place. This site is also listed in tha report for Pacific Gas and Electric done in 1984 by The Archeological Study Center at California State University, Sacramento performed under the direction of Dr. Jerald Johnson. Report on file with California Department of Forestry in Sacramento, Ca. State Archeologists office.). The Tom Baker Cemetary: (This is a seperate cemetary on land East of the Patterson Cemetary located in the NW1/4 NE1/4 Sec. 14, T.35N.)
Sites-143,144,145,139,136,157,140,142,134(this is Baker place where Baker cemetary is located),122,121,131,132,130,133,135(Actually Hank Healy's place, Frank Mckay married Hank Healy's widow.),119,92,120,117,114,113,125,112,67,94,95,7.
From Report by CDF State Archeologist Dan Foster
March 1984. Cultural site #1. Cemetary: Cultural site #2. Patterson Ceaetary and Sweathouse in meadow above. Cultural site #3 village and cemetary(the cemetary extends to right and to left of the entrance to the meadow with the fence line going through the middle of it.)
We have been unable at this time to get a copy of the full report done by The Archeological Study Center at California State University, Sacramento performed under the direction of Dr. Jerald Johnson done for Pacific Gas and Electric Company in 1984 on the Cove.

All items in parenthesis are corrections of information inserted by me because the reports were mistaken, in a few cases, about locations or discriptions of sites.

Beth A. Elmore

S Comment noted. See response to L-248 F.

L-249

P.O. Box 496
Bethel Island, Ca
94511
2-2-87

Dear Mr. Beck.

I live at 4098 Stone Rd. Bethel Island, Ca. on the San Joaquin river and have for fifteen years

A I am deadly opposed to

B the transmission project you are proposing. It will dig a trail from my beautiful home

C and devalue it.

Eileen Regina Simpson

A Your opposition to the COTP is noted.

B Comment noted. The preferred route for the COTP does not cross Bethel Island. See also response to L-15 E.

C See responses to L-184 A, L-244 A, and T-82 C.

L-251

WRITTEN COMMENT FORMS
FOR THE DRAFT EIS/EIR
FOR THE
CALIFORNIA-OREGON TRANSMISSION PROJECT
AND THE
LOS BANOS-GATES TRANSMISSION PROJECT

If you have comments on the Draft Environmental Impact Statement/Environmental Impact Report that you would like to have considered by the lead agencies, you can use this form to write them down. This form can be handed in to the court reporter at the meeting, or mailed to the Environmental Coordinator at the address below. Your comments must be mailed by February 3, 1987.
Thank you.

A I oppose the Calif. Oregon Transmission Project thru our land or near it in Modoc County. We live near Bloody Point where wagon trails of early settlers are located, Indian Rocks and arrowheads may still be found in the fields.

B I object to ruining of our beautiful view of Mt Shasta, none in the valley compares to it.

C I object to the noise it would create anytime and especially when damp as we have trouble with our tv & telephone & smaller power lines now.

The farmers depend on irrigation pipe wheel lines to water their crops. Some new seedlings crops must be changed every 2 hours. Going around towers this often would create a tremendous problem. This is the only method we have of irrigating. We can not flood irrigate.

E The airport located near us would be affected by the high wires. Spray flying over our fields would be dangerous.

F I believe if the lines are to be built, they should be further east on the "Cross Alternative."

Hearing Date: _____

Location: _____

Name/Address: Mrs. Betty Halonen
6731 Kimberly Ct
Klamath Falls, Or. 97603

Mail to:

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866
(916) 924-3995

A Your opposition to the COTP is noted.

B Comment noted. See response to L-330 F1.

C See responses to L-329 C1 and L-330 H3.

D Transmission towers make some irrigation systems more difficult and time consuming to use. The effect of such towers on irrigation practices in fields is discussed in Section 3.6.2.2 in Vol. 2A of the Draft EIS/EIR. Also see responses to L-41 C and L-330 G.

E The Malin Airport is located approximately three and a half miles from the N-10A route, and the Tulelake Airport is located approximately two miles from the N-10G route. We do not believe this distance presents a hazard. Other routes (N-10D, N-10F, N-10I) have been considered in the routing process, but were eliminated for reasons that included their proximity to airports. Near the transmission lines, however, modification of aerial spraying practices are required to reduce safety risks to applicators. The potential for reduced spray coverage, reduced crop yields, and other impacts are discussed in Section 3.6.2.2 in Vol. 2A of the Draft EIS/EIR. Also see responses to L-14 A, L-277 A, and T-175 H.

F Your support of the John Cross alternative is noted. A route option was identified that shares many of the same benefits with the John Cross Alternative. This option is called the "Copic Bay Option" and is presented in the Draft EIS/EIR. See response to L-330 H.

L-255

Since 1975

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Porterville, Ca. 93257
(209) 539-3874

March 23, 1687

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento,Ca 95866

Re: Notice of Impact Report:
Copy received by Tulare County
March 15, 1987

A B C This Impact study does not address the use of undergrounding and the health problems of overhead lines which has been questioned, not to mention the plane accident recently that took two lives and shutdown a power plant by hitting 500 KV lines.

D The attached proposed paper gives a no risk underground alternative that could be placed in Interstate Highway #5 and would not then require any more deformation of the environment.

Paul F. Pugh PE
Mgr. Intecon Project

Attachments:
500 KV paper
cost factors UG
other items

PS: A proposal along the line of the attached paper can be made for consideration for any part of the line. Please direct your inquiry to the above address.
PFP

A See response to L-307 I.

B See responses to L-330 P3 and SL-51 A.

C We are not familiar with the incident referenced in the comment. We are aware of an incident that occurred in approximately mid-1984 when a U. S. Marine Corps jet fighter stationed at Yuma, Arizona, was practicing "nap of the earth" flight maneuvers and flew into the shield wire of the 500 kV Southwest Power link. The shield wire broke and approximately 2000' of wire hung on the aircraft. The pilot was successful in returning to the Yuma airport and landing safely with the wire trailing behind.

D Although Mr. Pugh's proposal is encouraging for the development of feasible underground 500 kV systems, the application of this unproven technology to the COTP is inappropriate. The COTP will be a critical component of the bulk electrical transmission system of the western U.S. The COTP should utilize engineering design that has been proven technically and commercially feasible. As is discussed in Mr. Pugh's reference material, his invention has been tested only through 138 kV and, as of yet, has not been commercially installed for HVAC transmission systems. Also see response to L-307 I.

FEASIBILITY OF 2000 MILE, 2000 MJ, 500 KV UNDERGROUND TRANSMISSION LINE

P.F. Pugh,PE, Life Member, IEEE
Associated Professional Engineers
INTECOM PROJECT
Terra Bella, California

Abstract - A new underground transmission cable system is proposed for long distance and high capacity circuits. The installed cost is analized and new design parameters are given along with comparisons to overhead AC and DC transmission lines and conventional underground cable systems.

INTRODUCTION

Long distance and high capacity transmission lines have been overhead, either AC or DC because the first cost is much lower than underground. An AC line is preferred for ease of taping. However, compensation and phase matching are a problem compared to a DC line which can cost less under certain conditions.

AC underground cables require compensation to reduce charging currents which have been a problem.

Large AC conductors require special constructions to reduce the conductor losses as they increase the power losses and the cost of a transmission line compared to a DC line which does not have AC inductive effects.

The design of an AC long distance, high capacity underground transmission line is related to cost, reliability, voltage drop, phase matching, stability loading, overvoltages, losses, cost of energy transferred, safety and ecology. Charging currents and dielectric or insulation losses must be evaluated also.

These design parameters will be directed to a new, proposed underground cable system for long distances and high capacities and will be compared to present underground cables now used for short runs and overhead AC and DC lines.

PROPOSED UNDERGROUND SYSTEM

Cost is the main factor in the design of the proposed long distance and high capacity underground transmission line which has the purpose to carry remote surplus lower cost power or supply power shortages.

The cost of underground cables is made up of the conductor, the insulation, the enclosure, and the installation method. In order to compute the costs, the cable design must be established for the loading, voltage, and distance. For a given load and distance, the voltage must be selected for the proper voltage drop.

"This paper has been submitted to the IEEE Power Engineering Society for the 1987 Summer Power Meeting in San Francisco. It is being reviewed and approval for the meeting has not been given."

Voltage Drop

Voltage selection is very important for underground as it determines the voltage drop and also the charging current. Where overhead line may require a higher voltage to limit the voltage drop and increase the stability loading underground is better costed at a lower voltage than overhead.

The voltage selection determines the conductor size, the insulation volume, and the enclosure size which are the three largest cost items for the cable system. The charging current is directly proportional to the voltage and the dielectric losses are proportional to the square of the voltage.

First determine the load amperes for the assumed line. It is 2800 amperes at 500 KV. It was selected as a common voltage used by many of the utilities that will be served by the line.

$$(1) \quad I_L = \frac{2{,}000{,}000 \text{ KW}}{500\text{KV} \times 1.73} = 2800 \text{ Full Load Amperes}$$

Assume an allowable voltage drop of 5% at full load. At 500 KV the voltage drop line to neutral is 11,500 volts.

$$(2) \quad VD = \frac{500{,}000}{1.73} \times 0.05 = 289{,}000 \times 0.50 = 11{,}500 \text{ Volts Drop Line To Neutral}$$

The calculated voltage drop was based on 100% compensation for the line and 100% load power factor. The voltage drop now is resistive only. The value of the resistance is 4 ohms for the 2000 miles at full load.

$$(3) \quad CR = \frac{11{,}500}{2{,}800} = 4 \text{ Ohms Conductor Resistance}$$

Power Loss

The conductor power loss for the three phase, 2000 mile line is 36 MJ or 1.8% for the 2000 miles at full load.

$$(4) \quad PLC = \frac{3 \times 2800^2 \times 4}{1{,}000{,}000} = 36 \text{ MJ Power Loss Conductors}$$

$$\%PLC = 36/2000\ (100) = 1.8\%$$

The power loss is reasonable for the long line.

L-255 (continued)

Conductor Size

The 4 ohms resistance is used to calculate the conductor size. A new conductor is selected which is low in cost and has the same resistance for AC and DC currents. The conductor construction is shown in Figure 1 below. It consists of 180, 1/2" aluminum redraw rods in a bundle and parallel with the same lengths. A redraw rod is normally used to make stranded wire which is used for overhead lines. This permits a lower cost conductor for the underground cable. The AC resistance of each ½"rod is the same as the DC resistance. Tests have been run to show that the AC and DC resistance of large bundle of these rods is the same just as with a single rod. The DC resistance of a single ½" rod is 0.068 ohms per 1000 feet. This makes the required conductor 45,000 MCM for a 4 ohm circuit.

(5) $$MCM = \frac{0.068 \times 2000 \times 5.28 \times 250 MCM}{4 \text{ Ohms}}$$

$$= 45{,}000 \text{ Conductor Size}$$

(6) $$NRR = 45{,}000/250 \text{(size ½" rod)}$$

$$= 180 \text{ Number Redraw Rods (½")}$$

The diameter of the conductor is 7.7". The rods are placed inside a thin wall plastic tube which permits the rods to move on bending and provides a round, smooth surface for the control of the voltage stress at the conductor surface.

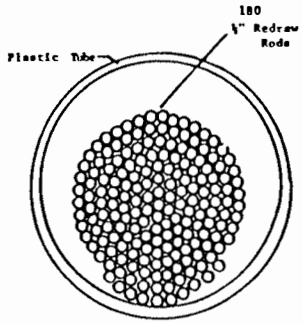


Fig. 1. Conductor System

The 180, ½" redraw rods are placed in 8.7" diameter plastic pipe as shown in Figure 1. The pipe wall is thin and enough clearance is required to push and pull the rods through the pipe or extrude the pipe over the rods.

Insulation Thickness

The insulation thickness is determined by voltage stress assigned for the cable. The factor of safety is the ratio of the working voltage to the breakdown voltage. The voltage stress for a shielded cable is a maximum at the conductor which is located on the outer surface of plastic tube over the conductors. This shield is connected to the conductors at each splice.

The operating voltage stress to be used for the new underground system is only 80 volts per mil of insulation thickness. Conventional cables are operated at 300 volts per mil and higher. These are the pressurized cables. The 80 VPM was selected based on the same insulation system of crepe paper and SF_6 gas operating at this stress successfully for 8 years at a lower distribution voltage. The factor of safety is 4 to 5 for the new cable, whereas, tried and proven pressurized cables have a factor of safety of only 2 to 3.

The insulation thickness for the new 500 KV cable is 5.63" and the diameter over the insulation is 19.96". This is larger than any conventional cable and is similar to the gas spacer cable used for short station ties and deadfront substations.

(7) $$80 \text{ VPM} = \frac{289{,}000}{4350 \text{ MRC} \ln_e \frac{DI}{DC}}$$

MRC - Mile Radius Conductor
DI - Diameter Of Insulation, Inb.
DC - Diameter Of Conductor, Ins.

$$\ln_e \frac{DI}{8.7} = 0.83$$

$$\frac{DI}{8.7} = 2.294$$

$$DI = 19.96"$$

$$IT = \frac{19.96 - 8.7}{2}$$

$$= 5.63" \text{ Insulation Thickness}$$

Shielding

The insulation surfaces, inside and outside, must be surrounded by a smooth metallic shield, called conductor shield and insulation shield. The material can be aluminum tapes applied with a lap. The thickness of these tapes or volume shall be large enough to prevent overheating of the cable during a short circuit and be able to carring the charging current between ground points without a large voltage rise. The fault current is the worst condition and the tapes will be damaged at the fault but can be repaired at that point. Assume 30,000 amperes fault current for period of time of 15 HZ. The size of the shields shall be at least 1818 MCM aluminum.

The MCM size of the shields is inversely proportional to the square root of the time for the short circuit or fault. If the time is for 30 HZ, the MCM size would be 1.41 times larger or 2571 MCM.

(8) $$MCM \text{ (Shield)} = 30{,}000/16.5$$

$$= 1818.2$$

(9) $$MCM \text{ (Shield)} = 1818(30/15)^{\frac{1}{2}}$$

$$= 2571$$

The short circuit current is directly proportional to the shield MCM size. The equation (8) is based on the temperature of the shields rising from 105C to 200C, a very worst and conservative condition.

L-255 (continued)

Size Of Enclosure

The inside diameter of the enclosure for the new cable system is at least 1" larger than the cable diameter or 20.96". The enclosure material will be high density polyethylene pipe that has been used for over 20 years directly buried in the earth for carrying natural gas.

The pipe is rated at least 2500 psig. tensile strength. A factor of safety of 5 will permit a working stress of 500 psig. The gas pressure in the cable will be 40 psig. Calculated pipe thickness for this stress will be 0.84".

(10) $TP = \frac{psig \times DPI}{2 \times 500}$

psig - pounds per square inch, gage pressure

DPI - Diameter of pipe, inside, inc.

$TP = \frac{40 \times 21}{1000}$

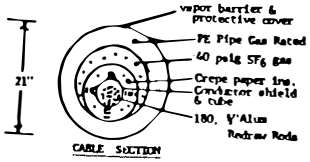
= 0.84" Thickness of Pipe

A wall thickness of one inch will be used for additional strength and mechanical protection.

The polyethylene pipe has excellent resistance to water vapor diffusion. It is subject to water vapor diffusion at temperatures above 45C and relative humidity above 60%. To prevent water vapor diffusion a 2 mils vapor barrier of high strength material and high resistance will be wrapped around the pipe and then covered with 80 mils of PVC protective tapes.

New Cable Construction

Figure 2 below shows a section of the new cable system and how the three single phase cables will be buried in the earth.



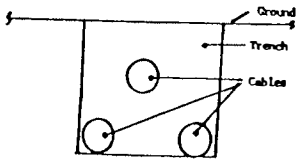


Fig. 2. Cable In Earth

Installation Method

The cable will be manufactured at the installation site with portable equipment. The pipe will be shipped to the site in 60' to 80' lengths and will be fused together with a machine straight in long lengths of ½ mile to several miles. The conductor rods, shielding tapes, and paper tapes will be shipped in bulk to the job site. The rods will be assembled in the tube. The tube will be pulled and pushed through the taping machines and into the pipe. Pipe will have the vapor barrier applied and the protective tapes overall. The completed cable will be placed on dollys and pulled to the open trench and placed with equipment now used for laying gas pipes. The pipes will have small terminals attached, the insulation dried by heat and vacuum with cable in the pipe. The vacuum will be broken with SF_6 gas at 40 psig.

Stop joints will be made at each splice by a compartment which will permit repairing section of the line without removing all of the gas. The terminals will be joined in a compartment. The splices to be staggered and buried. As shown in Figure 2 the cables will be laid in triangular configeration.

Installed Cost Cable

The installed cost of the cable in Figure 2 is estimated to be $1.9 million per mile or $3.8 billion for the 2000 mile line. With a capitel cost of 10% per year at 100% load factor the cost for transporting power 2000 miles is an estimated 2.2 cents per KWH. The relative costs of the major items are shown in Figure 3 below.

ITEM	PERCENT
Conductor	23
Insulation	41
Shields&Tube	6
Pipe ,Vapor Barrier,Covering	23
Splices & Terminations	3
Trenching & Backfilling	4
Total	100 %

Fig. 3. Relative Installed Cost

(11) $\$/KWH = \frac{\$1.9 \times 10^6 \times 2000 \times 0.10}{2 \times 10^6 \times 8760}$

= $ 0.0217 per KWH for carrying 2000 miles

Of particular interest is the installation cost which is reduced to less than 10% from the normal 50%. This is because the system is field manufactured at the job site. A charge of 2.2 cper KWH is reasonable in view of high energy costs and the wide range in efficiencies for generating plants and the time of day usage.

The above costs do not include the cost of losses which would be less than 2%.

Charging Currents

The charging current of a cable is the AC or capacitence current that flows through the insulation. It is calculated from the thickness of the insulation, the conductor size, and the dielectric constant of the insulation. The

L-255 (continued)

value for air is one, the lowest value. All other insulations are higher. Polyethylene is 2.3, oil is 2.2, paper&oil is 3.4, dry low density paper is 1.7, and creped, dry, low density paper with a gas is 1.2 or lower. With a dielectric constant of 1.2, the charging current for the new 500 KV cable is 27,962 amperes for the 2000 mile line. The cable could not carry this current safely even though this current is a peak at one end. Compensation is needed to cancel charging currents in the conductor.

(12) $IC = \frac{0.106 \times 289 \times 60HZ \times 1.2 \times 2000 \times 5.28}{\ln_e \frac{DI}{DC}}$

$\frac{DI}{DC} = \frac{19.96}{8.7}$

$IC = 27,962$ Amperes per phase for 2000 miles.

This charging current can be compensated for by load current inductive reactance, by increasing the insulation thickness which will reduce the charging current, reducing the dielectric constant by more drying and lower density paper, and by the use of shunt or series reactors.

The spacing of cables can provide some inductive reactance (X_L). If the conductor has a slight twist, inductive reactance can be added but the conductor size will need to be increased to give the same voltage drop and power loss. Assume a spacing of 6' between the centers of the conductors (S) and the conductor diameter of 7.7" or 0.642' (DC). At 2800 amperes the compensating X_L vars are +573. The charging current X_C vars are -765. This will require additional compensation unless the extra X_C vars can be used for load power factor correction as these values are per foot per phase and would be very large for the entire circuit.

(13) X_C vars $= \frac{-27,962}{2000 \times 5280} \times 289,000$

$= -.764$ vars per phase per foot cable

(14) X_L vars $= I_L^2 X_L$

(15) $X_L = 0.023(\ln_e \frac{2S}{DC} + 0.25)$ Ohms per 1000 feet per phase

$= 0.023(\ln_e \frac{2 \times 6}{.642} + .25) \times 10^{-3}$ ohms per ft.

$= +0.0731 \times 10^{-3}$ ohms/ft

[illegible] per phase per foot cable.

When the line is energized, the charging currents will require special consideration to prevent cable overheating before the load is picked up. The high thermal capacity of the cable may be of help, but the voltage will rise also. Each substation can have switching reactors or the cable energized with load or a faulting device for the phase conductors. A combination of reactors at substations and self-compensation can be used or considered.

Dielectri Losses

The charging currents produce dielectric losses and heating even though the currents are compensated in the conductor. They are directly related to the square of the voltage, the insulation power factor, the dielectric constant and inversely to the cable configeration.

The insulation power factor is an AC resistance of the charging current. Gas insulation has a very small power factor, close to zero. The better insulations have a value of 0.1% to 0.01%. The very dry, low density crepe paper with a dry gas has been measured as low as 0.001%.

The dielectric losses for this new cable with a power factor of 0.01% are 2.4 MW for the entire line which is only 0.12% of the full load.

(16) $DL = \frac{0.0106(289)^2 \times 60 \times 1.2 \times 0.0001 \times}{\ln_e \frac{DI}{DC} \times 1,000,000}$

$\frac{3 \times 5.28 \times 2000}{}$ MW

$= 2.43$ MW Dielectric Losses

$\%DL = \frac{2.43 \times 100}{2000}$

$= 0.1217$ % Dielectric Losses

The charging current conductor losses are zero at full load as they could be fully compensated. If lumped compensation is used they would have some conductor losses.

Reliability

Overhead lines are traditionally used in most parts of the country out side of cities. Special efforts have been made by utility engineers to make them highly reliable. Most systems are looped or grids so that a single outage will not cause a loss of power to a customer. Separate rights of ways are selected for alternate circuits to prevent one failure from taking out two lines. Overhead has been more versatile for overloading in an emergency as the heat from the conductor can be dissipated directly to the air.

Underground lines are immune to the aerial exposure of an overhead system and some have operated for 50 years without a single outage. These are pressurized underground cables referred to as pipe-type cable and self-contained cables. These cables have all of the air and moisture excluded at the factory and a liquid or gas pressure maintains the system from the atmosphere. The pressure also prevents a [illegible] from taking place. The ionization or breakdown voltage of a pressurized cable is almost directly proportional to the pressure and density of the gas.

The failure mode for underground cables is much different that that of overhead lines. OH lines are like a gas spacer cable with air as the insulation in place of pressurized SF_6 gas now used by utilities. An overvoltage such as

L-255 (continued)

lightning, a switching surge, a short circuit generated overvoltage, or an unbalanced ferroresonance; will breakdown the air between the conductors or along the surface of an insulator producing a fault current through the air. When the voltage is removed, the gas returns to its prior insulating level of infinite insulation resistance without damage by the fault. This is called rehealing of the insulation. When solid insulation fails, a carbonized hole is burned through the insulation and it will not reheal.

The new cable has the ability to reheal. The low density paper fibers are surrounded, inside and outside, with the pressurized SF_6 gas. An overvoltage will ionize the SF_6 gas producing temperature higher than the surface of the sun which changes the paper fibre to a gas leavings the walls of the hole clean and insulating. The SF_6 gas is 5 times the density of air so it takes a lower pressure than air to obtain the same ionization voltage. When pressurized SF_6 gas is the insulation, the thickness is much smaller than used for overhead lines. Compared to SF_6 gas spacer cable, the continuous crepe paper spacer will prevent a floatation of moisture or conducting particles providing greater reliability. The rehealing of the new insulation system has been confirmed by the Underwriter's Laboratory in a Fact Finding Report. A single length of the cable was broken down on test repeatedly at the same voltage. On the same test a solid rubber-like insulation could only be tested a single time andead short was produced the first time voltage was applied. The new insulation is in the 1984 National Electrical Code. Article 325 as Type IGS Cable (Integrated Gas Spacer Cable which is an factory assembly of cable and conduit with crepe Paper and SF_6 gas at 20 psig rated 0- 600 volts. Testing has been completed for increasing the rating to 0-35KV the highest rating of the NEC and the Code Panel is still studying the proposal).

Solid insulation has now been used 20 to 25 years for underground distribution and some transmission lines. Many failures have been reported due to gaseous ionization and water treeing after a few years up to 15 years. These cables have synthetic insulations and have insulations thickness much less than cables installed in the 30's and 40's. Some of them with the heavier walls have lasted 20 to 30 years or longer.

Water treeing is caused by water vapor diffusion as the spaces between the long chain molecules are large enough for the gases - oxygen, nitrogen and water vapor to enter. When the water vapor contacts the walls of the insulation energy is given up and the vapor turns to liquid. The dielectric constant of water vapor is one and that of water is 80 or more.

This high dielectric constant in an electric field reduces the forces holding the long chains together which produces an air pocket like bubbles in water when it is boiled. The gas space in the bubble is easily ionized and can take place at operating voltage. Gaseous ionization with a AC voltage produces radient energy which destroys the long chains forming carbon trees or a complete breakdown.

Even without water treeing, the gas spaces between the molecules can ionize at operating voltage which over a long period of time will produce insulation failures. A new method has been patented[1] which can prolong the life of these solid cables by replacing the air spaces and moisture with SF_6 gas by gaseous diffusion. These solid insulations then have the ability to last 60 to 90 years.

Impulse Strength

The impulse strength of the new insulation system is 10 to 11 times the operating voltage of 80 volts per mil. Surge arresters are recommended as low cost extra insurance. They can even protect against 60 HZ overvoltages and gaps can be used before the cable fails.

Relaying

Relaying for overhead lines has been perfected over the years. Relaying of underground cables can be accomplished in a similar manner. The shields of the cable are one point grounded and a current transformer at each point with a remote monitoring will tell which section of cable failed.

High Resistance Grounding

The most reliable circuit is high resistance grounding where the fault current is limited to a few amperes above the charging current and the system can operate with a fault as it is alarmed only. The fault current is used to locate the fault with the circuit energized. During a fault, the voltage on the other two phases is increased 73%. The new cable can operate at this voltage for short time without damage or loss of life. The SF_6 gas pressurized switchgear should be protected for a short time overvoltage. The transformers would need to be evaluated. The added expense for more insulation could be evaluated against reduced relaying and switching cost, reduced maintenance cost, and improved reliability. The new cable would be able to reheal as the fault current would be low enough to not damage the shields.

High resistance grounding has not been used in this country for transmission or distribution lines, but has been used successfully by industrial customers and utilities at generating stations to prevent damage to windings and to warn of a problem which can be repaired on a scheduled shutdown. Arcing faults are also prevented by high resistance grounding.

Once high resistance grounding is selected, consideration can be given to fully insulated system with plug in spare devices which parallel the fauly equipment and permit taking it out of service without a shutdown.[2] Maintenance can be performed the same way eliminating the need for duplicate circuits.

Emergency Loading

The new cable system is designed to handle a large overload safely due to its large thermal capacity and very large conductor. The allowable operating temperature is 105C for the insulation when a vapor barrier is used. If none is used the operating temperature would be limited to 60C.

Phase Matching

The AC line is corrected for unity power factor which will make phase matching easy. At the tap points phases can be shifted as needed.

Stability Loading Limit

With 100% compensation the loading limit would be infinite. The exact value would need to be calculated for the desired outage. The value for the underground would be much higher than overhead and should be 2000 MW or higher.

Safety

Voltages are not produced on the surface of the polyethylene pipe unless the voltage on the inside shield is too high. The vapor barrier would be grounded along the way and would not have a voltage. A magnetic field would be present between the cables which are spaced. The field surrounding the three cables would go to zero feet.

Ecology

The ecological aspects of overhead compared to underground have been well documented. No thermal soil would be needed for the new underground cable as the cable will operate at a low temperature. Any radiation from the cables would be low at 60 HZ and could be evaluated. No ionizing radiation would be produced by an electric field as the cable is shielded. Ionization of the insulation is controlled by the gas pressure and by operating at a low voltage stress.

Overhead DC Transmission

DC has been proposed for AC lines at a lower cost as two conductors are used in place of three conductors. The proposed AC underground system would operate at unity power factor as a DC line. The conductor of the new cable has an AC resistance equal to its DC resistance so it would be same as a DC system. A three phase line is more economical than a single phase line as only 75% of the conductor material is required for the same loading. It would be difficult to string 65,000 MCM for an overhead DC line. In Figure 3 the conductor cost is 23% of the total cost. This would suggest that the new underground cable with high energy costs would be very competitive with overhead DC transmission.

SUMMARY

A new underground transmission system has been described and costed for a high capacity and long distance line. Figures 1,2,3.

The systems described have been invented by the author, but the complete details are beyond the scope of this paper.

It is hoped that the data presented will encourage the utility engineers working in planning, design, and operations of overhead transmission lines to investigate underground as a viable alternative.

ACKNOWLEDGEMENTS

Work in evaluating and testing the new insulation system has been funded in part by US Department of Energy, Small Technology Section.

Paul F. Pugh,Jr has worked with the new insulation system for the past 11 years and has made many contributions.

REFERENCES

1 Paul F. Pugh,PE,"60/4.16KV Deadfront Distribution Substation" Transmission & Distribution Magazine,April 1977,Pages 62-64 116.

2 Paul F. Pugh & Paul F. Pugh,Jr. "Gas pressurized Cable And Conduit System" U.S. Patent #4,581,478, April 8, 1986.

Paul F. Pugh,PE (PE,IAS, I&DS, RS,Senior Life Member IEEE) was born in Orrville, Ohio on August 1, 1922. Graduated from USC, Los Angeles, 1948,BEEE,with honors. GE Co. Test Courses, 1948-1949. 90% Masters Power at University of Detroit. Case Institute Technology,Cleveland,Ohio Graduate School Polymer Chemistry,Nuclear Physics,Production Management.1950-1955.Instructor UC Berkeley PE Exam EE Review course 1970-1977. Was Application Engineer, Cable Specialist, and Sales Representative for GE Co Wire and Cable Department 1950 to1967,Consulting EE & ME 18 years.Own firm 11 years, Registered EE & ME in California.Nine US Patents on cables and energy systems. Member Eta Kappa Nu, Tau Beta Pi, NSPE. Past President of East Bay Chapter of CSPE. Award Winning Installation by Specifying Engineer's Magazine for Energy Conservative Cable. 1981 Published numerous Technical Articles.

L-260

SHASTA COUNTY FIRE DEPARTMENT

CALIFORNIA DEPARTMENT OF FORESTRY

COOPERATIVE FIRE PROTECTION

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REDDING CA 96001
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COUNTY FIRE WARDEN
RANGER-IN-CHARGE

VOLUNTEER FIRE COMPANIES

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KESWICK
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MILLVILLE
MONTGOMERY CREEK
OAK RUN
OLD STATION
PALO CEDRO
PLATINA
SHASTA LAKE
SHINGLETOWN
WEST VALLEY
WHITMORE

March 19, 1987
E3

California Oregon Transmission Project
P. O. Box 660970
Sacramento, CA 95866

14 FIRE PREVENTION
14.3 Fire Safety and Land Use Planning
CALIFORNIA OREGON TRANSMISSION PROJECT

Dear Sirs:

The California Department of Forestry and Fire Protection/Shasta County Fire Department (CDF/SCFD) has reviewed the above referenced project.

A The Shasta County Fire Department (SCFD) is not aware of any county fire department permits or requirements that would pertain to this project.

B All CDF comments were sent through the state clearing house. A copy of those comments are attached for your information.

If you have any questions, please contact County Fire Prevention Officer Chris Newton at this office, telephone (916) 225-2418.

Sincerely,

Gary Harlow
Acting County Fire Warden

By C. J. Newton

Chris Newton
County Fire Prevention Officer

bw

attachment

cc: FPO
RO II

BOARD OF SUPERVISORS

John Reil Bob Bosworth Abe Hathaway Don C. Maddox Roy F. "Pete" Peters

A Comment noted.

B Receipt of a copy of the CDF comments is acknowledged. These comments were received from the State Clearinghouse. See responses to L-362 Y through L-362 RR.

L-260 (continued)

COMMENTS ON DRAFT EIS
FOR CALIFORNIA - OREGON TRANSMISSION PROJECT
SCH# 85040914

The California Department of Forestry and Fire Protection coordinates several programs and enforces the Forest Practice Act, which could all be potentially impacted by this project. In summary these programs are:

1. Wildland fire control.
2. Vegetation Management Program.
3. Range Improvement Program
4. California Forest Improvement Program
5. Forest Practice Inspections
6. Fire Prevention Inspections under Public Resources Code Section 4293.
7. General Timber Resources

In order to facilitate comment, these programs will be discussed in the order listed above.

1. WILDLAND FIRE CONTROL

The potential impact of the project on the Department's wildland fire control efforts are two-pronged. The first is the implication to air operations safety on fires that may occur near the route. Transmission lines are usually far enough above the ground to be hazardous for helicopters and air tankers delivering retardant and water to assist in the control of wildfires. Some mitigation, such as beacons or some such should be included to allow for increased visibility during the typically smokey conditions prevalent during a wildfire.

The second impact is to the safety of ground forces suppressing fires adjacent to the proposed route. The extremely high voltage conductors will arc in the presence of smoke, and can actually arc to the ground. In order to protect the lines and the ground attack forces from this, some mitigation, such as well maintained fuelbreaks should be provided as mitigation.

2. VEGETATION MANAGEMENT PROGRAM

The preferred alternative route from the Round Mountain Substation to the Cottonwood Substation transects an area that has been very active in the Vegetative Management Program. This program allows the Department to assist private landowners in the use of prescribed fire to reduce fuel loading on their property, and to improve the browse quality of the brush species.

L-260 (continued)

These areas require maintenance from time to time, which usually means repeating the burns. Our experience in the past has been that the utility companies aren't willing to shut down the major transmission lines for the 1-2 day duration of a prescribed fire. If this were to be the case with the proposed route, nearly 2500 acres of land under this program would be eliminated by the line bisecting the area under management. Proposed mitigation for this might be that the enrolled utilities provide for mechanical treatment of the brush under the power lines on a scheduled basis to improve browse, and to serve as an additional reduction in fuel loading, as well as off site treatment in the areas removed from treatment to mitigate the acres removed from the Vegetation Management Program. The financial impact of removing this land is considerable to the individuals involved. The average cost of these burns is $38.00 per acre. Up to 75% of this is borne by the state, by the use of State dozers, engines, and personnel. Lands treated with prescribed fire under the Vegetation Management and Range Management Program are more productive for domestic livestock and wildlife. If no mitigation for this impact is undertaken, the land will revert to the heavy, decadent brush that existed before the programs began. The fire potential will increase to pre-prescribed burning conditions while forage available for livestock and wildlife will decline.

3. RANGE IMPROVEMENT PROGRAM

The Range Improvement Program is similar to the Vegetative Management Program with many of the same impacts caused by plan implementation. Accordingly, mitigation should include mechanical treatment of the acreage directly under the lines, and off site treatment to mitigate the acreage taken out of management.

4. CALIFORNIA FOREST IMPROVEMENT PROGRAM

The California Forest Improvement Program would be most highly impacted by the route between Hillcrest and Big Bend. This program encourages small landowners to use good resource management techniques on their property by allowing the state to cost share some of the work needed on the property. This work can include site preparation, planting, precommercial thinning, and brush management. Some of these small land holdings will be taken out of production by the transmission line, through the right-of way acquisition, others will have the ability to burn the brush piles and slash piles curtailed by proximity to the lines. Some consideration of this should be included in the E.I.S.

5. FOREST PRACTICE ACT

Whereas the impacts of implementation will not effect the Forest Practice Act, several points of incorrect information within the EIS should be corrected, and some additional information included.

Under Section 6.0 "Compliance with Laws and Regulations",

L-260 (continued)

The EIS states that Timberland Conversion Permits will be applied for as required. Section 1104.1, Title 14 Division 1.5 of the California Administrative Code specifically exempts utility right-of-way's from the conversion permit requirement. However, because a substantial portion of the route is on privately owned, as opposed to federally owned timberland, an approved Timber Harvesting Plan will be required before the project can be begun on any timberland in the state. No mention of this is made in Table 6.1-2.

Page 5.1-9 refers to waterbars,cross ditches, diversion ditches, berms, straw bales, and energy dissipators will be used, as required. This section is covered in detail in 14 CAC 934.6, and will be required.

Item #8, page 5.1-10, says that winter operations and other wet periods will be avoided to the extent practical. If winter operations are required on timberland, Section 943.6 of Title 14 California Administrative Code prohibits the use of equipment when they cannot operate under their own power (i.e. muddy roads). If this proves necessary, mitigation such as rocking of access roads may be required as the situation dictates, and a winter operation plan will have to be submitted with the Timber Harvesting Plan.

Item #2 under "Water Resources" page 5.1-11, states that a 100 foot buffer of undisturbed vegetation will be maintained along all lakes and streams. 14 CAC Section 936.5 specifies the procedure for classifying watercourses and designating their required protection zones. These zones are based on the side slope adjacent to the watercourse. Many of these zones are less than the 100 foot zone stated in the DEIS, but, in many cases the required zone is substantially more than this 100 foot buffer. The EIS should state that the protection zones will comply with laws and regulations and in no case will be less than 100 feet.

6. FIRE PREVENTION INSPECTIONS UNDER PUBLIC RESOURCES CODE SECTION 4293.

Due to the large amount of equipment and manpower that will be required to complete this project, and the remote location of the line, the Department would propose the inclusion of two other mitigations under Section 5.1 (J), page 5.1-18. This project will require that two Fire Captain Specialists be assigned to the project throughout the construction phase to assure compliance with not only 4293, for the charged line, but Public Resources code Section 4428, and 4429 at all active sites. This cost should be borne by the enrolled utilities. In addition, any inspectors for the project hired by the proponents for the purpose of inspecting the work in progress should be delegated "shutdown" authority for violations of law or regulation until such violation is corrected.

7. GENERAL TIMBER RESOURCES

An additional impact that is inadequately spoken to is the removal of 946 acres of Timber Preserve Zone land and prime

L-260 (continued)

timber land from production. The EIS states that this would have the effect of eliminating 1.4 jobs from the timber industry. Even if a conservative estimate of 15 thousand board feet per acre was to be harvested from this ground, the total volume removed from this ground would be 14,190 MBF(thousand board feet). The removal of this volume would be a substantial portion of the annual production from many saw mills. This is not adequately addressed in the EIS. The reverse of this effect is the time frame for construction will be very short. The flush of nearly 14 MMBF into the market will have the effect of artificially pushing the value of sawlogs down for the short run. Although short-lived, many loggers are currently finding it financially difficult based on the amount paid by the mills for their sawlogs, without any additional reduction in value through a surplus of supply. This effect is entirely overlooked in the Socioeconomic analysis of the project.

RECOMMENDATIONS

The EIS should not be approved without considering the easternlocation and the impacts on the timber resourceof the preferred route. Many of the impacts addressed in these reports could be alleviated by utilizing an eastern route, possibly along an existing corridor near Nevada.

L-263

PLEASE REPLY TO

SACRAMENTO ADDRESS
ROOM 3048 STATE CAPITOL
SACRAMENTO 95814
TELEPHONE (916) 445-8083

1035 DETROIT AVENUE
SUITE 200
CONCORD 94518
TELEPHONE (415) 689-1979

EAST COUNTY
420 W. THIRD STREET
ANTIOCH CA 94509
TELEPHONE (415) 754-3011

WEST COUNTY
COUNTY HEALTH BLDG
100 37TH STREET
RICHMOND 94805
TELEPHONE (415) 236-3620

Senate
California Legislature

DANIEL E. BOATWRIGHT
CHAIRMAN

Committee on Appropriations

MEMBER
ELECTIONS COMMITTEE
HOUSING AND URBAN AFFAIRS COMMITTEE
REVENUE AND TAXATION COMMITTEE
JOINT COMMITTEE ON PRISON CONSTRUCTION AND OPERATIONS
CALIFORNIA PUBLIC PROCUREMENT ADVISORY COMMITTEE
CHAIRMAN
SELECT COMMITTEE ON STATE PROCUREMENT AND EXPENDITURE PRACTICES
REPRESENTING
SEVENTH SENATORIAL DISTRICT
CONTRA COSTA COUNTY

January 13, 1987

James Beck, Chairman
The Transmission Agency of Northern Calif.
P.O. Box 661030
Sacramento, CA 95866

Dear Mr. Beck:

A February 3, 1987 is the currently scheduled closure of the public response period for the Draft EIR/EIS. I am writing to urge that the response period be extended beyond that date.

As you are aware, the legislative delegation representing Eastern Contra Costa County has had very significant concerns about the public awareness of this project and its potential impacts. While we have recently seen a much improved coordination in the dissemination of information to the residents of this area, the inclusion of these people so late in the process has not allowed for sufficient time to adequately assess all of the impacts. Given the complexity of the project, if we are to prepare the best, most comprehensive final document possible, an extension of the public comment period is essential.

The organization P.R.O.P.P. has submitted the attached letter which outlines in greater detail, the failure of the lead agencies to adequately include the people of Eastern Contra Costa County in the process. I share their concerns and believe that it is incumbent upon the Transmission Agency of Northern California to do everything within its power to give that organization and the general populace the opportunity to

A A response was sent to the commentor on January 19, 1987. The comment period was extended to March 2, 1987. See also responses to T-152 B and T-152 F.

L-263 (continued)

A adequately review the draft document. With the complexity of the issues, the question of insufficient public participation, the delay in receiving the documents in some communities and the inevitable confusion and conflicts created by the holidays, an extension of the public comment period, which is in your power, seems not only appropriate but warranted.

I look forward to your positive response.

Very truly yours,

DANIEL E. BOATWRIGHT

DEB:Tdr
Enclosure
cc: Contance Brady

L-264

REPLY TO
ROOM 5082
STATE CAPITOL
SACRAMENTO CALIFORNIA
95814
(916) 445 3700

720 SUNRISE AVENUE
SUITE 110D
ROSEVILLE CALIFORNIA
95678
(916) 783 8232

Senate

California Legislature

JOHN T. DOOLITTLE
First District

COMMITTEES:
RULES
BUSINESS AND PROFESSIONS
VICE CHAIRMAN
AGRICULTURE AND WATER RESOURCES
INSURANCE, CLAIMS AND CORPORATIONS
JUDICIARY
SELECT COMMITTEE ON SMALL BUSINESS ENTERPRISES
JOINT COMMITTEE FOR THE REVISION OF THE PENAL CODE

January 8, 1987

Mr. Robert A. Olson
Managing Director
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Dear Mr. Olson:

A B I take this opportunity to express my position on the routing of the California Oregon-Transmission line. As the state senator representing Modoc County, I am deeply concerned with the line corridor's effects on the lands to be traversed, as well as the effects it has on the people who live and work near the path of the corridor.

C As I am sure you are aware, I have closely monitored the various proposals since they were first introduced to the public. There has been an apparent lack of cooperation on the part of the project staff in releasing information to the residents and government entities within Modoc County. On several occasions there has been little or no information released on the potential location of the preferred route. The lack of information available has generated a deep feeling of mistrust toward the Project by the area's residents. I hope to help bring a more productive, cooperative atmosphere between the area's residents and the project staff.

D E The route designated by the Project as the preferred alternative would, in my opinion, be detrimental to the agricultural industry in Modoc County. Locating the lines along or near any irrigated cropland it would make the cost of production on these lands prohibitive. In addition, the preferred route would take out of production some of the most productive and accessible private timberlands in California.

A The effects on lands are of great importance to the COTP proponents. The environmental process is designed to produce a route that minimizes impacts to both land and the people who live and work near the COTP.

B From the beginning of the planning process, the lead agencies have conducted an active public information/public involvement program in Modoc County and throughout the COTP study area.

The intent of this effort has been to keep the public up to date on the status of the studies and to provide them an opportunity to express their concerns and views. At different stages, public meetings and workshops were held to provide a forum to exchange information. The public was also encouraged to send written comments at any time. In addition, newsletters were issued periodically and a special information telephone number was published to give the public access to information regarding the routing identification process and other activities.

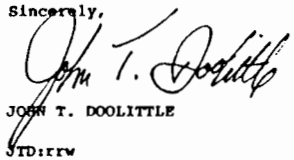
C There have been extensive public involvement and information activities throughout the environmental process for the COTP. Section 1.1.7 of Volume 1 of this Final EIS/EIR summarizes those activities. We believe we have been very active and responsive in keeping area residents informed.

L-264 (continued)

F, G

I am quite sure that if the project were to have done a thorough economic analysis and evaluation of the preferred alternative route you would have found the adverse economic impact far outweighed any benefits the route might have had. The easternmost alternative would have little affect on the irrigated farmlands. I strongly urge you to reevaluate your chosen route and instead place the lines where they will cause the least disruption to the economy of Modoc County. That route would be the "John Cross" alternative.

Sincerely,



JOHN T. DOOLITTLE

JTD:rrw

D We agree that certain farming costs may increase from the presence of towers and conductors which cross cultivated agricultural areas. We feel that the transmission line would be one factor affecting each farmer's unique economic situation. The economic effects are addressed in Sections 3.6 and 3.8 of Volume 2A of the Draft EIS/EIR. Also, see responses to T-9 A and L-27 D.

E See response to L-179 C.

F A short and long-term economic analysis based on a lost crop revenue approach was conducted (refer to Section 3.6.2.2 of Volume 2A of the Draft EIS/EIR). See response to L-204 E.

G Comment noted. See response to L-330 H.

L-265

Tom Torlakson
Supervisor, District Five
Contra Costa County
Board of Supervisors

300 East Leland Rd.
Suite 100
Pittsburg, California 94565
(415) 439-4138

January 8, 1986

James Beck, Chairman
The Transmission Agency of Northern California
William Clagett, Administrator
The Western Area Power Administration
P.O. Box 661030
Sacramento, CA 95866

SUBJ: California-Oregon
Transmission Project
Draft EIR/EIS

Gentlemen:

A I would like to request an extension of the response period for public review of the California-Oregon Transmission Project EIR/EIS beyond the February 3, 1987, deadline.

B Public input during the scoping meetings have been limited. I understand the Public Utilities Commission has already noted the lack of public input in its comments on the Committee Review Draft of the EIR/EIS. Furthermore, notification of these meetings appear to have been inadequate. I understand further that documents were not C provided to the communities until the middle of December rendering a very limited timeframe to review the extensive materials. Inadequate notification coupled with limited time provided for review certainly makes it difficult to assure proper citizen review and input.

I believe every effort should be made to ensure adequate citizen review and input. I urge you to extent the deadline for the response period for an additional 45 days.

Sincerely,

Tom Torlakson

Tom Torlakson

TT:gro

A The public comment period was extended to March 2, 1987. A response was sent to the commentor on January 19, 1987.

B See response to T-156 B.

C See response to T-156 C.

L-266

STATE OF CALIFORNIA GEORGE DEUKMEJIAN, Governor

STATE LANDS COMMISSION
1807 13TH STREET
SACRAMENTO, CALIFORNIA 95814

January 6, 1987

File Ref: W 23795

Rick A. Lind
Environmental Coordinator
California-Oregon Transmission Project
P. O. Box 660970
Sacramento, California 95866

Dear Mr. Lind:

A The State Lands Commission's staff has received the draft Environmental Impact Statement (EIS)/Environmental Impact Report (EIR), State Clearinghouse No. 85040914, relative to the California-Oregon Transmission Project.

In reference to a letter dated March 11, 1986 from Dwight Sanders of this office, in response to the draft NOP, the proposed project will extend over several State-owned waterways. The project coordinator has been mailed application requirements to apply for the necessary approvals.

If you would like to discuss State ownership, please contact me at (916) 322-7814. For environmental information, please call Diana Jacobs of this office at (916) 445-5034.

Sincerely,

Joyce Lane

JOYCE LANE
Land Agent

25211

A We have received the application requirements for transmission line crossings over state-owned waterways. Applications will be submitted to the State Lands Commission during the final design of the COTP.

L-267

January 5, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

RE: Project's impact on a reclamation district.

With the preferred route for the powerlines running in a general southeast direction across a floodplain following the eastside of Jersey Island, it crosses Dutch Slough and passes over Reclamation District 799's main Dutch Slough area pmphouse containing two pumps.

These pumps remove water from the District's drainage system that drains all the floodplain acreage from Jersey Island Road east to Sandmound Slough. The pumphouse also is used to store sandbags, oils, a spray rig and supplies for the District.

A Since no structures will be allowed under the powerlines, RD-799's main Dutch Slough pumps and the elevated pumphouse would have to be moved. Changing the pumps' location would disrupt an essential drainage system that has been established for over 50 years.

Because the pumps discharge into Dutch Slough, they have to be located near the levee. To find a new location for the pumps in the midst of fully developed, expensive waterfront property would be very costly and probably give cause for condemnation proceedings. Undeveloped waterfront land is priced at about $50,000 to $60,000 per 50-foot lot. The big unknown is the cost of right-of-ways, engineering and grading the drainage ditches for hundreds of acres so the drain water would run to the pumps' new location.

Moving the pumps also brings up the problem of how to placate the new pump site's neighbors. No one wants the pumps to be next door to their property worth well over $100,000. RD-799 is very much aware of the pumps' present neighbor's complaints about the noise the pumps make turning off and on automatically 24-hours a day during times of heavy drainage.

B The Board of Trustees of Reclamation District 799 finds the EIR/EIS in Vol. 2A, table 3.4-4 addresses the marshlands of Dutch Slough, but doesn't address the impact on the land's drainage when pumps have to be moved to new sites. This drainage has a definite impact on agricultural, recreational and residentia lands and properties within the three mile corridore studied for the EIR/EIS.

Sincerely,

Robert D. Gromm, Chairman,
Board of Trustees, Reclamation District 799
P.O. Box 447
Bethel Island, CA 94511

A The preferred route does not pass directly over the Reclamation District pumps. The 1500 foot wide route is near the pumps, but an easement can be situated in such a way as to avoid the need to move them. See also response to L-96 A.

B Your comment about impacts on the land's drainage when pumps are moved is noted. The pumps will not need to be relocated because the COTP line will be sited to avoid the facilities.

L-268

DEPARTMENT OF THE ARMY
SACRAMENTO DISTRICT CORPS OF ENGINEERS
650 CAPITOL MALL
SACRAMENTO CALIFORNIA 95814-4794

REPLY TO ATTENTION OF

December 11, 1986

Regulatory Section

Environmental Coordinator
California-Oregon Transmission Project
Post Office Box 660970
Sacramento, California 95866

Gentlemen:

A We have received the Draft EIR/EIS for the California-Oregon Transmission Project and the Los Banos-Gates Transmission Project and have no comments relative to the information provided in the document. We would, however, like to compliment the organizers for the thorough evaluation provided, considering the geographic magnitude of the project.

B As noted in the EIR/EIS, Department of the Army permits may be required depending of the alignment of the facilities. Once details of the alignments are finalized, it is suggested that you contact Mr. Bob Junell at telephone (916) 551-2265 to set up a meeting concerning the need for a permit.

Thank you for providing us the opportunity of being a cooperating agency and reviewing the EIR/EIS.

Sincerely,

Art Champ
Chief, Regulatory Section

A Comment noted.

B Comment noted.

L-269

VICTOR ATIYEH
GOVERNOR

OFFICE OF THE GOVERNOR
STATE CAPITOL
SALEM OREGON 97310

December 10, 1986

James W. Beck, Chairman
Transmission Agency of Northern California
P.O. Box 661030
Sacramento, CA 95866

Dear Mr. Beck:

A The Transmission Agency of Northern California (TANC) and the Western Area Power Administration (WAPA) are now taking comments on the draft Environmental Impact Statement/Environmental Impact Report for the California-Oregon Transmission Project. The deadline for written comments is February 3, 1987. I ask that you extend the comment period for 60 days.

Our comments will be written by the Oregon Review Committee. The committee includes lay members from Malin, Keno, and Pinehurst, planning staff from Klamath and Jackson counties, and staff from eight State agencies.

Committee members -- particularly the lay members -- do not have enough time to adequately review the long and complex study and prepare comments. The comment periods for the BPA and California EIS drafts overlap. Further, the holidays cut into citizens' ability to tackle the weighty EIS drafts.

The third AC line is an investment of several hundred million dollars. If built, it would affect the lives of many Southern Oregon residents. They deserve adequate time to review and comment on the project.

Sincerely,

Victor Atiyeh
Governor

VA:jf

A A response was sent to Governor Atiyeh on January 19, 1987. The public comment period for the Draft EIS/EIR comments was extended to March 2, 1987.

L-273

320 Quien Sabe Rd.
Scotts Valley, CA 95066
February 19, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Dear Coordinator:

We are property and home owners of acreage at 5024 Parkville Road, Anderson CA. This property is adjacent to the route of the proposed California-Oregon Transmission Project.

A We would like to express our concern that the proposed route would destroy the Shasta View, not only from our property, but from the Balls Ferry Bridge, and for the boaters on a large section of the Sacramento River.

B We are NOT in favor of the California-Oregon Transmission Project.

C Why can't you use the exisating route for power transmission. This is our retirement home and we chose it because of the beautiful views.....please don't destroy our views.

Sincerely,

Bud and Diane Ruppert

Bud and Diane Ruppert

A The Draft EIS/EIR acknowledges that the Grizzly Peak to Redding Route in the northern section of the COTP would impose adverse visual impacts at the Sacramento River crossing. Several crossing locations were examined to reduce overall environmental impacts as much as possible. Of these, the preferred route would cross the Sacramento River along Route Segment N-9O, while the Anderson Creek option would follow Route Segment N-9P, near the Balls Ferry bridge. The preferred route would parallel an existing transmission line crossing of the river that is located approximately 3 miles upriver from the Balls Ferry bridge and would have considerably less visual impact than the Anderson Creek option. The preferred river crossing would not be visible from the bridge.

B Your opposition to the COTP is noted.

C The existing easements and facilities for the transmission lines in your area are insufficient to accommodate a 500 kV transmission line. The preferred route for the COTP does parallel existing transmission lines from the proposed Olinda Substation near Gas Point Road to a point near Round Mountain where the presence of existing 500 kV lines requires greater separation. See also response to L-177 A.

L-276

Environmental Coordinator
California/Oregon Transmission Project
P.O. Box 660970
Sacramento, California 95866

February 17, 1987

Dear Sir:

A I am writing in regard to the transmission project under consideration for the Tulelake, California area. I am opposed to the project and cannot imagine how, dollar-wise, it will have any benefit.

B I have not been able to get any substancial information on this project and only accidently heard about it at a meeting I was attending. This leads me to believe that it is benefiting only a few people in some obscure group much like the ending of the moratorium on mountain lion hunting to benefit a group of egos who believe the only good lion is one mounted on a wall.

C I hope you will consider the amount of money this undertaking will be and how much real value it will have. This
D is not to mention the amount of wildlife that will be electrocuted upon landing or flying into the wires. It seems to
E me that it is also just another eyesore for all of us to look at and Tulelake has enough human-induced eyesoars.

F Thank you for reading this letter. I will be looking forward to more information on this subject in the media as I am sure you will want to be as up front about this project for the public's sake.

Regards,

M. J. Moore
2155 Park Marina Dr. #29
Redding, California 96001

A Your opposition to the COTP is noted. The economic analysis in Section 1.5, pages 1.5-1 to 1.5-13, of Volume 3A of the Draft EIS/EIR concludes that there is a net economic benefit to California ratepayers after mitigation costs. See responses to L-3 T and T-126 A.

B See responses to L-157 C and T-126 A.

C An economic analysis is presented in the Draft EIS/EIR in Section 1.5 of Volume 3A.

D Birds are not electrocuted when touching one conductor of a transmission line and will not typically land on the conductors of a transmission line the size of the COTP. In high voltage transmission lines the conductors of different phases are far enough apart so that birds cannot contact two conductors simultaneously. The phases are also far enough away from the steel tower to prevent contact with a phase and the steel simultaneously.

E Comment noted. See response to L-330 F1.

F Comment noted.

L-277

KARL VIDRICKSEN, M.D.
602 MAIN STREET
P.O. BOX 607
TULELAKE, CALIFORNIA 96134
TELEPHONE: (916) 667-2256

February 16, 1987

Mr. James W. Beck
California Oregon Transmission Project
P.O. Box 660970
Sacramento, California 95866

Dear Sir,

A I am concerned that the proposed power line east of Newell, California will be built so close to the airport that the power lines will be a hazard to aircraft that have engine problems or any pilot who flies in adverse weather.

In 1978 I treated two victims from Canada who were flying in foul weather. The air plane's wings were iced and they opted to land at the Newell airport. Visibility was about 100 feet as they circled about 50 feet off the ground. The pilot was unable to find the airport even though he tried to land on county road 141 which is ½ mile east of the airport. Fortunately the pilot slowed the plane to about 25 miles per hour at the time of impact and the injuries were limited to lacerations and contusions.

Had the powerline been completed in 1978 I'm sure that the Canadians on their way to Reno would have crashed into the powerline.

I am also concerned that air ambulance services will refuse to land at Newell should the powerline be constructed at the propsed site east of the Newell airport.

Sincerily,

Karl L. Vidricksen, M.D.

KLV/rfv

A During the initial routing process, airports and airstrips were considered by the COTP to be important factors in the location of proposed route segments, and route alignments conformed with all applicable federal regulations regarding aircraft safety. As a result, the route segments comprising the preferred Alternative D are about two miles east of the Tulelake Airport at Newell. Because this distance exceeds minimum FAA requirements, air ambulance service should not be adversely affected.

L-278

CALIENTE ISLE YACHT CLUB
BETHEL ISLAND, CALIFORNIA

Environmental Coordinator
California-Oregon Transmission Project
P. O. Box 660970
Sacramento, CA 95866

Dear Sir:

A I would like to go on record protesting the proposed routes for your power lines which involve the area of Bethel Island and Taylor Slough.

My family and I enjoy our vacations, holidays, weekends and leisure hours at Caliente Isle on Taylor Slough. In the event of the power lines passing near us, our tranquility and peace of mind will be undermined.

You cannot assure us beyond doubt that the electrical and/or magnetic field from those wires will not harm us. You cannot positively tell us that the wind or earthquakes cannot cause the towers or lines to fall on us or our property. You admit that our view will be ruined, the wires will buzz and make noise around the clock, TV and radio interference will occur, migrating birds will be harmed, and pace-makers may malfunction. However, you fail to

B show us that these routes are the only ones available and more importantly you fail to prove the need for added power! At the present time, according to P G & E Officials, California is enjoying an energy

C surplus!!!

Your project demands that I forfeit a portion of my present tranquility. You ask us to surrender some of the natural beauty that we now enjoy and you offer nothing that could compensate for these and other losses. No Thank You. You are not needed, not invited, not wanted and not welcome!

Yours truly,

John Rombouts
Risa A. Rombouts
Mark J. Rombouts
David John Rombouts
Dennis Rombouts

50 Taylor Acres
Bethel Island, CA

A Your opposition to the proposed route in the area of Bethel Island and Taylor Slough is noted. Please see response to L-330 P3 regarding electric and/or magnetic fields. See response to L-53 B and T-81 D, respectively, regarding wind and earthquake impacts to the towers and lines. See response to L-329 C1 and L-121 C, L-309 E2, and L-330 H3 regarding the noise from the lines. See responses to L-330 H3, L-121 C, and L-309 E2 regarding TV, radio and pacemaker interference. See response to L-117 C regarding migrating bird impacts.

B Many alternate routes have been studied for the COTP in the Draft EIS/EIR (See Section 2.0 of Volume 2A). The preferred route has been identified to be environmentally superior to other alternatives studied.

C In its most recent Electricity Report (1986), the California Energy Commission found that while existing resources could supply most of California's needs in the near term, there were opportunities to improve the state's generation systems and to lower costs by building new facilities. One of the options identified in that report was to increase purchases from the Pacific Northwest, as the COTP is designed to do. See Section 1.5 of Volume 1 to the Draft EIS/EIR and responses to T-109 B and L-3 T.

L-283

CHRIS STROMSNESS

CHRIS STROMSNESS
ATTORNEY AT LAW
9832 DUNSMUIR AVENUE
DUNSMUIR, CALIFORNIA 96025

February 12, 1987

Environmental Coordinator
Cal-Ore Transmission Project
P. O. Box 660970
Sacramento, CA 95866

Re: Draft EIS/EIR

A I have recently become aware of a proposal by the Bonneville Power Administration to usurp water now being used to flush salmon and steelhead smolts to the ocean in a timely fashion, and use that water to generate surplus power for sale to California. If this is the proposed source of power for the Cal-Ore project, then the whole project should be scrapped.

B If your power is from a source that won't harm anadromous fisheries in the northwest, then my concerns deal with the location of the lines through northern California. Thank you for moving east of the I-5 and Shasta Valley and McCloud areas. Your preferred route is better than those to the west, but it does impact a lot of timberlands. The best route would be one even farther east, which crosses a minimum of timberlands.

Sincerely,

CHRIS STROMSNESS

CS/gs

A Anadromous smolts in the Columbia River basin are protected by the Water Budget, a designated amount of water that is used by fisheries agencies and tribes to flush smolts through the hydroelectric system during their spring out-migration. That water is dedicated to the Water Budget through the Northwest Power Planning Council's Fish and Wildlife Program, and thus the firm capabilities of the PNW hydroelectric system are de-rated by that amount. Upgrading the AC Intertie with the COTP would not affect the availability of Water Budget flows. The Intertie Development and Use EIS, released in draft form by BPA in October 1986, examines the potential effect of the COTP on the level of unplanned (as opposed to programmed) spill, which has often been available to pass anadromous smolts over spillways rather than through turbines. The IDU Draft EIS/EIR predicts minor effects on anadromous fish due to changes in spill.

B Alternative routes east of the existing Intertie are addressed, among other places, in Sections 2.0 and 3.0 of Volume 2A of the Draft EIS/EIR. See response to T-69 F regarding the engineering and economic problems attendant to routing the COTP east of the Intertie.

L-284

February 11, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

RE: Draft EIS/EIR

A The alternative route (A) appears to pass directly through my property; therefore, I am obviously in favor of the preferred route (D) over the alternative.

In reality, I don't like either of the routes and would prefer that the project be abandoned. It is difficult for me to understand why TANC would even consider the alternate route (N-7H) which zig-zags from one side of the canyon to the other. This area is inaccessible, habitat for several species of wildlife and highly productive forest land.

Please register my opposition to both the preferred and alternate routes through this area, and the entire project in general.

Sincerely,

Guy M. Gore
P.O. Box 144
Big Bend, CA 96011

cjk

A Your preference for Alternative route D (the preferred route) over Alternative route A is noted. The reasons for considering Alternative route N-7H is described in Section 4.3 of the Phase II Report of Volume 2A in the Draft EIS/EIR. Your opposition to routing the proposed COTP in the vicinity of the N-7H and to the entire COTP in general is noted. A new route option, utilizing most of route N-7H, has been identified and is analyzed in the Supplement to the Draft EIS/EIR. Comparison of the new route option to alternatives in this area resulted in the identification of a preferred route (Grizzly Peak option) instead of the new Hearst option that included a portion of N-7H.

L-285

February 11, 1987

Ms. Laura Edlin
Public Affairs Director
Transmission Agency
P.O. Box 660970
Sacramento, CA 95866

Dear Ms. Edlin:

A Thank you for your letter of January 14, 1987, wherein you enclosed the portion of the U.S. Geological Survey quadrangle map relevant to the Big Bend area.

The alternative route appears to pass directly through my property; therefore, I am obviously in favor of the preferred route over the alternative.

In reality, I don't like either of the routes and would prefer that the project be abandoned. It is difficult for me to understand why TANC would even consider the alternate route (N-7H) which zig-zags from one side of the canyon to the other. This area is inaccessible, habitat for several species of wildlife and highly productive forest land.

Please register my opposition to both the preferred and alternate routes through this area.

Sincerely,

Carol J. Kilian

Carol J. Kilian
P.O. Box 144
Big Bend, CA 96011

A See response to L-284 A.

L-286

THE PLANNING AND CONSERVATION LEAGUE

909 12TH ST., SUITE 203 • SACRAMENTO, CA 95814 • (916) 444-8726

February 10, 1987

Laura Edlin
California-Oregon Transmission Project
Director, Public Affairs
PO Box 660970
Sacramento, CA 95866

Dear Ms. Edlin:

A The Planning and Conservation League strongly supports the proposed alternate route for the California-Oregon Transmission Project's KV line (500).

The Planning and Conservation League is a statewide environmental lobbying group representing over 130 environmental groups in California and over 7000 individual members. We are concerned about preserving prime agricultural land in California, and believe that transmission lines should not be placed across agricultural land when viable alternative routes are available.

B We have reviewed the proposed "Preferred Alternative" route, and we feel strongly that alignment in the Tulelake Basin would have substantial adverse effects on existing, productive farming operations in that area. The Cross alternative will allow farmers to continue their operations by shifting the transmission line from prime egricultural lands near Newell to range land east of Newell.

We strongly recommend relocation of the power line within the Tulelake Basin in accordance with the Cross alternative if the project is approved.

Sincerely,

Esther Feldman

Esther Feldman
Research Director

A Your preference for Alternative D in the Northern routing area is noted.

B See responses to L-330 G and L-330 H.

L-287

February 9, 1987

Environmental Coordinator
California-Oregon Transmission Project
P. O. Box 660970
Sacramento, CA 95866

Ladies and Gentlemen:

A As I own land involved in your California Oregon Transmission Project, and as I have studied your EIR/EIS, I recommend strongly that you only use Preferred Alternative B shown in Figure 2.1-9, sent with your Memorandum of December 5, 1986.

Your EIR/EIS shows that Preferred Alternative B is superior to Other Alternative A for the reasons below:

Page 2.1-21 Alternative A has the most environmental effects

Page 4.1-14, Paragraph 4.1.2.4. Alternative A transverses the least amount of organic soil, 2.8 miles, but the largest amount of soil subject to liquefaction, 21.5 miles.

Page 4-19 Paragraph 4.1.4.4. Alternative B is "Environmentally superior."

Page 4-1.9 Alternative A with approximately 70 new tower sites, would be located in floodplains, compated with Alternative B with 56 new towers.

Alternative B is mostly agricultural, as mentioned on Page 2.1-28. I plan to sell my land contained in Alternative A

B to a developer who would build homes similar to the style of

A Your preference for the preferred Alternative B in the southern section of the Project is noted.

B Comment noted. Alternative B was chosen as the preferred route because it has less overall impacts than Alternatives A or C. See response to L-203 H for further details on the preferred route identification.

L-287 (continued)

B

Discovery Bay, which is very close to this 525 acre parcel, changing the nature of this ranch from agricultural to residential. This powerline would invoke a public response mentioned on Page 4-34 of "concerns on electrical and biological effects include noise generated by the transmission line, electromagnetic interference affecting radio and television reception, special health impacts and safety problems," not to mention a special concern mentioned on Page 4-3 of decreased land productivity, as well as violating the visual resources--viewer sensibility, listed on Page 4-7.

I just wrote the Department of Energy in Sacramento to deny permission to enter my land included in Southern Section Alternative A but will be happy to cooperate with any studies needed for Preferred Alternative B.

Please feel free to contact me if you have any comments or questions.

Very truly yours,

Edna M. Fallman

L-288

Environmental Coordinator
California - Oregon Transmission Project
P.O. Box 660970
Sacramento, California 95866

Dear Sir,

A This letter is with regard to the Calif - Oregon transmission project. The scale on the map sent to me showing the proposed routes is so small that I cannot read it. Could you please send me a better map. My property is in Shasta County, some in the Millville area and some in the Palo Cedro - Cottonwood area.

B I would be very much opposed to any line that would cross my property particularly in the Millville area, partly because it would cut off the access to my property and ruin it completely.

Sincerely, Jack K. Kifer
22619 Paul Revere Dr.
Woodland Hills, Calif.
91364

818 999 3628

A A response was sent to the commentor on February 25, 1987.

B Your opposition to a route that would cross your property is noted.

L-289

Feb. 7, 1987

Environmental Coordinator
California - Oregon Transmission Project
P.O. Box 160070
Sacramento, Ca. 95816

Dear Sir:

A We live on Bethel Island and do not want the transmission lines crossing the island.
They are a real eye sore to a community.

B Bethel Island is a crowded island and quite a populated.
On the Delta, Bethel Island, is one of the most popular recreation area and also the home for many Bay Area and City.
A transmission line crossing this island will cause island property values lowering no desire for people to locate on the island. Islands such as Jersey, which are adjoint to Bethel, are primarily Agriculture and appears to present fewer problems for locating the transmission lines.

C

D Also by locating these lines across Bethel, will cause funds not to be available for the maintenance and upkeep for our levees, which is very necessary. More effort and money has been expended to provide good levees on Bethel. If any of the outer islands of these levees are not found for, they will erode & much property and peoples lives will be in danger.

We firmly object to these transmission lines crossing over Bethel Island. Another survey must be found.

Sincerely,
Thomas Tendeland
Gloria Tendeland
P.O. Box 446
Bethel Island, Ca. 94511

A Your opposition to alternative route S-8D that crosses Bethel Island is noted.

B The Bethel Island route is not part of the preferred route because of the substantial residential/commercial and recreation impacts. The preferred route crosses Jersey Island and Dutch Slough.

C The preferred route crosses Jersey Island. The routing guidelines stipulated that the crossings of agricultural lands would be minimized. However, in some locations, engineering considerations and/or other environmental resource constraints were such that agricultural lands could not be totally avoided.

D The preferred route does not cross Bethel Island.

L-290

Community
Development
Department
County Administration Building
651 Pine Street
4th Floor, North Wing
Martinez, California 94553 0095

Phone: 372-2035

Contra
Costa
County

Harvey E. Bragdon
Director of Community Development

February 20, 1987

Mr. Richard A. Olsen
Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Gentlemen:

Thank you for the opportunity to review the Draft EIS/EIR on the California-Oregan Transmission Project. While the Draft EIS/EIR raised numerous issues worthy of in depth dialogue, our comments will focus on the deficiencies of this document as it relates to the project within Contra Costa County.

The draft goes into great depth on discussing the sensitivity of this project to existing and proposed recreational facilities. The Sacramento-San Joaquin Delta is identified by this County as well as the State of California as an area of unique concern. It is an important existing component of the recreational resources of Contra Costa and adjacent counties. Its recreational potential looms even larger. For this reason, our County is especially sensitive to any project which could negatively impact this resource or its economic contribution to the County. The proposed transmission line raises special concerns in this regard. Recreational facilities are identified on Figure 3.0-7. Both the document text and that figure fails to disclose that the East Bay Regional Park Districts recently adopted master plan proposes the development of a major shoreline park on the southeastern corner of Jersey Island. That proposed park is planned to be one of the major recreational facilities serving the eastern portion of this County and is proposed to be a major recreational high use facility. The preferred alternative does not appear to take this proposal into account or discuss the potential impact between the powerline and that specific proposal. This should be done in depth.

A

It also needs to be pointed out that while the Clifton Court Forebay is not a designated park, that it does have a strong recreational component. Fishing is a popular use of the site and in the long term improved recreational facilities along its perimeter should be anticipated. The final EIS/EIR needs to address their recreational uses as they relate to the preferred alternative.

B

A second area of major concern is that any type of new facility being considered for routing through the Delta should be aware of the potential levee failures and should be prepared to be considered a beneficiary of Delta levee protection and therefore participate in any funding of Delta levee improvements. The Draft EIS/EIR does not mention the possible flooding dangers in the Delta areas.

C

A The proposed Big Break Shoreline Regional Park on Jersey Island has been added to the Draft EIS/EIR, Table 3.6-14 (Recreational Facilities) and Table 3.6-21 (Planned Land Uses) in Volume 1, Section 1.2.3 of the Final EIS/EIR. A discussion of the proposed park has also been added to the revised summary of the preferred route in Volume 1, Section 1.2.3 of the Final EIS/EIR. See comment L-18 and responses.

B The recreational use of the Clifton Court Forebay is described on page 3.6-45 of Volume 2A of the Draft EIS/EIR. On page 3.6-47, it is indicated that few impacts are expected to recreation from construction of the preferred route that would run along the east and south sides of the Forebay. The recreation/fisheries comment is mentioned in Table 3.6-14 in Volume 2A of the Draft EIS/EIR.

C The towers in the floodplain areas of the Delta will be designed to withstand flooding that may result from levee failures. Appendix E in Volume 3A of the Draft EIS/EIR in Volume 3A of the Draft EIS/EIR shows the extent of potential flood areas in the Delta.

L-290 (continued)

C Page 4.1-19 (4.1.4.4 Southern Section) refers to the Delta area as diked agricultural areas. This appears to underplay the size of Delta levees and potential flooding impacts. This section should be revised to better indicate the magnitude of flood protection provided by Delta levees. Page 4.1-10 and 11 (4.1.1.4 Southern Section) should include the history of Delta levee failures in the area and how this may impact the transmission line. The California Department of Water Resources could be noted as a source for specific information.

D

E Once this concern is raised, a possible mitigation measure could be financial participation with local districts and state and federal agencies for both ongoing maintenance and long-term major rehabilitation of Delta levees. The final EIS/EIR should specify specific mitigation measures which can be utilized to protect the Delta levees should this powerline proposal be approved.

On Page 36-58 of Volume 2A it correctly states that it is this County's policy on siting transmission lines to use existing transmission line corridors wherever possibly. In this fashion existing towers can many times be reconstructed to meet the future needs. Where reconstruction of existing towers is not feasible, the placement of parallel lines concentrates the visual and other impacts to one location rather the spreading the impacts out to new locations. The Draft EIS/EIR suggests that a rationale for utilizing new line locations will spread out the risks of interruption to service in the event of a disaster. The document does not, however, provide any risk analysis on the potential for such a disaster to occur, nor does it equate this potential risk with the environmental consequences of having a powerline located in more pristine areas. An environmental impact/risk analysis is needed to balance these concepts. Absent clear public safety benefits, it would not appear appropriate to create a new powerline which doesn't parallel existing facilities. This point is related to our second area of concern dealing with needs for Delta levee maintenance. If solutions are provided for funding assistance of Delta levees, it should mitigate the need for a new separate alignment through the Delta. On Page 16 of the Summary in Volume I (top of page) it states that flood proof structures will be "totally effective" in mitigating this impact. If so, the need for a separate new alignment is open to question.

F

G

H On Page 21 of the Summary in Volume I it states that there will be a loss of $2,500 in agricultural production value per corridor mile. Can a similar loss in recreational potential value be calculated; if so what is the dollar impact?

I As our comments above indicate we disagree with the statement in the second paragraph on Page 2-1-21 in Volume I that Alternative 8 is the environmentally preferred alternative because it spreads out the impacts of power lines in our County, without justification of the need for separation from the existing intertie.

J On Page 5.1-1 in Volume I under the caption Construction Activity Access and Location, item #5 states "All access roads not required for regular maintenance activities will be closed using the most effective and least environmentally damaging methods". This is a very vague mitigation measure. Of specific concern is that construction activities be conducted to minimize this impact on the struggling agricultural economy and that lands be returned to agricultural

D Comment noted. The Department of Water Resources is a participant in the COTP and has been involved in the planning.

E See response to L-309 N1.

F The need for a separate new alignment is not dependent upon Delta levee maintenance. It is, instead, dependent upon the provision for sufficient separation between lines to prevent a simultaneous outage of all three 500 kV transmission lines.

Section 2.1, page 2.1-3, of the Draft EIS/EIR refers to separation analyses performed to determine the factors most critical to reliability. This study was used, in part, to determine separation for the COTP.

There have been incidences involving aircraft that have caused a simultaneous failure of 500 kV transmission lines. See responses to L-255 C and L-309 YY. For that reason, separation of 2,000 feet or more has been specified as a criteria for the need to provide a separate new alignment.

G See response to L-309 N1.

H Losses to recreation potential are not calculated because of the numerous unknowns involved. Recreation preferences are very subjective. Usage rates are subject to many factors like weather, distance from population centers, and accessibility. In addition, recreation experiences cannot be easily quantified or compared to each other. Even if the various activities could be quantified, those figures would be extremely difficult to apply to recreation potential. Areas with recreation potential may never be developed because of poor access or policy retaining land as a wilderness preserve. Also, development of one recreational use may impact or exclude the other recreational uses.

L-290 (continued)

J production if they aren't required for future maintenance use. This mitigation measure should be made more specific to returning land to productive uses.

K On Page 5.1-4 under electrical effects item #3 states that ambient noise surveys will be conducted at selected sites and can be utilized if complaints are received after the project is placed in operation. What criterion will be utilized to select sites? Proximity to residences? Is this an anticipated effect of the project which requires mitigation?

L CEQA requires the consideration of several factors which aren't specifically required by NEPA. One important area of discussion required by CEQA deals with growth inducing impacts. I could locate no specific section dealing exclusively with this issue. That discussion becomes important in consideration of the need for the project. As you are aware, the State of California Energy Commission every few years publishes a report on energy needs in this State. The final EIS/EIR needs to relate this project to the assumptions and conclusions of that agencies findings on need for new facilities. For example, if this project is not included within the assumptions of that report and there is a projected surplus of electrical generation capacity, then this project might be deemed growth inducing. The final document needs to have a specific section dealing with growth inducing impacts and discuss the relationship to California Energy Commission policies.

M On Figure 4-1G in volume 4A the map of land use is incorrect on the south side of Dutch Slough just southerly of Jersey Island. There is a east-west fringe of urbanization from Bethel Island Road to Jersey Island Road along the levee which is missing from your map. Two of the alternative alignments cross this area including the preferred alignment. The final EIR needs to consider the compatability of the project proposals to these homes.

N The aforementioned comments focus on perceived inadequacies in the Draft EIS/EIR. After the final EIS/EIR is completed, I request specific notification of any hearings on public meetings that are arranged to finalize a decision on this project or to finalize the selection of alternatives alignments. Additionally, I would request receipt of a copy of this Notice of Determination on this project within a few days of it being filed.

Sincerely yours,

Harvey E. Bragdon
Director of Community Development

HEB:ed

jwc2/olsen.jc

I Justification of separation from the existing Intertie is one of engineering reliability and feasibility. The upgrade of the existing lines was eliminated from further consideration because of the potential for a catastrophic outage. Analyzing the feasible alternatives, Alternative B is determined as the environmentally preferred alternative. See Section 1.2 of Volume 1 of this document for a description of other alternatives considered in this area.

J The referenced mitigation measure has been revised. See Item II.A in Section 1.1.5 of Volume 1 of this Final EIS/EIR. Construction activities on agricultural land will be conducted in such a way as to minimize the impact to the land, so that they can remain in agricultural production. Soils mitigation measures in Section 1.1.5 specifically address returning soils to their production capability by subsoiling and disking of topsoil, where appropriate. The mitigation measures were proposed with agricultural land uses in mind but were worded so as to apply to all areas along the preferred route.

K See item X.P in Section 1.1.5 of Volume 1 of this Final EIS/EIR. Ambient noise surveys will be conducted in selected areas where the COTP facilities would be close to residences or businesses. During construction it is possible that hardware and equipment may be installed in such a manner as to be a source of ambient noise. These sources can be detected and corrected after the line is energized.

L Growth inducing impacts were discussed in Volume 1, Section 4.5 of the Draft EIS/EIR. This section has been revised and is located in Section 1.1.4 of the Final EIS/EIR. The comparison of the assumptions and methods used in the Draft EIS/EIR analysis of the COTP with the California Energy Commission's (CEC) 1985 Electricity Report are discussed in Volume 1, Section 1.0 (Purpose and Need for Actions), and Volume 3A, Appendix B (Evaluation of the Economic Benefits of the COTP). The key assumptions associated with need for and benefits of the COTP in the 1986 CEC Electricity Report are addressed in the Addendum to Section 1.1.1 of Volume 1 of this Final EIS/EIR.

M Although an urban strip is not shown on the map for the area in question, an analysis of the impact of the proposed route segments on the homes is included in the text of the Draft EIS/EIR (see Volume 2A, Section 3, pages 3.6-47 to 56).

N A response was sent to the commentor on July 9, 1987.

L-291

PACIFIC POWER 920 S W Sixth Avenue • Portland, Oregon 97204 • (503) 243-1122

February 24, 1987

Mr. Rick Lind
Environmental Coordinator
California-Oregon Tranamission Project
P. O. Box 660970
Sacramento, CA 95866

Dear Mr. Lind:

Pacific Power & Light Company welcomes the opportunity to comment on the COTP Draft Environmental Impact Statement as it represents the completion of a major milestone in the development of this project. Pacific continues to support the earliest practicable completion of the project.

A The analyses of the environmental consequences of construction, operation, and maintenance of the project is very thorough and the summary tables demonstrate that Alternative D is only marginally better than Alternative C. We trust that as

B you resolve site specific locational problems that adequate separation from the existing Interties is maintained.

Pacific continues to endorse the conclusions of the Power Syatems Studies Committee' October 1985 report entitled "Corridor Separation for the COTP", the "Northwest Technical Evaluation of COTP Corridors and Termination Issues", dated April 1986, and the "Comparisons of Northern Corridors" dated April 1986. Our concern, of course, is to avoid the adverse effects that outages of a three-line intertie system could have on Pacific and other member utilities of the Western Systems Coordinating Council.

The completion of the COTP will be a welcomed addition in the development of a reliable interconnected electrical system in the Western United Statea.

Sincerely,

Paul D. Higgins, Manager
Environmental Planning

PH:db
PH.022387a

A Comment noted.

B Comment noted.

L-292

PERKINS COIE

A Law Partnership Including Professional Corporations
One Bellevue Center, Suite 1800 • 411-108th Avenue Northeast • Bellevue, Washington 98004
Telephone: (206) 453-6980

February 25, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, California 95866

Re: Draft Environmental Impact Statement/Environmental Impact Report for the California-Oregon Transmission Project and Los Banos-Gates Transmission Project

Dear Environmental Coordinator:

H Enclosed please find an original and copy of the comments of Puget Sound Power & Light Company on the above-referenced project. Please file the original and return the copy file stamped to me in the enclosed envelope.

Thank you for your assistance in the matter.

Very truly yours,

James M. Van Nostrand

JMV:ljb:0600v
Enclosures

H The copy was transmitted to the commentor on March 2, 1987.

L-292 (continued)

PUGET POWER

February 24, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, California 95866

Re: Draft Environmental Impact Statement/Environmental Impact Report for the California-Oregon Transmission Project and Los Banos-Gates Transmission Project

Dear Environmental Coordinator:

In response to the Western Area Power Administration's Federal Register Notice (51 FR 45168) requesting comments on the draft Environmental Impact Statement/Environmental Impact Report ("EIS/EIR") for the above-referenced projects, Puget Sound Power & Light Company ("Puget") submits the comments set forth below.

A Puget has previously expressed and continues to have an interest in participating on an ownership basis in expansions or upgrades of the Pacific Intertie, such as the third AC Intertie Line. In response to the Western Area Power Administration's Federal Register Notice of August 6, 1984, Puget submitted its Statement of Interest for Participation in the Development of the Third AC Intertie. See Puget letter to WAPA dated September 4, 1984, a copy of which is attached hereto and incorporated herein by this reference. The EIS/EIR must not be inconsistent with this participation.

B It appears unnecessary that federal funds be expended on this project, in light of utilities such as Puget which are willing to discuss participating in the project and providing funds in return for an ownership type of interest. The Bonneville Power Administration ("BPA"), as well as Pacific Power & Light Company, have each committed to developing business arrangements with interested Pacific Northwest scheduling utilities for participation, through contribution of funds or facilities, in upgrading the capacity of the Intertie and establishing a third AC Intertie Line. See BPA letter to Pacific dated October 5, 1984, Pacific letter to BPA dated

A Nothing in the Draft EIS/EIR is inconsistent with non-federal participation in the proposed Intertie facilities in the PNW. The ownership of Intertie facilities in the PNW is yet to be determined. This issue is the subject of a separate decision process currently being undertaken by BPA.

B Comment noted.

L-292 (continued)

B August 2, 1984 (paragraph 3 in particular), and Puget letter to Department of Energy dated January 31, 1985, copies of all of which are attached hereto and incorporated herein by this reference.

C The economic analysis included in the EIS/EIR is incomplete. The economic impact of the project, as viewed from the perspective of Northwest utilities and their ratepayers, is not recognized or assessed; the draft EIS/EIR evaluates only the benefits and costs to the California utilities and their ratepayers. This economic analysis does not satisfy the requirements of the National Environmental Policy Act (NEPA"). NEPA requires "a rather finely tuned and systematic balancing analysis" by the agencies; "the particular economic and technical benefits of planned action must be assessed and then weighed against the environmental costs." Calvert Cliffs' Coordinating Committee v. United States Atomic Energy Commission, 449 F.2d 1109, 1113, 1123 (D.C. Cir. 1971), 42 U.S.C. § 4332(2)(c).

D Moreover, 40 C.F.R. § 1502.23 requires a discussion of "the relationship between that analysis and any analyses of unquantified environmental impacts, values and amenities." Without a consideration of the economic impact of the project on Northwest utilities and their ratepayers, the evaluation of the project's economic benefits and the environmental impacts is simply inadequate.

E The Intertie Development and Use Environmental Impact Statement prepared by BPA, which is cited in the draft EIS/EIR, similarly excludes such an analysis.

F The discussion of economic impacts in the draft EIS/EIR also fails to reflect the impacts of any participation of Puget in the third AC intertie line.

G The environmental and socioeconomic impact of the Pacific Northwest Reinforcement Project receives insufficient evaluation in the draft EIS/EIR. The limited analysis of the Pacific Northwest Reinforcement Project in Volume 2C contrasts sharply with the extensive discussion of the environmental and socioeconomic impact of the California-Oregon Transmission Project and Los Banos-Gates Transmission Project, which is contained in four volumes.

Very truly yours,

PUGET SOUND POWER & LIGHT COMPANY

By R. G. Bailey
Vice President Power Systems

Enclosures

C The BPA IDU EIS (cited in the COTP Draft EIS/EIR) includes analysis of the overall value of the COTP for both California and the Pacific Northwest without distinguishing benefits to the PNW versus those to California or Canada. The final distribution of benefits will be the outcome of negotiations for long-term firm contracts and short-term purchases between buyers and sellers of power. The IDU EIS considered the likely net economic effect of the Project on the combined utilities.

D See response to L-292 C.

E See response to L-292 C.

F The economic models used for the COTP Draft EIS/EIR and IDU EIS are regional models. The models are based on the assumption that utilities will make economic decisions about the use of those facilities - a reasonable assumption given the economic and regulatory forces that shape utility operations. The models cannot address the effects on the distribution of benefits of one pattern of ownership versus another.

G The evaluation of the environmental and socio-economic impact of the construction of the Pacific Northwest Reinforcement Project as found in Volume 2C of the Draft EIS/EIR is commensurate with the environmental impacts of that project. In contrast to the COTP and Los Banos-Gates Project, the impacts from construction are expected to be minimal.

The COTP EIS is scoped to discuss physical and social impacts of constructing a transmission line from the southern Oregon border area to central California. Pacific Northwest regional socio-economic and environmental impacts associated with developing additional intertie capacity and how that capacity will be used, are ecompassed by BPA's Intertie Development and Use Draft Environmental Impact Statement.

L-292 (continued)

PUGET POWER

September 4, 1984

Mr. David G. Coleman, Area Manager
Sacramento Area Office
Western Area Power Administration
2800 Cottage Way
Sacramento, CA 95825

Re: Western Area Power Administration
Intent to Construct a Third 500-kV AC Line to the Pacific Northwest-Southwest Intertie; Request for Statements of Interest

Dear Mr. Coleman:

In response to Western Area Power Administration's request in the August 6, 1984 Federal Register for Statements of Interest regarding the above, Puget Sound Power & Light Company ("Puget") is interested in participating in the development of the third AC Intertie and in accordance with your request, Puget hereby submits its Statement of Interest for Participation in the Development of the Third AC Intertie and submits the following information:

(1) Name of entity: Puget Sound Power & Light Company

(a) Management contact person(s) and phone number:

R. G. Bailey (206) 453-6720

(b) Technical contact person(s) and phone number:

R. G. Bailey (206) 453-6720

(2) Amount of transmission capacity (megawatts) sought on the third AC line: up to 200 MW

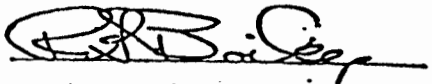
Of course, Puget's interest is in acquiring transmission capacity rights in the northern sections of the Pacific Northwest-Southwest Intertie ("the Intertie") so that Puget can make its power and energy available to utilities in the Southwest. We have expressed this interest to the Bonneville Power Administration ("BPA") and other Northwest utilities actively

L-292 (continued)

We look forward to discussing the possible terms and conditions that would mutually benefit Puget, WAPA and other Intertie participants and users.

Sincerely,

Puget Sound Power & Light Company

By: 

Its: Vice President Power Systems

RGB:jks

L-292 (continued)

Department of Energy
Bonneville Power Administration
PO Box 3621
Portland, Oregon 97208

OFFICE OF THE ADMINISTRATOR

OCT 5 1984

Mr. D. F. Bolender, President
Pacific Power & Light
920 SW. Sixth Avenue
Portland, OR 97204

Dear Mr. Bolender:

I have signed your letter of August 2, 1984, and agree that it correctly summarizes some important principles that we have concurred with and that the Bonneville Power Administration (BPA) and the Pacific Power & Light Company (Pacific) should consider in any contract negotiations regarding the construction of a third AC Intertie. BPA will be cognizant of these principles in any such negotiations. As the principles recognize, any BPA proposals that may evolve from these principles will be made consistent with applicable law, including the National Environmental Policy Act (NEPA).

BPA looks forward to continued discussions and close cooperation with Pacific in the transmission areas which are the subject of your letter.

Sincerely,

Peter T. Johnson

Administrator

L-292 (continued)

PACIFIC POWER & LIGHT COMPANY
920 SW SIXTH AVENUE · PORTLAND, OREGON 97204 · (503) 243-[illegible]

David F. Bolender
President

Rec AUG 3 1984
Referred to
Action Taken
☐ ANS ☐ NO REPLY
Date
By

August 2, 1984

Peter T. Johnson, Administrator
Bonneville Power Administration
P. O. Box 3621
Portland, Oregon 97208

Dear Mr. Johnson:

During the past several months, Pacific Power & Light Company has worked with the Bonneville Power Administration toward development of increased transfer capability between the Northwest and California for the benefit of the Pacific Northwest. These continuing discussions specifically involve upgrading the d-c capacity and establishing a third a-c line.

As we have discussed, the potential benefits of increasing these transfer capabilities significantly outweigh the expected costs. It is my understanding that these discussions have produced agreement on some important principles, among them:

1. BPA and Pacific will use best efforts to complete both contemplated facilities at the earliest possible date.

2. BPA, Pacific, and Portland General Electric Company have provided the facilities which comprise the existing Northwest to California transfer capability. These existing Northwest facilities are capable of delivering more power to the Oregon border than California's existing transmission can accept. This existing surplus transmission capability will be considered in the determination

of appropriate shares of any increases in the a-c intertie transmission capability.

3. BPA and Pacific will develop appropriate business arrangements and work closely with other interested Pacific Northwest scheduling electric utilities for participation through contribution of funds and/or facilities.

4. Consistent with applicable law, policies, and practices, BPA will provide main system transmission system capability and Pacific will provide integration services to the extent possible to utilities not directly connected to intertie facilities.

5. Studies to date show that completion of both projects at the earliest date maximizes overall operational flexibility and reliability. Potential control of some impacts of inadvertent flow is provided by the d-c terminal uprate. A new 500 kV a-c facility constructed with physical separation from the existing intertie facilities in Northern California adds significantly to the reliability of the WSCC system.

6. Where possible, technical and environmental studies for these projects will be combined to minimize duplication of effort. All studies will be shared.

7. Projects will proceed independently with permitting and construction.

8. BPA and Pacific will: (1) encourage all agreements needed among third parties to complete both projects, (2) attempt to secure agreements between Northwest and California entities in concert with the above principles, (3) seek to complete negotiations of Northwest agreements as soon as possible, and (4) work to keep interested parties informed.

If you concur in these principles, please so indicate by executing below and returning one copy of this letter to me.

I believe these principles form a solid foundation for continued rapid progress in providing expanded benefits to the Pacific Northwest.

Very truly yours,

PACIFIC POWER & LIGHT COMPANY

By D. F. Solander
President

Accepted this 5th day of
October, 1984

BONNEVILLE POWER ADMINISTRATION

By Peter T. Johnson
Administrator

L-292 (continued)

PUGET POWER

January 31, 1985

Mr. Stanley W. Hulett, Director
California Energy Project
Office of the Secretary
United States Department of Energy
333 Market Street
San Francisco, California 94105

Re: Third 500-kV AC Pacific Intertie Line

Dear Mr. Hulett:

This is in response to the request for comments published in the Federal Register, Vol. 50, No. 2 January 3, 1985 regarding the above. These comments are submitted on behalf of Puget Sound Power & Light Company (Puget). In response to Western Area Power Administration's request in the August 6, 1984 Federal Register for Statements of Interest in connection with the above, Puget submitted its Statement of Interest for Participation in the Development of the Third AC Intertie. A copy of that statement, dated September 4, 1984, is attached hereto and incorporated herin by that reference.

We believe, and have been advised, that utilities such as Puget are to be afforded an opportunity to participate in the development of the Third AC Intertie and that discussion regarding such participation will soon commence. In that regard, we notice that the "Conceptual Plan for a New 500-kV AC Transmission Line between the Pacific Northwest and California" transmitted by letter dated December 24, 1984 to the Honorable Thomas P. O'Neill from the Secretary of Energy, on Page 2, stated with regard to financing of the intertie:

> "No Federal funds will be required for the Project's facilities except that Federal funds could be incurred in the Northwest for additions to existing transmission facilities."

Puget has expressed and continues to have an interest in participating on an ownership basis in the Third AC Pacific

Intertie. It appears unnecessary that federal funds be expended on this project, in light of utilities such as Puget which are willing to discuss participating in the project and providing funds in return for an ownership type of interest.

Very truly yours,

R. G. Bailey
Vice President
Power Systems

Attach.

cc: D. H. Knight
R. G. Bailey
J. A. Austin/W. A. Gaines
J. R. Lauckhart/W. L. Robinett
D. G. Kari
File
Green

L-292 (continued)

PUGET POWER

September 4, 1984

Mr. David G. Coleman, Area Manager
Sacramento Area Office
Western Area Power Administration
2800 Cottage Way
Sacramento, CA 95825

Re: Western Area Power Administration
Intent to Construct a Third 500-kV AC Line to the Pacific Northwest-Southwest Intertie; Request for Statements of Interest

Dear Mr. Coleman:

In response to Western Area Power Administration's request in the August 6, 1984 Federal Register for Statements of Interest regarding the above, Puget Sound Power & Light Company ("Puget") is interested in participating in the development of the third AC Intertie and in accordance with your request, Puget hereby submits its Statement of Interest for Participation in the Development of the Third AC Intertie and submits the following information:

(1) Name of entity: Puget Sound Power & Light Company

(a) Management contact person(s) and phone number:

R. G. Bailey (206) 453-6720

(b) Technical contact person(s) and phone number:

R. G. Bailey (206) 453-6720

(2) Amount of transmission capacity (megawatts) sought on the third AC line: up to 200 MW

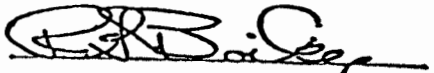
Of course, Puget's interest is in acquiring transmission capacity rights in the northern sections of the Pacific Northwest-Southwest Intertie ("the Intertie") so that Puget can make its power and energy available to utilities in the Southwest. We have expressed this interest to the Bonneville Power Administration ("BPA") and other Northwest utilities actively

L-292 (continued)

We look forward to discussing the possible terms and conditions that would mutually benefit Puget, WAPA and other Intertie participants and users.

Sincerely,

Puget Sound Power & Light Company

By: 

Its: Vice President Power Systems

RGB:jks

L-293

County of FRESNO

Public Works & Development Services Department

Richard D. Welton
Director

February 24, 1987

Environmental Coordinator
California-Oregon Transmission Project
P. O. Box 660970
Sacramento, CA 95866

Gentlemen:

Subject: EIS/EIR for the COTP and LB-GTP

Fresno County Public Works & Development Services Department staff has contacted various County-wide agencies and groups and has the following comments.

A 1. The proposal is consistent with the property development standards of the AE (Exclusive Agricultural) Zone District. It should be noted that Section 875 of the County Zoning Ordinance (copy enclosed) is applicable to the proposal.

B 2. Westlands Water District staff has reviewed the proposal and has provided comments (copy enclosed) regarding the Los Banos-Gates transmission line.

Thank you for this opportunity to comment.

Very truly yours,

Jerry K. Boren
Development Services Manager

Richard S. Gilbert

Richard S. Gilbert
Staff Analyst III

RSG:jw

Enclosures

4499 East Kings Canyon Road/Fresno, California 93702/Phone (209) 453-5055
Equal Employment Opportunity – Affirmative Action – Handicap Employer

A PGandE will comply with Section 875 of the Fresno County Zoning Ordinance and has sent Fresno County on March 27, 1987, information necessary for compliance to Section 875 of the Fresno County Zoning Ordinance.

B PGandE responded to the Westlands Water District letter dated December 5, 1986, requesting that PGandE locate the LBG transmission line along one of the proposed western routes. PGandE sent a response on December 22, 1986, to Westlands Water District stating that the preferred route coincides with the route requested by Westlands Water District.

SECTION 875

PUBLIC UTILITIES AND SERVICES

The following procedure shall apply to all public utilities and service installations.

A. The provisions of this Division shall not be construed as to limit or interfere with the construction, installation, operation and maintenance of any use coming under the jurisdiction of the Public Utilities Commission, which uses are related to the public utility purposes of water and gas pipes, mains and conduits, telegraph and telephone lines, pole mounted repeaters, telephone booths (except in residential districts), sewers and sewer mains, electric light and power distribution and transmission lines.

(Amended by Ord. 490.180 adopted 8-7-79)

B. REVIEW OF ELECTRIC POWER LINES

The routes of proposed electric power lines shall be submitted to the Director for County review prior to filing with a State agency or prior to any condemnation proceedings.

(Amended by Ord. 490.180 adopted 8-7-79)

1. Electric power lines shall be those lines which are intended to transmit electrical energy from:

   a. The source of such energy to a transmission substation.

   b. A transmission substation to a distribution substation.

2. The following plans and information shall be submitted to the Director for review in accordance with the procedures specified in Section 875-C through E, below:

   a. The location of the proposed route.

   b. The width of proposed rights-of-way.

   c. The location of existing rights-of-way and easement in the vicinity of the proposed routes.

   d. Description and frequency of towers and number of three-wire circuits.

   e. Approximate height of towers.

   f. Maximum operating voltage of the proposed facilities.

L-293 (continued)

g. Other pertinent data. Much relevant information needed for consideration is included in, but may not be limited to environmental impact assessment summaries, and similar documents.

3. The submittal shall be accompanied by a filing fee as provided in Section 879 for the purpose of defraying the costs incidental to the review.

C. ACTION BY THE DIRECTOR

1. The Director shall review the proposed development for conformance with all adopted plans, existing zoning and land use. The Director may, when in the public interest, recommend such modifications as deemed necessary to protect the health, safety and welfare.

2. The Director shall prepare a report of all findings, including support for recommended modifications. Support for recommended modifications, based upon the premise that the location should provide the greatest public good and least private injury, shall give consideration to the following factors:

   a. Community values.

   b. Recreational and park areas.

   c. Historical and aesthetic values.

   d. Influence on environment.

3. The staff report shall be presented to the Planning Commission at a public hearing not less than ten (10) nor more than forty (40) days after filing of the plans and data.

4. Notices shall be given not less than ten (10) days before the date set for the hearing.

   Mailed notices shall be sent to owners of property, the nearest boundaries of which are within three hundred (300) feet of the proposed centerlines of the electric power lines corridors. Notices shall be mailed to the owners as shown on the latest equalized assessment roll or parcel number index.

   (Added by Ord. 490.180 adopted 8-7-79)

D. COMMISSION PUBLIC HEARING AND ACTION

1. The Commission shall, not less than (10) days after the legal notice of a public hearing on a proposed electric power line, hold said public hearing.

2. The Commission shall consider the proposal, the Director's recommendations, and all testimony given and shall make recommendations. The recommendations shall include the basis for modifications not previously supported by the Director.

3. The Commission actions shall be announced in a resolution not later than thirty (30) days after the conclusion of the hearings. Such resolution shall be filed with the Board of Supervisors and a copy thereof shall be mailed to the proponent of the electric power line.

E. BOARD OF SUPERVISORS PUBLIC HEARING AND ACTION

1. The hearing date shall be set by the Clerk of the Board for not less than fifteen (15) nor more than forty (40) days after filing of the Commission resolution with the Board of Supervisors. Notice shall be made pursuant to Section 875-C.4.

2. The Board shall, not less than ten (10) days after the legal notice of public hearing, hold said public hearing.

3. The Board may indicate approval of any one or all of the proposed electric power line routes; may identify changes in proposed routes necessary for the protection of the public health, safety, and welfare; or may indicate disapproval of any one or all of the proposed routes.

4. Action by the Board of Supervisors shall be announced by resolution. Copies of the resolution shall be mailed to the proponent of the electrical power line and to the California Public Utilities Commission not later than (10) days following completion of the hearing.

5. It is intended that the provisions of this Section not be the type of review subject to requirements of California Government Code, Sections 65920 et. seq.

(Added by Ord. 490.180 adopted 8-7-79)

F. CREATION OF LOTS OR PARCELS FOR PUBLIC UTILITY USE

The creation of lots or parcels which are substandard as to lot area or lot dimension for public utility use shall be subject to the provisions of Sections 855-A-2 and 855-B.3.

(Amended by Ord. 490.180 adopted 8-7-79)

L-293 (continued)

WESTLANDS WATER DISTRICT

3130 NORTH FRESNO STREET / P.O. BOX 6056, FRESNO, CALIFORNIA 93703
TELEPHONE: (209) 224-1523
TELECOPIER: (209) 224-1560

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TREASURER

RECEIVED

January 13, 1987 JAN 15 1987

COUNTY OF FRESNO
PUBLIC WORKS & DEVELOPMENT SERVICES DEPT.

Mr. Richard S. Gilbert, Staff Analyst III
Fresno County Public Works and
Development Services Department
4499 E. Kings Canyon Road
Fresno, CA 93702

Dear Mr. Gilbert:

Please refer to your Inter Office Memo of December 16, 1986, inviting comments on Pacific Gas and Electric Company's proposed Los Banos-Gates 500 KV transmission line.

The District's Board of Directors, at its regularly scheduled meeting of November 17, 1986, adopted Resolution No. 827-86 which requests that PG&E locate its 500 KV transmission line on the western part of the San Joaquin Valley outside of the boundaries of Westlands Water District.

Enclosed for inclusion with our comments concerning the Los Banos-Gates transmission line are copies of Westlands Water District Resolution No. 827-86, our letter of December 5, 1986, transmitting to PG&E a copy of the Resolution, and a letter from PG&E in answer to Westland's comments to PG&E.

Sincerely,

Terence M. Garvey
Chief Engineer

Enclosures

L-293 (continued)

RESOLUTION NO. 827-86

WESTLANDS WATER DISTRICT

LOCATION OF PG&E TRANSMISSION LINE

WHEREAS, PG&E is planning to install a 500 KV transmission line on the western boundary of Westlands Water District; and

WHEREAS, one of the routes under consideration by PG&E is the route lying outside the District boundaries; and

WHEREAS, the location of said line within the District would adversely impact farming operations within Westlands; and

WHEREAS, this Board of Directors believes that it would be more cost effective for PG&E if it were to install the line outside of Westlands Water District since that area is not presently being farmed.

NOW, THEREFORE, BE IT, AND IT IS HEREBY, RESOLVED that PG&E is requested to locate its 500 KV transmission line on the western part of the San Joaquin Valley outside of the boundaries of Westlands Water District.

AYES: Directors Stone, Giffen, Hurlbutt, Indart, McFarlane, Smith, Turnquist, and Woolf

NOS: None

ABSENT: Director Ulrici

ADOPTED: November 17, 1986

L-293 (continued)

December 5, 1986

Mr. George A. Maneatis, President
Pacific Gas and Electric Company
77 Beale Street
San Francisco, CA 94106

Dear Mr. Maneatis:

Enclosed is Westlands Water District Resolution No. 827-86, adopted by the Board of Directors at its regularly scheduled meeting of November 17, 1986.

The Resolution requests that PG&E locate its proposed 500 KV Los Banos-Gates Transmission Line along the western alignment of those alternative routes as shown in "Newsletter 3, September, 1986, Los Banos-Gates Transmission Project."

Your favorable consideration of the Board's request is appreciated.

Sincerely,

William R. Johnston
Acting Manager

Enclosure

cc: Mr. Robert Martin, w/enclosure
Vice President, San Joaquin Valley Region
Pacific Gas and Electric Company
1401 Fulton Street, Room 903
Fresno, CA 93760

L-293 (continued)

PACIFIC GAS AND ELECTRIC COMPANY

PG&E + 77 BEALE STREET • SAN FRANCISCO, CALIFORNIA 94106 • (415) 781-4211 • TWX 910-372-6587

December 22, 1986

Los Banos-Gates Transmission
Line Project
608.1

Mr. William R. Johnston
Westlands Water District
Post Office Box 6056
Fresno, California 93703

Dear Mr. Johnston:

We would like to acknowledge and thank you for your December 5 letter regarding the Westlands Water District Resolution No. 827-86, adopted November 17, 1986.

In concert with your resolution PG&E has chosen as its preferred route one of the western routes for the Los Banos-Gates Transmission Line.

We appreciate your input into our route selection process and are pleased that our choice coincides with your preference.

Sincerely,

C. Robert Martin

Vice President
San Joaquin Valley Region

NEB:mcm

cc: RADraeger
GAManeatis

L-295

UNITED STATES DEPARTMENT OF AGRICULTURE | FOREST SERVICE | PACIFIC SOUTHWEST REGION | REGIONAL OFFICE 630 SANSOME STREET SAN FRANCISCO, CA 94111

REPLY TO: 1950

DATE: FEB 27 1987

Mr. Jim Feider
Western Area Power Administration
1825 Bell Street
Sacramento, CA 95825

Dear Mr. Feider:

I am enclosing a copy of the Forest Service comments on the Draft Environmental Impact Statement for the California-Oregon Transmission Project for your consideration in the preparation of the final environmental impact statement.

Our concerns center around two primary issues; the elimination of Alternative N-10M in the eastern corridor as a viable alternative to be analyzed in detail and the lack of analysis and disclosure of impacts in key resource areas.

A While I support measures to ensure that a utility transmission network will reliably deliver power to its users, I do not concur with your analysis that a five mile or greater separation of a new line from the existing two-line corridor would best reduce line outage risks related to fire concerns.

Rather, I believe that risks related to fire concerns in the eastern corridor would be minimized by placing the line closer to the two-line corridor such as Alternative N-10M where fuels are lighter and fire management strategies can be optimized to prevent outage. I am enclosing information to support this conclusion in the form of two draft reports that: (1) Refute the report upon which your analysis leading to the line separation criteria is based; (2) Present the factors we believe should be the focus for fire concerns related to line reliability; and (3) Document our effectiveness in fuels management, early fire detection, and suppression capabilities.

B Based on environmental analysis completed, Alternative N-10M would result in the least adverse environmental impacts of all of the alternatives considered in detail in the document.

A A fuels management plan for the area of land near the existing AC Intertie transmission lines and the N-10M route option will be developed in consultation with the Forest Service and the California Department of Forestry. The fuels management plan will strive to reduce the potential for a simultaneous outage of three 500 kV transmission lines due to forest fire. The fuels management plan will consider the use of prescribed fire, mechanical methods, and hand treatment methods such as thinning as alternatives.

B Comment noted. Part of Alternative N-10M has been incorporated into a new route option (N-10M option) that is analyzed in the Supplement to the Draft EIS/EIR. Portions of this new option have been adopted as part of the preferred route. See Section 1.1.3 of Volume 1 of this Final EIS/EIR for a map showing the current preferred route segments.

L-295 (continued)

B For the above reasons, I believe that Alternative M-10M should be analyzed in detail in the document and that options to segments of this alternative (as we have previously presented at recent meetings) be considered to further reduce adverse environmental impacts.

C My other primary concern is the lack of specificity in the mitigation measures and the lack of thorough impact analysis within the resource areas of timber, visual quality, water quality, and fire management.

I hope we can continue in a cooperative effort towards resolution of these issues and in the preparation of a final document that is acceptable to both agencies.

Sincerely,

for ZANE G. SMITH, JR.
Regional Forester

Enclosures (3)

C The mitigation measures have been revised in many cases to reflect the need for more specificity. In other cases, they have been left somewhat flexible because they may not apply universally to the entire length of the COTP. In all cases, appropriate land management and resource agencies will be consulted during the detailed phase of the COTP and site-specific mitigation will be included in the Mitigation and Monitoring Plan. More detailed impact analyses and discussions have been added to this Final EIS/EIR on timber resources, visual quality, water quality (impacts on beneficial uses), and fire management. See also responses to your specific comments below.

See response to L-179 C and Section 1.1.4 of Volume 1 of this Final EIS/EIR for information on impacts to timber production. Section 4.1 of Volume 1 and Section 3.2 of Volume 2A of the Draft EIS/EIR and Section 1.1.4 of Volume 1 of this Final EIS/EIR address soil instability effects of erosion and impacts to downstream beneficial uses. Visual resources impacts are analyzed in Section 4.1 of Volume 1 and Section 3.7 of Volume 2A of the Draft EIS/EIR and Section 1.1.4 of Volume 1 of this Final EIS/EIR. For additional explanation of visual resource evaluations, see responses to L-3 B and L-309 K1. A discussion of fuels management has been added to Section 2.3 of the Final EIS/EIR. Information and analyses in those sections of the documents pertain to those resources cited in the comment that occur on Forest Service administered lands.

L-295 (continued)

FOREST SERVICE COMMENTS ON DRAFT ENVIRONMENTAL IMPACT STATEMENT OF NOVEMBER, 1986 FOR THE CALIFORNIA-OREGON TRANSMISSION PROJECT

VOLUME 1, Summary:

D pg. 2. The Forest Service has never agreed to a routing guideline that "maximized the route segments on public lands". There are areas of this project where resource impacts would be minimized by locating the right-of-way on private instead of public lands.

E pg. 2. Alternatives need to be compared with the present situation or no action and not with the project preferred route.

F pg. 2. The project preferred route should be identified in the document and the environmentally preferred route should be discuss in the Record of Decision.

G pg. 9. The Forest Service has provided information on existing electronics sites on National Forest System lands. We have not determined if the project proposal for communications facilities is compatible with existing and planned uses of these sites. We will entertain an application for these sites, but do not guarentee a permit will be issued.

H pg. 14. The statement that most impacts can be avoided or mitigated is very misleading. Significant residual impacts are identified for earth resources, wildlife, land use, visual, and social economics.

I pg. 14. We are concerned with the importing of fill material as it relates to possible movement of noxious weeds.

J pg. 14. Significant residual impacts from water erosion and possible mass wasting on the Grizzly Peak to Redding Alternative is unacceptable. A site specific survey of all high erosion hazard and unstable areas will be required. Specific mitigations must be implemented to reduce soils and watershed impact to below the significant level.

K pg. 16. How will the project deal with wetlands larger than 1000 feet in length?

L pg. 17. A project Vegetative Management Plan will be required and must be approved by the Forest Service prior to the start of construction.

M pg. 18. A Snag Management Plan will be required and must be approved by the orest Service prior to start of construction.

N pg. 19. The point where impacts to commerical forest lands becomes significant should be the same for public and private lands.

O pg. 20. Impacts to visually sensitive areas must be mitigated to less than significant. This could be accomplished by use of tubular towers, painting of towers and proper location.

D The intent of the guideline is that if all environmental and resource impacts are similar, public lands should be used rather than private. Land status was only one of several guidelines considered in the routing process.

E See response to comment L-295 DD.

F The environmentally superior route and the project preferred route were included in the Draft EIS/EIR to provide opportunity for agencies and the general public to comment on the lead agencies' analysis. The final environmentally preferable alternative will be identified in Western's Record of Decision. In 46CFR 18027-18039 Council on Environmental Quality "40 Most Asked Questions Concerning CEQ's NEPA Regulations," it is indicated that the CEQ encourages the identification of the environmentally preferable alternative in the Draft EIS/EIR.

G The COTP is preparing a communications plan based largely on the communications system information presented in Section 2.1 of Volume 1 of the Draft EIS/EIR. It would not be feasible to operate the COTP without the use of communication sites, some of which may be required on national forest lands. The COTP will use existing sites wherever possible.

H We could not locate such a statement on page 14. On page 11, a similar statement is provided within the context of mitigation through avoidance (siting within 1,500-foot wide route), and implementation of adopted mitigation. See Section 1.1.5 of Volume 1 of this Final EIS/EIR. A sentence has been added that indicates that significant residual impacts would remain after mitigation for earth resources, wildlife, land use, visual resources, and socioeconomics.

I Fill material will normally be material obtained at the site. For cases where imported material is required it will consist of crushed rock and non-soil material which will be free of organic matter and noxious weeds.

J Implementing construction mitigation measure II.A.4 in Section 1.1.5 of Volume 1 of this Final EIS/EIR will help to assure impacts are reduced to a less than significant level.

The Grizzly Peak/Kosk Creek area is one of the sensitive areas referred to in this mitigation measure. In addition, the Forest Service Best Management Practices (BMP) will be implemented to reduce soil erosion.

K As configured in the Draft EIS/EIR, the preferred route does not cross or intercept any wetlands greater than 1000 feet in length. Also, the COTP will avoid siting of structures, roads, or construction areas in wetlands.

L-295 (continued)

L A vegetative management plan (clearing plan) will be prepared in consultation with the Forest Service. In many cases it is neither necessary nor desirable to clear the right-of-way of all trees and vegetation. The plan will consider clearing requirements for the COTP and long-term right-of-way management needs. The plan will be incorporated into the construction clearing specifications and the COTP Compliance and Monitoring Plan, and will be referenced as a requirement of the Forest Service Special Use Permit and Easement.

M A transmission line right-of-way can eliminate many snags within the right-of-way which are habitat for cavity-dependent wildlife species. In addition, snags too close to the transmission line can affect the safe and reliable operation of the COTP. Therefore, snag management activities will be included in the vegetation management plan providing for the removal of snags which endanger the transmission line and replacement of snags for cavity-dependent wildlife species. See also Section 1.1.5 of Volume 1 of this Final EIS/EIR for mitigation measures relating to snags.

N As stated in the Draft EIS/EIR, Volume 2A, Section 3.6.3.3, the significance threshold is the same for public and private forestlands. A segment is considered significant if it crosses 40 or more acres of prime timberland. A route crossing a TPZ area must affect at least 40 acres of prime timber in order for the impact to be considered significant.

O The visual resources mitigation measures in Volume 1, Section 1.1.5, VII, Visual Resources, of this Final EIS/EIR are specifically designed to minimize visual impacts. Visual impacts cannot always be totally mitigated but they can be minimized in many cases, sometimes to less than significant levels of impact.

L-295 (continued)

FS Comments on DEIS, COTP, page 2.

P pg. 21. The socioeconomic impacts of this project are not fully addressed. Specifically, loss of revenue to the Federal Government (timber receipts), State and County Government (Yield Tax and 25 percent fund) and loss of jobs is not displayed.

Q pg. 22. What is proposed if cemeteries cannot be avoided and reburial is unacceptable to the tribe?

Volume 1, Section 1.0, Purpose and Need for Action

R pg. 1.1-3 The discussion of reliability and separation needs to be more specific. Why is a 2000 foot minimum separation needed? What separation is needed in different vegetative types and why? What fuels management can be implemented to increase system reliability where wildland fire is a concern?

S pg. 1.2-1. There needs to be a discussion of possible future transmission route and/or corridor needs within the study area.

T pg. 1.5-6. There needs to be an explaination of how the expected values were arrived at. Also, we see no discussion in the economic analysis of resource values and costs of mitigation. There is nothing that supports the commitment of and loss of natural resources for this project.

Volume 1, Section 2.0, Alternatives, Including the Proposed Action

U pg. 2.1-3. The question of reliability as it relates to separation is not adequately addressed in the Sargent & Lundy Report. Our recent meetings with you and the project staff have raised serious concerns about the validity of this report. The need for separation is not adequately addressed anywhere in the document, yet it is the most critical factor in route location for the eastern corridor.

V pg. 2.1-7. Under Operations and Maintenance Practices there needs to be a section on fuels management. There are ways to manage the vegetation and fuels within and adjacent to the right-of-way that will significantly reduce the threat of fire.

W pg. 2.1-12. Communication facilities proposed on National Forest System lands will conform with management direction for the sites.

X pg.2.1-12. There needs to be a discussion of this project in relation to direction given in Title V, section 503 of the Federal Land Policy and Management Act, PL 94-579.

P Table 3.8-8 of Volume 2A of the Draft EIS/EIR estimates, by segment, the loss of timber revenues to taxing agencies. See columns entitled: "Oregon Yield Tax", 'California Timber Yield Tax", "Forest Service R-T-C (Return-to-County)", and "Bureau of Land Management OC". Total jobs lost (both those directly resulting from the loss of timberland and those jobs indirectly related to the loss of timberland) are presented in the column entitled "Total Jobs". Table 3.6-4 presents a summary of the assumptions used in estimating these forestry impacts.

Q Avoidance of cemeteries is preferred and is usually possible. If it is not possible in a particular instance, the COTP staff will consult with the Native American community to arrange mutually acceptable mitigation measures.

R In the area south of the Sacramento River, less separation can be tolerated because the lines would not be as subject to the dense smoke from forest fires as those through heavily forested, or vegetated areas. See response to L-309 YY regarding the rationale for a 2,000-foot minimum separation. See response to L-295 A regarding the development of a fire and fuels management plan for the Project.

S At this time the COTP Participants have no plans of building a fourth Intertie line in the study area. With such diverse energy requirements between the two regions, additional transmission ties may be difficult to justify. A proposed project known as the Inland Intertie is currently being planned by other utilities, but is located outside the study area. It is anticipated that both of these projects will satisfy inter-region transmission needs into the foreseeable future.

T An explanation of how expected benefits were developed is presented in Volume 3A, Appendix B of the Draft EIS/EIR. Resource values and mitigation costs were compared during the identification of the environmentally superior and project preferred route. General mitigation costs were included as part of the construction cost in the economic analysis.

U Within the eastern corridor, there are many areas of concern. The COTP views versus the Forest Service views have been centered on a forest fire issue for the corridors west of the existing Intertie, covered by the Sargent & Lundy Report. It must be realized that this is not the only supportive information. Technical studies demonstrate the catastrophic effect should all three lines be taken out by the same common occurrence, no matter what the cause. All of this technical supporting information is available and has been used to determine that separation is needed.

V We concur that there are ways to manage the vegetation and fuels within and adjacent to the right of way that will reduce the threat of fire. Fuels management is being considered as a means to introduce a safety factor, and a fuel management practice will be developed as part of the process to obtain the easement for the line. See response to L-295 A.

L-295 (continued)

L-295 W CLS

W The COTP will conform with the Forest Service requirements for communications facilities located on Forest Service administered lands.

X Discussion of the COTP in relation to the direction given by the Federal Land and Policy Management Act is presented in response to L-307 P.

L-295 (continued)

FS Comments on DEIS, COTP, page 3.

Y pg. 2.1-16. We strongly oppose any criterion that maximizes route segments on public lands. This approach to routing has no justification in relation to resource impacts or economics. This is a criterion we have never agreed to.

Z pg. 2.1-18. There has been no valid data presented that would support elimination of the N-10M route segment. This segment should be reinstated as a feasible alternative.

AA pg. 2.1-21. We disagree with the statement that the preferred route minimizes the potential for major environmental impacts. Your own analysis indicates significant residual impacts to numerous resources (see comment for pg. 14). In addition there are significant impacts to National Forest System lands that are not adequately addressed in the document. These include impacts to timber productivity, impacts as a result of mass wasting in known unstable areas and impacts from reduced visual quality in sensitive areas.

BB pg. 2.4-1. The discussion of the No Action Alternative should center on what would happen if the projects were not constructed and not further discussion of the benefits of the combined projects . It could be argued that, from a national security perspective, there may be advantages to have multiple energy sources rather than relying on three highly visible transmission lines in one region. The no action alternative must be carried thru the analysis as required by NEPA.

CC pg. 2.5-1. We are not aware of any environmental benefits to National Forest System lands from this project.

DD pg. 2.5-2. Alternatives displayed should be compared with the current situation and not with the COTP.

EE pg. 2.5-3. Based on the comparison discussion, there is no firm basis for elimination of any of the alternatives.

FF pg. 2.5-7. There is no description of "parallel existing intertie lines". What is the definition of "in proximity to the two existing lines". We have seen no data or analysis that would indicate putting a third intertie line parallel to the existing lines is infeasible.

GG pg. 2.5-8. We do not believe the analysis of parallel routes has taken into consideration the additional costs associated with resource impacts and mitigation that will be required for routes proposed further west of the existing intertie lines in the northern section. There are areas of scattered brush and trees in the northern section where fire will not be a serious threat to these lines. We believe that separation can be minimized in these area, thus avoiding serious resource impacts.

HH pg. 2.5-10. The best non-transmission alternative should be carried forward in the analysis.

Y Comment noted. See response to L-295 D.

Z See response to L-295 B.

AA The COTP analyzed approximately 100 route segments in the Northern Section study area. From these route segments, four complete alternatives were selected, and among these four alternatives, one was selected as the preferred alternative. The preferred alternative has environmental impacts; however, of the alternatives compared, the COTP has selected the alternative with the least overall impacts. Please see response to L-371 E for a detailed description of the process used to identify the environmentally superior route shown in the Draft EIS/EIR. Section 1.2.2 of Volume 1 of this Final EIS/EIR describes the process used for comparing new route options and revising the environmentally superior route. See response to L-295 C for locations of discussions on timber, soils, and visual resources.

BB The No Action Alternative demonstrates the types of actions which would be taken in the absence of the COTP. It also describes the reasons the COTP is preferable to the consequences of the No Action Alternative. With regard to national security, this concern principally involves reliability of power supply. The routing of the line was influenced significantly by reliability considerations. See response to comment L-306 KK.

CC The environmental benefits referred to on page 2.5-1 are the benefits of the proposed action when compared to its alternatives. These are in large part due to the Western Area Power Administration upgrade between the Olinda Substation and the Tracy Substation, and the possible deferral of new generation resources discussed in Section 1.1 of Volume 1 of the Draft EIS/EIR.

DD The current situation could not represent an alternative source of supply unless there were no electric load growth and no need for replacement of existing power generation facilities. In the COTP Draft EIS/EIR analyses of the No Action Alternative, the alternatives are compared to circumstances with and without the COTP under future conditions which are forecast to occur during the period the COTP is planned to be operational.

EE The COTP Draft EIS/EIR evaluates alternatives on a comparable basis and shows the COTP to be a lower cost alternative. Of the non-transmission alternatives with potentially less environmental impact, none would provide both increased firm peaking capacity and resource diversity. Of the transmission alternatives with potentially less environmental impact, neither provides increased reliability for the interconnected western electric power transmission system. Since increased peaking capacity, resource diversity, and reliability are all objectives of the proposed action, these factors are the basis for the elimination of these alternatives.

L-295 (continued)

FF As documented in the report "Centerline Separation Reliability Analysis for 500 kV Transmission Lines" (August 1986) by Sargent and Lundy, the COTP has documented 2,000 feet as the minimum separation from the existing AC Intertie, in non-forested areas due to potential outages caused by the impact of aircraft. For forested areas, a guideline of miles of separation had been used for routing studies. "Paralleling existing intertie lines," as used on page 2.5-7, Volume 1, Draft EIS/EIR, refers to the COTP being aligned adjacent to the two AC Intertie 500 kV lines. Since this is closer than 2,000 feet, it is infeasible from a reliability standpoint. See response to L-177 A.

GG Comment noted. Separation in forested areas has been reconsidered in certain locations based on discussions with the Forest Service. Consideration of new route options in these areas has resulted in the identification of a preferred route that is closer to the existing Intertie lines. The new route options are discussed in the Supplement to the Draft EIS/EIR. See also response to L-295 B.

HH In 46 FR 18027-18039 Council on Environmental Quality's "Forty Most Asked Questions Concerning CEQ's NEPA Regulations," item 2A indicates that the agencies shall include or examine all reasonable alternatives to the proposal. Reasonable alternatives include those that are practical or feasible from a technical and economic standpoint and those based on common sense. We believe that the non-transmission alternatives discussed in the Draft EIS/EIR do not meet the technical or economic tests of feasibility or practicality when compared to the preferred alternative. See response to L-295 EE.

L-295 (continued)

FS Comments on DEIS, COTP, page 4.

Volume 1, Section 3.0, Affected Environment

II Fig. 3.0-1. If identification of endangered aquatic species is for Red Band Trout, then Tate, Racoon and Bull Creeks should also be shown. Two goshawk territories are missing and may be overshadowed by spotted owl territories.

JJ

KK Fig. 3.0-2. There are no managed spotted owl territories north of Highway 89 in the Dead Horse area or southeast of Dutchman Peak. Red Band Trout are found in Racoon, Bull, Tate, Sheepheaven and Swamp Creeks. The Butcherknife Spotted Owl Territory, MC-6, is not shown. The Deer Creek spotted owls are not part of the forest matrix. There is a developed recreation site at Iron Canyon Reservoir.

LL

MM

NN

OO Fig. 3.0-3. Two goshawk territories are not shown north of Dead Horse Ridge.

PP The Medicine Lake Road is not shown, which is a Forest Service designated scenic road.

QQ Fig. 3.0-4. Most of the Pit River is a designated Bald Eagle use area with several known nest sites

RR Fig. 3.0-5. There is no matrix spotted owl territory as shown at the north end of the map.

SS pg. 3.1-18. What is the current status and importance of the KGRA at Glass Mountain?

TT pg. 3.1-22. There are Red Band Trout in all the creeks listed above and also possibly in Trout Creek.

UU pg. 3.1-23. The Grizzly Peak to Redding Route does not cross Kosk Creek according to project maps.

VV pg. 3.1-24. There needs to be a more detail description of the vegetative resources. What is the definition of tall vegetation?

WW pg. 3.1-27. The Grizzly Peak to Redding Route crosses prime bear habitat.

XX pg. 3.1-29. The Forestry resource needs to discuss the timber industry as it relates to potential yields, land values and land management. As presently written it just describes the vegetation.

YY pg. 3.1-32. Spelunking is a significant recreation use in the lava flow areas.

ZZ pg. 3.1-39. All maps indicate that the Grizzly Peak to Redding route is west of the lookout. There is no mention of the vista on the Tionesta Road. Also, we would characterize the Pit River country as extremely rugged and steep.

A1

B1

C1 pg. 3.1-39. There is no discussion of Forest Service Visual Quality Objectives.

D1 Table 3.1-7. South Fork Mt. is on BLM land.

II The identification for special status aquatic species includes the redband trout. The identification of habitat for the redband trout on Tate Creek was inadvertently left off of Figure 3.0-1 in the Draft EIS/EIR, although it is included for this same geographical area on Figure 3.0-2. Raccoon and Bull Creeks were not considered in the special-status aquatic species analysis because they do not contain "essential habitat" for redband trout in the vicinity of the transmission line based on USFS maps in the USFS Redband Trout Management Plan.

JJ This is correct. The two goshawk territories were known and analyzed, but were overshadowed on the map by the spotted owl territory.

KK These spotted owl territories were mistakenly identified on the maps as USFS network territories. Their non-network status was recognized in other analyses. See response to L-345 D.

LL Regarding Raccoon, Bull and Tate Creeks, see response to L-295 II. Redband trout are indicated in the Draft EIS/EIR on Figure 3.0-2 for Swamp Creek. The proposed transmission line routes do not cross Sheepheaven Creek.

MM We did not receive information on the MC-6 spotted owl territory in our original contacts with USFS. A preliminary analysis indicates that the centerline of the preferred route shown in the Draft EIS/EIR runs tangential to the boundary of the MC-6 territory. Thus, selection of an alignment within the 1,500-foot route should permit complete avoidance of the territory or of critical old growth habitat within the territory. If the preferred route crosses the territory, a careful analysis should be made of the existing amounts of old growth and the effects of clearing along the proposed line on spotted owl habitat. Route adjustments to protect old growth in this territory would be closely coordinated with protection measures for owl territory MC-2.

The Deer Creek territory was incorrectly shown on maps as a USFS network territory. Its correct status has been recognized in other analyses.

NN Figure 4-2E of Volume 4A of the Draft EIS/EIR shows that there are two recreation sites at Iron Canyon Reservoir. Figure 3.0-5 in Volume 1 of the Draft EIS/EIR shows one of the recreation sites within one mile of a route segment.

OO These territories are overlain by the spotted owl area. They were considered in the analysis, but no impacts will occur. See also response to L-345 D.

PP The Medicine Lake Road or Highway was not mapped as a "designated scenic road", because no formal designation appears in available Forest Service documentation. However, the visual analysis in the Draft EIS/EIR considered impacts to views from this road, as noted in the response to L-3 E.

L-295 (continued)

QQ The map was incorrect. All of the area shown as "other sensitive raptor use area" should have shown as "bald eagle use area." This was addressed correctly in the text. This correction has also been noted in Section 1.1.3 of Volume 1 of this Final EIS/EIR. Bald eagle impacts in the Pit River area are analyzed in detail in the Biological Assessment.

RR See response to L-295 KK.

SS According to Randy Sharp, geologist and environmental coordinator in charge of lands and minerals for Modoc National Forest, two production wells have been drilled in the Glass Mountain KGRA by two different companies and more production wells and test holes are expected, along with a limited number of small to moderate sized (200 MW) production facilities in the next five to ten years (personal communication with D. Laney, March 25, 1987). It is unlikely that the KGRA will interconnect with the COTP because of the very high cost of transformers and other equipment that would be needed.

TT The presence of redband trout in Trout Creek near segment N-6W is noted in the Draft EIS/EIR on Figure 3.0-2, although the route does not cross the creek in this segment. The route does cross Trout Creek in Segment N-4J (Alternative A), but this is several miles downstream of the area identified by the Forest Service as essential redband trout habitat. See also response to L-295 LL.

UU The preferred route shown in the Draft EIS/EIR did not cross Kosk Creek. The optional route segment N-7H2 shown in the Draft EIS/EIR crosses Kosk Creek. The new Hearst route option in the Supplement to the Draft EIS/EIR that includes much of N-7H2 also crosses Kosk Creek.

VV "Tall Vegetation" is defined as being comprised of species exceeding about 25 feet in height, at maturity, based on conductor clearance requirements for vegetation on rights-of-way. Vegetation resources are adequately described in Section 3.4 of Volume 2A of the Draft EIS/EIR. Timber resources have been addressed in Section 3.5 of Volume 2A of the Draft EIS/EIR under "land use."

WW Comment noted. Mitigation measures, such as road closures, will be applied if necessary to reduce or avoid impacts to bears.

XX Please refer to the Draft EIS/EIR, Volume 1, page 4.1-23 and Volume 2A, page 3.6-1 for a discussion on these subjects. Additional analyses and discussions on forestry resources and impacts have been added to Section 1.1.4 of the Final EIS/EIR.

YY This information has been added to the Final EIS/EIR. See Volume 1, Section 1.1.3.

ZZ This is correct. The Grizzly Peak to Redding preferred route discussed in the Draft EIS/EIR crosses on the west side of the lookout on Grizzly Peak. The final preferred route also passes to the west of the lookout on Grizzly Peak.

L-295 (continued)

A1 The vista on the Tionesta Road was listed as a significant visual impact in the Environmental Consequences section of the Draft EIS/EIR; Volume 1, page 4.1-28. It was included in the visibility mapping and was considered in the impact analysis. The presence of this vista was also incorporated in the discussion of visual impacts in the Supplement to the Draft EIS/EIR.

B1 The "Pit River area" is meant to include the Flatwoods as well as rugged and steep forestlands.

C1 The Forest Service Visual Quality Objectives were discussed on pages 3.7-4 and 5 of the Data and Impact Analysis Report in Volume 2A of the Draft EIS/EIR, and were incorporated in the visual impact assessment that is tabulated in Table 3.7-1 on pages 3.7-6 through 8.

D1 This comment is correct. Table 3.1-7 in the Draft EIS/EIR has been changed to show that South Fork Mountain is located on BLM land. See Volume 1, Section 1.1.3 of the Final EIS/EIR.

L-295 (continued)

FS Comments on DEIS, COTP, page 5.

E1 pg. 3.1-55. On National Forest System lands the Forest Service will make the decision on occupancy of electronics sites.

General Comments on Affected Environment:

F1 For each resource there needs to be a better discussion of the significance of that resource and what the current management of the resource is.

G1 The maps for this section should also display the location of commerical forest lands, significant wetlands and floodplains, and sensitive view areas. Because of possible overlap, more than one map for each area would be needed.

H1 There is no discussion of fuels as a resource. This is a key resource element in determining separation and reliability for this project.

Volume 1, Section 4.0, Environmental Consequences

I1 Table 4.1-1 thru 8. There is a lot of important resource data in the tables in Volume 2A that is not summarized for comparison in these tables. Specifically, road densities and thresholds, big game habitat, raptor nesting areas, forest resource values, yield tax and RTC losses, tax benefits, and visually sensitive areas crossed. Lack of the summarized data makes alternative comparisons extremely difficult.

J1 pg. 4.1-1. There needs to be some quantified data presented on air quality for a comparison with the data displayed in the Affected Environment.

K1 pg. 4.1-10. The Universal Soil Loss Equation is not appropriate for use in Forested areas. Soils types and descriptions for National Forest System lands have been provided. These descriptions include elements on erosion hazard, mass wasting potential and compaction hazard.

L1 pg. 4.1-12. There must be a discussion of impacts to the proposed Giant Crater Lava Flow Special Interest Area.

M1 pg. 4.1-15. There must be a more indepth discussion of impacts to the water resource and fisheries. There must be an assessment of cumulative watershed impacts for this project on National Forest System lands.

N1 pg. 4.1-17. We question whether the project can avoid all areas of significant vegetation when the extent of the resource is not yet known.

O1 pg. 4.1-18. There is no McCloud National Forest.

P1 pg. 4.1-19. Present management direction for spotted owl matrix territories does not allow for any impacts to identified old growth stands if there is less than the 1000 acre minimum.

E1 Comment noted.

F1 The analysis was prepared under state (California Environmental Quality Act) and federal (National Environmental Policy Act) environmental guidelines. These guidelines were adhered to during the analyses of resource impacts and in the development of significance criteria. Mitigation measures were also developed under these guidelines. The lead agencies believe that the description of the affected environment and impacts to resources meet CEQA and NEPA requirements.

The current management of resources is shown in Figures 4.2A through 4.2G in Volume 4A of the Draft EIS/EIR. A discussion of resource management is included in Section 3.6, Land Status, of Volume 2A in the Draft EIS/EIR.

G1 Maps displaying the location of sensitive view areas are located on Figures 4-A to 4-G in Volume 4A of the Draft EIS/EIR. Maps displaying wetlands and floodplains are located on Figures E-1 to E-7 in Appendix E of Volume 3A and Figures 4-1A to 4-1G in Volume 4A of the Draft. The location of private commercial forest lands were not mapped, but all private lands in forested areas were mapped and included in Figures 4-2A to 4-2G in Volume 4A.

H1 See response to L-295 A. Fuels were not directly mentioned as a resource since it was assumed they are an integral part of the natural forest environment. A discussion of fuels has been included in Section 2.3 of the Final EIS/EIR.

I1 Data which was considered relevant for the assessment of the significance of impacts was included in the summary of impacts. All other data was not summarized in Volume 1 as it was not necessary for the comparison of impacts.

J1 Emissions of NO_x, SO_2, HC, CO, and TSP from construction equipment exhausts are presented in Section 1.1.3 of Volume 1 in this Final EIS/EIR. These estimates are based on preliminary construction activity information and EPA emission factors for heavy duty construction equipment. Because construction activities will occur in staggered phases and will be distributed along the entire length of the route, such emission sources are not expected to significantly affect ambient air quality.

Fugitive dust will be generated by vehicle traffic along dirt roads and clearing and grading operations during transmission line construction. Based on preliminary construction activity information and U. S. EPA emission factors, approximately 1,128 pounds per day of fugitive dust will be generated from construction activities along the route. Again these emissions will be spread out over the entire route and therefore, should not cause significant air quality impacts.

L-295 (continued)

K1 There appear to be two parts to this comment:

1. The Universal Soil Loss Equation (USLE) is not appropriate for use in forested areas.

2. Erosion Hazard Ratings (EHR) should be used to describe the potential for erosion, mass wasting, and compaction in forested areas.

Two criticisms are frequently made concerning use of the USLE on forested land. The first criticism is that since the USLE was developed for use on agricultural land, the value of the USLE's K (soil erodability) and C (cover) factors are often inappropriately selected for forest land. The second criticism is that the USLE does not produce accurate estimates of the amount of sediment produced by erosion.

The COTP knows of only one study which has suggested that the values selected for the K and C factors invalidate the use of the USLE for forested land (Jensen 1983). We point out that while the USLE was developed to predict soil loss on agricultural land (Wischmeier and Smith 1965), extensive work with the USLE since that time has helped to develop guidelines for selecting USLE values which are specific to forested land.

In 1985 the United States Department of Agriculture presented a paper at a Sediment Yield Workshop in Oxford, Mississippi, Estimating the Soil Loss Equation's Cover and Management Factor for Undisturbed Areas, which established methodology for the selection of C values for undisturbed land, woodland that is grazed, burned or selective harvested, and forest lands which have had site preparation treatments for reestablishment after harvest (USDA 1978). Two years later, C values were jointly developed by representatives of the Science and Education Administration (SEA), the Soil Conservation Service (SCS), and the Forest Service for southern pine forests that have had site preparation treatments after harvesting (Patric and Brink 1977). These values were later modified for application to forest lands in other climatic regions and helped solve the problem of selecting C values for forest lands.

About this same time, work was being done to determine how to estimate K values without the use of Wischmeier's nomograph. The nomograph has proved successful in assigning soil erodability factors to most of the 11,000 soil series, surface textural phases, and subsoils identified at the time, but occasionally produced values which did not agree with observed infield relationships. This was (and is) particularly true when dealing with volcanic ash-influenced soils, exposed subsoils, and forested soils of the Pacific Northwest where antecedent moisture and steep slopes compound inherently erosive soil properties and cause major erosion by forms other than rill and sheet. C. S. Holzhey and M. J. Mausbach (1977) used the latest in USDA soil taxonomy research (USDA 1985) and were able to organize soil erodability factors by categories higher than the series level, demonstrate ways in which pedologic information can be used to supplement K values in evaluating potential erosions hazards, and

L-295 (continued)

K1 (cont.)

examine variability within soil series to determine ways in which the nomograph can be used to account for deviation from generalized performance. This helped to solve the problem of selecting K values for atypical forest soils.

Work done at the USDA West Technical Service Center (WTSC) in Portland, Oregon, and the University of California, Davis has further refined the techniques which were developed in these early studies for selecting C and K values for use on forested land. The conclusions of this work are reflected in the WTSC Note 10 description of the capabilities and limitations of the USLE: "The USLE is useful in making estimates of erosion from disturbed forest land. It can estimate erosion from skid trails, temporary roads, landings, burns, grazing, game, and recreational areas, and planting sites on forested lands."

As for the criticism that the USLE does not produce accurate estimates of sediment production, the reader should remember that Page 4.1-11 of Volume 1 of the Draft EIS/EIR quotes W. H. Wischmeier and D. D. Smith, developers of the USLE as saying, "The USLE is an erosion model designed to compute long-time average soil losses from sheet and rill erosion under specified conditions. It is also useful for construction sites and other non-agricultural conditions, but it does not predict deposition and does not compute yields from gully, streambank, and streambed erosion" (USDA 1978). The discussion of soil impacts is also prefaced by a statement which indicates that the USLE was not utilized in the Draft EIS/EIR to develop sediment production figures for COTP alternatives or route segments.

These comments were made for two reasons:

- "The USLE is an empirical formula in which sediment yield from sub-acre test plots is normally defined as "erosion" or "soil loss". The computed soil loss from large areas is usually greater than the sediment yield from the same area, and the larger the area, the greater the discrepancy between computed soil loss and sediment yield." (USDA 1983)
- COTP staff prepared the earth resources section with the objective of describing impacts to, rather than from, soil.

This is not meant to imply that a method does not exist for computing sediment yield using USLE soil loss estimates. As early as 1983, the Soil Conservation Service attempted to use the USLE to develop a sediment delivery ratio to estimate what proportion of displaced soil can be expected to reach adjacent streams (Dissmeyer 1983), and it was reported recently that "SCS has used this method extensively for many years with success. It is well suited to estimating current sediment yield and predicting the effect of land treatment and land changes on future sediment yield." (USDA 1983). 1/

L-295 (continued)

K1 (cont.)

1/ The SCS equation to calculate sediment yields is as follows:

$$Y = E(DR)$$

Where

Y = annual sediment load (tons/unit area)
E = annual gross
DR = sediment delivery ratio

Unfortunately, to accurately predict sediment yield all available methods and models require site specific information (the role of topography and vegetation, distance to area streams, etc.), information which will not be available until the COTP begins more in-depth planning prior to construction. Thus, the use of the USLE in the Draft EIS/EIR was limited to estimating the amount of soil displaced rather than its final disposition. To attempt to do more than this with any method would have produced highly speculative results.

Finally, it should be noted that no other method -- including erosion hazard ratings -- predicts soil movement on forested land as accurately as does the USLE. Studies have shown that "Erosion hazard rating systems .... are not adequate for estimating erosion potential on lands where timber is to be harvested" (Dodge et al 1976). Datzman (1978) found that as much as 63 percent of the variance between actual and estimated erosion on forested land can be explained by inadequacies in the erosion hazard rating system. Rice and Datzman (1981) suggest that one reason why erosion hazard ratings do not fit erosion data is operator variability. In a later study (Rice and Grade 1984) these same researchers question "whether it is even reasonable to expect much accuracy or precision from a single erosion-hazard rating that is expected to predict the aggregate effect of any type of disturbance on all erosional processes."

It was suggested in this later study that using four different erosion hazard rating equations may be the way to obtain the most accurate erosion estimates: equations for surface erosion from tractor-yarded areas, mass erosion from tractor-yarded areas, surface erosion from cable-yarded areas, and mass erosion from cable-yarded areas. However, after measuring 100 variables from 720 cells on 102 plots the study concludes: "Most harvest areas in Northern California are quite complex geomorphically, vegetatively, and edaphically. By attempting to lump such diversity into a single expression of hazard, we may have "averaged out" important site indicators of hazard." It is further stated that the "economic and political circumstances in California will probably militate against carrying out a study of the size necessary to develop and verify an EHR in which much confidence could be placed .... we lack the scientific insights to develop a usable model which, based on empirical data, closely mimics the actual physical processes."

Although no empirical method yet developed can predict the mass wasting of forested granitic terrain which results from subsurface drainage (Durgin 1984) and which is described in the "geologic hazards" section of the Draft EIS/EIR, the USLE can and has been successfully applied to the prediction of erosion from the overland flow of water on forested land. The COTP does not contend that the USLE is perfect for this purpose or that erosion

L-295 (continued)

K1 (cont.) hazard ratings should not be used, only that the USLE works in many cases as well as, if not better than, EHR and therefore should not be abandoned.

L1 See response to L-3 D.

M1 Additional information has been analyzed concerning potential impacts to downstream beneficial uses, including water resources and fisheries. This information is summarized in Section 1.1.4 of Volume 1 of this Final EIS/EIR. The information indicates that there will not be cumulatively significant impacts to downstream beneficial uses.

N1 "Significant vegetation" is defined as the unique and sensitive plant communities identified in Table 3.4-4 of Volume 2A of the Draft EIS/EIR. On the preferred route, these constituted wetlands, riparian vegetation, vernal pools, and old-growth forest. Project staff is committed to avoid these communities during siting of the 200-foot wide right-of-way within the 1,500-foot wide route, based on detailed field inventories being conducted prior to final engineering design.

O1 A correction has been included in Section 1.1.4 of Volume 1 of the Final EIS/EIR. The correct reference is to the Modoc National Forest.

P1 Comment noted.

L-295 (continued)

"S Comments on DEIS, COTP, page 6.

Q1 pg. 4.1-19. Road density is a major concern, especially in key wildlife habitat, yet there is no discussion of the present situation or consequences of this project.

R1 pg. 4.1-23. Under land use there must be a discussion of potential yield losses to the National Forest affected. The value of that loss must also be discuss.

S1 pg. 4.1-23. Recreation should be discuss as a separate resource and not as a part of the visual resource.

T1 pg. 4.1-23. There needs to a discussion of impacts from proposed new road construction. What design standards will be used? Will roads be used year-round, and if so, what type of surface will be required?

U1 pg. 4.1-25. What is the impact to future use of the Grizzly Peak Lookout as it relates to wildland fire detection?

V1 pg. 4.1-26. Somewhere in the document there must be a map displaying the visually sensitive area on public lands. This should include all developed recreation facilities affected, not just those within one mile of the proposed routes. Views from some vista points more than one mile from the routes are affected.

W1 Pg. 4.8-1. We do not believe that visual impacts to scenic highways and rivers are irreversible. The following resource losses should be identified as

X1 irreversible: Soil losses from erosion and mass wasting, Potential yields of sawtimber for the life of the project, loss of wildlife due to death or displacement, loss of archaeological sites impacted by the project.

Y1 pg. 4.8-2. We define irretrievsble as not recoverable for the life of the project. Loss of topsoil is, for all practical consideration, irreversible.

Z1 The following resources should be identified as irretrievable: loss of tall vegetation within the right-of-way for both transmission lines and access roads, loss of wildlife habitat for species dependent on tall vegetation, reduction in visual quality in areas of retention and partial retention on National Forest System lands, loss of jobs in the timber related industries of northern California.

Volume 1, Section 5.0, Mitigation Measures,

A2 pg. 5.5-1. There must be a description of what the minimum design standard for roads will be. Permanent roads will require surfacing for dust abatement and erosion control.

B2 pg. 5.1-2. Construction of new access roads will be minimized and use of existing roads will be maximized. Road densities on public lands will not exceed the existing density or 1.5 miles per acre, whichever is less.

Q1 These impacts are discussed in the Draft EIS/EIR, Volume 1, page 4.1-20 to 4.1-22. They are discussed in more detail throughout the Data and Impact Analysis Report in Volume 2A of the Draft EIS/EIR.

R1 Timber yield losses are discussed in Section 3.6 and presented in Tables 3.6-4 and 3.6-5 of Volume 2A of the Draft EIS/EIR. Potential long-term yield losses for the affected National Forests were calculated and are described in Section 1.1.4 of Volume 1 of this Final EIS/EIR. The calculations show that the long-term yield losses will not be significant.

S1 The discussion of visual and recreation resources was combined for clarity and understanding. For example, northern Alternative A crosses in the foreground of the Cattle Camp Campground. The COTP landscape architects who evaluated the potential impacts to visual resources along alternative routes included impacts to recreation in their analysis.

T1 Access roads will be designed in accordance with the applicable standards. Forest Service standards will be used where appropriate. Access roads will be planned during the engineering and construction phase of the COTP. See response to L-295 A2.

U1 The COTP will have little impact on the future use of Grizzly Peak Lookout as it relates to wildland fire protection. The lookout is located on the top of Grizzly Peak at an elevation of approximately 6,270 feet. The preferred route in the Draft EIS/EIR crosses about one-half mile west of the lookout at elevations ranging from about 5,500 to 5,800 feet. The distance of the line from the lookout and variable elevations of the transmission towers should not detract from siting a wildland fire.

V1 See responses to L-3 B, L-295 C1, and L-309 K1.

W1 Visual impacts to scenic highways and rivers, the Pacific Crest trail, and crossings within 1.2 miles of residences have been removed as an irreversible commitment of resources.

X1 Soil loss is irretrievable. See response to L-295 Y1. All the other resource losses which are listed as irreversible in this comment are identified as such on page 4.8-1 of the Draft EIS/EIR.

Y1 The development of topsoil which is lost during construction will not be replaced through natural processes during the life of the Project. Therefore, loss of topsoil will be irretrievable.

Z1 Comment noted. See response to L-295 W1 and Section 1.1.4 of Volume 1 of the Final EIS/EIR. Some of these impacts will be mitigated by the COTP's concept of avoiding clearcuts in the right-of-way where possible.

A2 Construction standards for access roads will be included as part of the Forest Service permit application and part of the construction plans and specifications. Specific USDA Forest Service requirements will be addressed in those documents. Road construction standards for the COTP are included in Section 1.5 of the Final EIS/EIR.

L-295 (continued)

B2 As part of the normal review process for an easement and Special Use Permit on National Forest lands, the Project Manager is presently coordinating with Forest Service officials and transportation planners to site any new access roads so that they do not conflict with existing policies or plans for future roads. The coordination described above will ensure that new access roads are constructed only when necessary and that road densities do not exceed the limits prescribed by regulation.

L-295 (continued)

FS Comments on DEIS, COTP, page 7.

C2 pg. 5.1-6. There must be a distinction between dispersed recreation areas and developed sites. Where the route crosses visually sensitive areas on public lands there will be mitigation measures to reduce the impacts. Specific actions were described in our previous comments and include use of tublar towers, painting of towers and use of nonspecular conductors.

D2 pg. 5.1-8. No activities will be allowed on active slide areas on public lands. In those areas where high erosion hazards and possible mass wasting are suspected, a detail geotechnical/soils investigation will be required prior to approval of the final right-of-way location.

E2 pg. 5.1-9. Forest Service Best Management Practices must be identified as being implemented for this project on National Forest System lands. Applicable BMP's have already been provided by the Forest Service.

F2 pg. 5.1-9&10 Eliminate wording that states "as necessary", "as soon as practical", "as possible" and "to the the extent practical". On public lands a comprehensive erosion control plan will be required. Specific methods to reduce impacts to soils will be required as outlined in Forest Service BMP's.

G2 pg. 5.1-11. If paleontological resources are found on National Forest System lands, the appropriate agencies will take action, and the participants will be required to cease actions in the area.

H2 pg. 5.1-11. On National Forest System lands the streamside management zones vary depending on the significance of the watershed. This zone may be greater than 100 feet and it may be less.

I2 pg. 5.1-11. Change "should be" to will be on items number 3 and 4.

J2 pg. 5.1-12. Change "should be" to will be on item number 5.

K2 pg. 5.1-12. A comprehensive vegetative management plan will be required on National Forest System lands.

L2 pg. 5.1-13. Item number 7 is a mitigation measure that prescribes the development of mitigation measures. The possible T&E and sensitive species are already known and our previous comments included specific mitigation for these.

M2 pg. 5.1-16. There must be specific actions taken to protect hikers on the PCT during the construction of this project.

N2 pg. 5.1-16&17. There is no indication as to where the sensitive viewpoints and visually sensitive areas are. Darkening of towers should also be use in these senstive areas.

O2 Mitigation Measures, General. A list of required mitigation measures for this project, where it crosses National Forest System lands, was included with our previous comments. Those requirements will be incorporated into any authorization for a right-of-way issued by the Forest Service.

C2 See response to L-295 O. The specific visual mitigation measures detailed in your previous comments were 1) use nonspecular conductor, 2) use of tubular structures, and 3) darkening towers to blend with surrounding environment. Section 1.1.5 of the Final EIS/EIR states that tower design, nonspecular conductor, unobtrusive colors for substation and communication sites, and opaque insulators to reduce glare were adopted as mitigation for visual resources. Further, a mitigation measure has been added which states that darkened tower steel will be used where it can be expected to reduce visual impacts.

D2 Mitigation measure B.1 on page 5.1-8 has been reworded to state, "Additional measures are needed where high erosion hazards and possible mass wasting are suspected, such as in the Kosk Creek, Alder Creek, and Grizzly Peak areas. Construction of new roads will be carefully planned to avoid undercutting slopes, unnecessary vegetation clearing, and loading of unstable slopes with fill material. Cut and fill operations will be minimized in active slide areas. Spoil material will be disposed of according to methods approved by the appropriate land management or regulatory agencies. Additional mitigation will include avoidance of or helicopter construction in those cases that cannot otherwise be mitigated." (See measure II.B.1 in Section 1.1.5 of the Final EIS/EIR.) Detailed investigations of sensitive areas will be conducted as described in mitigation measure II.A.4 in Section 1.1.5 of the Final EIS/EIR. In addition, the Forest Service Best Management Practices (BMP's) will be implemented to reduce soil erosion.

E2 Forest Service BMP's will be implemented on National Forest System lands.

F2 Comment noted. As described in mitigation measure II.A.4 in Section 1.1.5 of Volume 1 of the Final EIS/EIR, erosion and sedimentation problems will be evaluated and cooperating agency personnel will be involved in this process. Forest Service BMP's will be implemented to reduce soil erosion.

G2 It is implicit in the two paleontology mitigation measures (II.C.2 and 3 in Section 1.1.5 of Volume 1 of the Final EIS/EIR) that in the event such fossil resources are found, and if the setting in which they are found indicates a direct relationship with human activity, an appropriate action would be to cease activities in the area until the appropriate authorities could be notified and effective mitigating actions initiated.

L-295 (continued)

H2 Comment noted. The buffer zone may vary depending upon the sensitivity of the watershed and soil type. The buffer zones are based on the side slope adjacent to the watercourse, typically extending to the first point of slope break. A minimum 100-foot buffer zone is assumed for analytic purposes. This mitigation measure (C.2 page 5.1-11, Volume 1 Draft EIS/EIR) has been revised to recognize the need for flexibility by stating, "A buffer of undisturbed vegetation shall be maintained along all lakes and streams. At a minimum, the buffer shall extend to the first point of slope break. Additional needs for buffers will be coordinated with the appropriate land management and regulatory agencies." (Measure III.A in Section 1.1.5 of the Final EIS/EIR.)

I2 Mitigation measure C.3, page 5.1-11 of the Draft EIS/EIR, has been revised to read, "Construction of new access roads will be avoided in stream drainages which support special status aquatic species. Where access road construction is determined to be necessary in those drainages, resource management agencies will be consulted to develop specific mitigation measures. Mitigation measure C.4, page 5.1-11, has been revised as requested. These are listed as measures III.G and B in Section 1.1.5 of the Final EIS/EIR.

J2 Mitigation measure C.5, page 5.1-12, has been revised as requested. It is listed as measure III.C in Section 1.1.5 of the Final EIS/EIR.

K2 See response to L-295 L.

L2 Exact locations of all sensitive species, especially plants, along the finally selected route will not be known until the completion of the biological surveys.

A biological assessment and site surveys are necessary to comply with Section 7 of the Endangered Species Act. It is expected that the Western Area Power Administration will initiate a Section 7 Consultation with the U. S. Fish and Wildlife Service when those activities have been completed. Appropriate mitigation will be developed in consultation with the U. S. Fish and Wildlife Service. See response to L-295 O2 for a discussion of the previously mentioned mitigation.

M2 Hikers along the Pacific Crest Trail will be protected as evidenced by mitigation measure VI.D.1 in Section 1.1.5 of Volume 1 of this Final EIS/EIR. Specific actions taken to protect hikers will be the subject of discussions with the individual Forests and Ranger Districts during the permit process.

L-295 (continued)

N2 The visibility of the alternative transmission segments from sensitive viewpoints was mapped, using the VIEWIT computer program. The viewpoints represent areas in which viewers are likely to be particularly concerned about visual amenity because of land use or viewer activity. Five classes of viewpoints were included in the analysis:

Residential areas: LUDA polygons were coded as 11 - Residential; 111 - Urban Residential; and 112 - Rural Residential; and were included in the visibility analysis.

Parks and recreation areas: Viewpoints were identified at developed recreation sites and other areas where viewers concentrate in parks and recreation areas. These areas were identified from a variety of sources and include National Forest recreation sites, Bureau of Land Management recreation sites, National Parks, National Monuments, National Recreation areas, Army Corps of Engineers recreation sites, state parks, county parks, local parks, and recreation sites developed by utilities in association with water resource projects.

Scenic highways: Viewpoints were selected at one-mile intervals along designated and eligible state and local scenic highways.

Wild and Scenic Rivers: Viewpoints were selected at one-mile intervals along river reaches that are designated as part of the state or national wild and scenic river systems, as well as river reaches that have been determined to be eligible for such designation.

National Trails: Viewpoints were selected at one-mile intervals along trails that are designated as part of the National Scenic Trail System or that have been included in the National Recreation Trail system.

See also responses to L-3 B, L-295 C1, L-309 K1, and L-295 C2. Information has been added to Section 1.1.5 of Volume 1 of this Final EIS/EIR that provides more detail on the expected locations for the mitigation measures, which include use of darkened steel for towers.

L-295 (continued)

O2 In response to the Forest Service's suggested mitigation measures, the following are summarized from Section 1.1.5 of Volume 1 of this Final EIS/EIR:

- Biological surveys for sensitive plants and threatened and endangered plant species are to be conducted for the preferred route - the commentor is referred to response L-295 L2.

- Archaeological reconnaissance as outlined in the MOA between TANC, Western, the Oregon and California State Historic Preservation Officers and the Advisory Council on Historic Preservation will be conducted according to the specific steps in that agreement.

- Forest Service Best Management Practices are adopted as mitigation on National Forest System lands for this project.

- Construction and maintenance activities will be limited in critical habitat areas. If there are construction, operation or maintenance activities that must take place within these habitat areas during key breeding or other important activity time frames, they will be coordinated with the State Fish and Game Departments, the Bureau of Land Management and the USDA Forest Service. The species and critical habitat areas are listed below:

Sandhill Crane (breeding)	Antelope (winter range)
Golden Eagle (breeding)	Bald Eagle (breeding & wintering)
Goshawk (breeding)	Prairie Falcon (breeding)
Osprey (breeding)	Spotted Owl (year-round)
Swainson's Hawk (breeding)	Antelope (kidding areas)
Deer (key winter range)	Deer (key fall holding areas)
Sage Grouse (strutting areas)	Deer (key fawning areas)

- If critical habitat is lost as a result of the COTP, mitigation will conform with the U. S. Fish and Wildlife Service Mitigation Policy. The need for such mitigation will be determined upon consultation with the State Fish and Game Department, the U. S. Fish and Wildlife Service and State and federal land management agencies.

- The need for off-site mitigation for loss of productive timberland will be determined through consultation with the California Department of Forestry and the USDA Forest Service. This activity will be coordinated with the State Fish and Game Departments and land management agencies to ensure that high value wildlife brushlands and hardwood areas are protected. See Section 1.1.5 in the Final EIS/EIR.

L-295 (continued)

O2 (cont.)

- A vegetative management plan will be prepared. See response to L-295 L.
- Mitigation measure 4, page 5.1-13 of the Draft EIS/EIR is revised to state: "In areas where there is an extremely high potential for collisions with the shield wire by waterfowl or sensitive raptors, the appropriate wildlife management agencies will be consulted to determine the need for marking or other mitigation. Following those consultations, the shield wire will be marked where appropriate to reduce the hazard. This may be appropriate in the Newell/Tulelake area, Pit River, Sacramento River, and some areas of the Delta." See Section 1.1.5 in the Final EIS/EIR.
- For visual mitigation measures, see response to L-295 C2.

L-295 (continued)

FS Comments on DEIS, COTP, page 8.

Volume 1, Section 7, Summary of Public and Agency Consultation

P2 pg. 7.1-2. The Forest Service presented numerous concerns at both formal agency meeting and informal meeting. None of our concerns are displayed in this summary or anywhere else in the document. We do not believe that our concerns have been adequately considered by the specialists.

Volume 2A, Section 2.0 Routing Investigation Report

Q2 pg. 2.4-5. We strongly object to the discussion and analysis that resulted in the elimination of the N-10M alternative. We were never consulted during the preparation of the Sargent and Lundy Report even though that report used fuel modeling and fire analysis for its basis. The Forest Service has never stated that fuels management to improve reliability was not feasible or would require modification to forest plans or preclude other management activities. Forest fires have not been a significant cause of line failure in the N-10M route. There has been only one fire in over 15 years of operation of these lines that has caused an outage. That fire (Pondosa) occured during a series of worst case events (extreme drought, extensive bug infestation and limited suppression resources due to numerous other major fires in northern California) that have a very low probability of occuring again. Much of the N-10M route is located in lava flow areas that do not even support a forest type. These areas pose little threat to the lines from forest fires.

Volume 2A, Section 3.0 Data and Impact Analysis Report

R2 pg. 3.6-17. We do not agree that there is a significant impact to crossing TPZ lands in all cases. It cannot be assumed that all TPZ lands are prime forestlands, as implied by the statement on significant impacts.

S2 pg.3.6-28. This is the only discussion in the document of fire fighting organization. We have not been consulted concerning fire suppression capabilities or to determine what response in a timely manner means in quantitative terms. Fire suppression capabilities should be considered in assessing the reliability of the proposed line.

Volume 3A, Appendix E

T2 Fig. E-4. Map does not show the route toward Grizzly Peak.

P2 The lead agencies believe that the substantive concerns of the Forest Service have been addressed through this Final EIS/EIR and through consultation leading to the presentation of this Final EIS/EIR.

Q2 Comment noted. The separation requirements from the existing AC Intertie in forested areas has been reconsidered based on discussions with the Forest Service. These discussions led to the identification of new route options that are presented and analyzed in the Supplement to the Draft EIS/EIR. It should be noted that one fire in 15 years that would cause an outage of all three lines would be a serious concern for the COTP. The multiple fires throughout the COTP study area in the Fall of 1987 also raised the possibility that the frequency of these severe fire danger conditions is higher than historical data may indicate. See also responses to L-295 B and L-295 S2.

R2 Timber Production Zones (TPZ) are parcels which have been assessed for growing and harvesting timber as the highest and best use of the land. This is discussed in Section 51110 of the (California) Government Code. The State of California in findings for both the Z'Berg-Nejedly Forest Practice Act of 1973 and the California Timberland Productivity Act of 1982 declared that the forest resources and timberlands of the state are among the most valuable resources of the state. Neither act mentions whether TPZs must be prime timberland or highsite quality, only that it be capable of supporting a sustained crop of timber. We do not believe that because all TPZs may not be "prime timberland" that it should diminish the importance the state of California has placed upon these lands.

S2 See Section 1.2.2 of this Final EIS/EIR under "Changes to the Project Preferred Route" for a summary of the results of discussions with the Forest Service on fuels management and fire response plans.

T2 This is correct. The route segment extending east from McGill Creek northeast toward Kosk Creek was incorrectly included in the Draft EIS/EIR on Figure E-4 and identified as the preferred route. The Grizzly Peak route should have been included instead. A revised Wetlands and Floodplains Report that reflects the final preferred route is included in Section 1.5.5 of Volume 1 of this Final EIS/EIR.

L-295 (continued)

U2

Fuels Management Analysis
for
Proposed "Eastern Corridor" Transmission Line
and Existing Malin-Round Mountain Right-of-Way

Introduction

A concern of the California-Oregon Transmission Project is the risk of outage of 500 KV lines in the "eastern corridor" due to forest fire. The two existing Round Mountain-Malin lines have a centerline separation of 150 feet. Current alternatives for location of the new line call for wide separation from the existing right-of-way to reduce the risk of simultaneous outage.

As of 1979, there were 507 special use permits issued by the Forest Service in California for above ground powerlines totaling 2,600 miles in length. Right-of-way maintenance for fuels hazard reduction totaled an average of 23,486 acres annually,[1] with mechanical and manual treatment methods being used on all but 289 acres.

The purpose of this report is to address fuels management strategies as a means of providing reasonable security against simultaneous outage due to wildland fire.

Fire History

The Pondosa Fire is cited in the Sargent and Lundy report on separation reliability as being responsible for outages of the existing lines in 1977. As noted by Carl Skinner, Fuels Management Officer on the Shasta-Trinity National Forest, untreated accumulations of logging slash contributed significantly to fire behavior and resistance to control on this incident. This was combined with a rare 2 year drought and ignited by a wide spread dry lightning storm. Conflagrations produced by thunderstorms are often the result of mulitple ignitions causing several fires that eventually burn together. These storms cover vast areas as cells build and move around. As evidenced by the Pondosa, Scarface, and several other large fires, the lightning storm that saturated the Shasta-Trinity and Modoc National Forests in early August 1977 produced virtually simultaneous ignitions covering several hundred square miles.

The Scarface Fire on the Modoc National Forest occurred during the same period of time as the Pondosa Fire and burned 79,900 acres. It burned in an elongated pattern parallel to and east of the existing lines for 24 air miles, in an area from Mayfield Springs to Damons Butte. The fire burned within 1 mile of the lines in the Mayfield Springs area. The mean distance from the lines was 5 miles. No outages were reported as being a result of this fire. Due to predominately southwesterly wind conditions, fires in the Scarface Burn area typically spread in a pattern paralleling the existing right-of-way.

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[1] USDA, Forest Service, Utility Rights-of-Way Maintenance (Pacifc Southwest Region Environmental Assessment, 1979), pp. 6-7.

U2

The comments on the centerline separation reliability analysis for the Malin-Round Mountain 500-kV transmission line have been assessed and incorporated into the review of alternative routes through Forest Service areas. Through discussions with the Forest Service, a final preferred route has been identified that reflects changes resulting from consideration of fire management techniques. See also responses to L-295 R, L-295 U, and L-295 FF.

L-295 (continued)

U2

Fuels Management (Hazard Reduction)

Fuels management is the manipulation and reduction of fuels to meet protection and management objectives while preserving and enhancing environmental quality. Fuels are either live or dead vegetation and occur naturally or result from human activities such as timber harvesting. Fuels modification practices have long been used by the Forest Service and other land management agencies as a means of reducing amounts of flammable fuels to aid fire control. Since 1957, the establishment of fuelbreaks has been one of the most widespread forms of fuels modification. As early as 1972, there were approximately 1,850 miles of fuelbreak in California wider than 100 feet.[2] A fuelbreak is generally defined as a strategically located strip or block on which a cover of dense, heavy or flammable vegetation has been permanently changed to lower fuel volume or flammability.

Widths of fuelbreaks are determined by several factors including vegetation, topography, and visual concerns. Several studies have produced data on minimum widths needed to protect firefighters from ignited vegetation. This data and experience in the field indicate 200-300 feet as minimum widths. These widths are often expanded on ridges and saddles, and are varied to blend with the landscape.[3]

Fuelbreaks can allow safe and quick access for suppression forces, and have been used many times to stop wildfire during severe fire weather conditions. With adequate fuelbreak systems, lateral spread of large fires can be contained and there've been several instances where they've helped save resources, structures and even lives. The following are only a few examples:

In 1982 the Gypsum Fire on the Cleveland National Forest consumed 16,800 acres and burned under a large powerline without causing damage to the line. A similar event occurred on the same forest in 1979 during the Paseo Fire.[4]

Fire advance was stopped by a portion of cleared powerline right-of-way during the 23,000 acre Twin Fire on the Modoc National Forest in 1978, without damage to the lines.

In 1971, on the Romero Fire near Santa Barbara, 12 miles of the East Camino Cielo fuelbreak served as a final control line and played a key role in saving the Santa Ynez River Watershed, which supplies water to the entire Santa

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[2] Liale R. Green, Fuelbreaks and Other Fuel Modification for Wildland Fire Control (Agric. Handb. 449, Washington DC: USDA, Forest Service, 1977), p. 9.

[3] Green, p. 15.

[4] E. Stout, Cleveland National Forest Dispatcher, personal communication, 1987.

L-295 (continued)

U2

Barbara south coast. In the same year, use of the Foothill fuelbreak between the cities of Upland and Cucamonga was credited for saving several homes during the Meyers fire.

On the Cleveland National Forest in 1970, the Pine Valley fuelbreak was backfired during winds of 40 miles per hour saving 30 homes in Pine Valley from an advancing fire. During the Laguna Fire, in San Diego County, the Corte Madera and Japatul fuelbreaks allowed engine crews to save scores of homes.

The International and Julian-Sunrise fuelbreaks in San Diego County have frequenty been successful in stopping fire advance, often under severe weather and fuel conditions.[5]

Conclusions

Fuelbreaks, when used in conjunction with suppression forces, have often been effective in slowing or stopping wildfires under severe conditions, but generally not under the most extreme conditions. However, even during extreme fire weather, they have been useful for checking lateral spread along the break and occasionally in stopping head fires during pauses allowing for favorable winds. Unmanned fuelbreaks have seldom stopped intense, rapidly moving fires advaning head on into the break, nor were they intended to do so. The key to fuelbreak use is it's combined use with suppression resources and other fuels modification practices. This would also be key for right-of-way separation. Given similar conditions as were experienced during the Pondosa and Scarface fires, reliance on centerline separation, without consideration for suppression, would not significantly reduce risks over that of an unmanned fuelbreak. This is due to the fact that lightning storms in the area of the "eastern corridor" move over vast areas and produce multiple multiple fire starts.

If lines are to be separated, two additonal problems arise with regard to their security. Of first concern would be the remaining heavy and hazardous fuels between the lines. The wider the distance between rights-of-way, the greater the volume of these fuels - as well as the number of lightning fires which could be expected to occur there. Because of the "shotgun" pattern of multiple ignitions in the area, fires can also be expected on the other sides of each right-of-way. The Scarface Fire created a fuel type conversion by eliminating vast areas of heavy fuels east and roughly 25 miles parallel to the existing lines. The Pondosa Fire also reduced the threat of heavy fuels near its portion of the lines. Fuelbreak and road systems, which have been added since 1977, provide additional protection. Locating a new line within, or adjacent and to the west of the current right-of-way, would offer more protection from natural barriers such as Burnt Lava Flow and the East and West Lava Rims. Duplicating 1977 conditions, protection from natural barriers and openings in fuels would be decreased as heavy fuels on intervening land between rights-of-way is increased.

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[5]Green, pp. 11-12.

L-295 (continued)

U2 Second, effectivess of detection and initial attack of fires is also a function of line separation. Round Mountain and Timber Mountain Lookouts are able to observe most of the present right-of-way located on the Modoc National Forest (Round Mountain can also view several miles on the Shasta-Trinity National Forest). Fire stations at Long Bell and Dry Lake are located within 1 and 3 miles respectively of the existing powerlines. Besides increased response time with increased separation, suppression forces could also be faced with having to defend two rights-of-way simultaneously.

Recommendations

Based on the above conclusions, Modoc Fire Management recommends avoiding separation of powerline rights-of-way. To further increase the security of a common right-of-way, the following fuels management strategies are suggested:

- Maintain the right-of-way with a low cover of grass and brush and light fuel volume. Should a fire then originate or spot into the right-of-way, estimated heat intensities, and scorch and flame heights indicate a fire could pass under the lines without causing damage. Reports from fire lookouts and engine crews have shown that on the better maintained portions of the existing right-of-way, fires have often spread very little or gone out on their own prior to the arrival of crews. An additional hazard reduction treatment would be to feather back edges of the right-of-way along concentrations of heavy fuels.

- Construct an additional fuelbreak adjacent to both sides of the right-of-way that would be accessable to firefighters and equipment. These would be corridors within which vegetation has also been modified to lower fuel volume and flammibility as an aid to fire control, and would require a long-term plan for maintenance. Actual construction would vary according to site conditions. As little as 100 feet of constructed fuelbreak would be needed in areas with light fuels or natural barriers. Widths would generally not be expected to exceed 300 feet in areas with steep slopes or heavy fuel concentrations. Shaded fuelbreaks in timber stands provide very functional protection corridors and should be used wherever possible to suppress growth of brush and minimize visual impact.

Other land management activities could also be used to enhance the effectiveness of the fuelbreaks. Rangeland grazing, wildlife browsing, adjacent timber sales, stand improvement operations, fuelbreak systems and prescribed burns would all improve the effectiveness of the proposed fuelbreaks and add to the security of the right-of-way.

Prepared by:
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Big Valley Ranger District
Modoc National Forest
February 17, 1987

L-295 (continued)

U2

REFERENCES

Bacon, Warren R.; Dell, John. National Forest Landscape Management Vol.2. Ch.6. Fire. Agric. Handb. 608. Washington DC: USDA, Forest Service; 1985. 89 p.

Green, Lisle R. Fuelbreaks and Other Fuel Modifications for Wildland Fire Control. Agric. Handb. 449. Washington DC: USDA Forest Service; 1977. 79 p.

USDA, Forest Service. Utilitiy Rights-of-Way Maintenance. San Francisco, CA: Pacific Southwest Region Environmental Assessment; 1979. 91 p.

Weatherhead, Donald J. A Decision Model Identifying and Evaluating Slash Treatments. Missoula, MT: USDA, Forest Service, Equipment Development Center; 1977. 156 p.

L-295 (continued)

V2

UNITED STATES DEPARTMENT OF AGRICULTURE — FOREST SERVICE — Mt. Shasta Ranger District, 204 West Alma Street, Mt. Shasta, CA 96067

REPLY TO: 2700 Land Uses Management DATE: 2/23/87

SUBJECT: Fire Mansgement Analysis of (Draft) Sargent & Lundy report of August 20, 1987; "Centerline Separation Reliability Analysis for Malin-Round Mountain 500KV Transmission Lines"

TO: File

SUMMARY OF ANALYSIS

The Forest Service disagrees with a number of points in the draft report "Centerline Separation Reliability Analysis for the Malin-Round Mountain 500 KV Transmission Line". The report was prepared by Sargent & Lundy Engineers, Chicago and will be referred to below as the Sargent & Lundy report.

Following are the primary points in the Sargent & Lundy report with which the Forest Service does not agree. The reasons for the disagreement are discussed in the body of this report.

1. Use of the Pondosa Fire as a 1 in 15 year occurrence because it happened to fall within the 15 years since the existing lines were built.
2. Use of the rate of spread as the only significant fire behavior parameter upon which to base decisions for separation distance.
3. The extreme rates of spread used in the analysis.
4. Multiple fires as a result of lightning storms used as a basis for separation.
5. Ignoring the potential fire problem in the Flat Woods south of Big Bend in Shasta County where the proposed transmission lines run 1.5 to 2.5 miles from the existing lines. No inclusion of this area in the Sargent & Lundy analysis of the perceived fire problem.
6. The estimates of fire spread in the Sargent & Lundy report disregard most of the assumptions and limitations of the fire spread model. The spread estimates are used in an invalid manner.
7. No alternatives were explored other than transmission line separation to ensure the security of the lines. No consideration was given to fuel treatment/modification.
8. No consideration was given to the detection and suppression capabilities in the area.

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Fuels management analyses and techniques are being carefully considered in consultation with the appropriate ranger districts as a viable mitigation measure to provide a reduction in the risk of a forest fire-caused outage of all three 500 kV transmission lines. See also responses to L-295 R, L-295 U, L-295 FF, and L-295 U2.

L-295 (continued)

V2

PROJECT PROPONENTS' CONCERNS

The Sargent & Lundy report is an attempt to address the proponents' concerns for centerline separation in regards to potential common mode outages. The primary concern is to avoid a simultaneous outage of any one of the existing lines and the proposed line. The report also states that the most significant cause of common mode outages would most likely be fire based upon the experience with the Pondosa fire.

Centerline Separation Alternatives Considered

Three alternative centerline separations were considered: 1) Common right-of-way at 150 ft separation, 2) N-10M at 2.5 miles average separation and 3) 10M ALT at 8.5 miles average separation. It has been established in meetings since the writing of this report that alternative number one is not viable for reasons other than fire and will not be addressed here. The minimum separation of 2000 feet will be used referred to in this response as the minimum acceptable anywhere along the line as agreed in meetings with RMI.

Critical Time Frames

The Sargent & Lundy report states that simultaneous outages of all 3 lines within 30 minutes to 8 hours would cause widespread break-up of the electrical system in the Western states.. The project managers have stated at subsequent meetings that 4-6 hours is probably a reasonable time frame to consider. Anything less would probably not be possible due to human response times and potential human error.

Past Common Mode Outages

Of 26 common mode outages of the existing lines that occurred between 1970 and 1984 only 6 were the result of centerline separation distance. These 6 were the result of two incidents with only one of these incidents a fire (Pondosa Fire).

OBJECTIONS

Following are points in the Sargent & Lundy report with which the Forest Service does not agree and reasons for that disagreement.

1. Use of the Pondosa Fire as a 1 in 15 year occurrence because it happened to fall within the 15 years since the existing lines were built.

The Pondosa Fire was one of many fires throughout Northern California in August of 1977 that was the result of dry lightning storms and a historical level two year drought. These conditions do not normally occur once in 15 years. It would be more accurate to use a much longer time span for the frequency of occurrence of this type of situation. Especially if significant decisions for the project will be based upon modeling of fires resulting from this condition. The last drought of similar extent occurred in the early 1930's. This would indicate a

L-295 (continued)

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more reasonable occurrence rate for this situation to be approximately once in 40-50 years.

2. Use of the rate of spread as the only fire parameter upon which to base decisions for separation distance.

The rate of spread is only one fire parameter that is significant in this situation and should not be used alone without consideration of the others. Other parameters that are important are volume of smoke, length of time the smoke is produced (burn out phase), the rate of spread in fuel types that are capable of producing large volumes of smoke with slow burn out times and the fireline intensities produced (this latter significantly dictates the type and effectiveness of suppression methods used). The amount of and duration of smoke and heat load is a function of the fuelbed under and adjacent to the line. This can be a significant factor causing arcing between insulators and phases and can influence the duration of an outage.

Those fuel types that produce the largest volumes of smoke and have the longest burn out phases are the same fuel types that usually spread at the slowest rates. These are the heavy timber or heavy timber/litter types. Those fuel types that spread at the fastest rates are normally the fuel types that do not produce large volumes of smoke and/or have very short burn out phases. The latter are grass and grass/shrub types. The heavy shrub types are intermediate.

The Sargent & Lundy report cited 3 fuel types. However, to determine rate of spread of fire only one fuel type was used along with extreme conditions exeeding the 90th percentile. The two fuel types not used in the rate of spread projections are both much slower but both produce greater volumes of smoke and take significantly longer to burn out. They are more persistent in burning due to generating greater intensities and forcing crews to use more indirect methods of suppression.

The rate of spread is not significant unless considered with the capacity the fuel type has for generating smoke and the persistence with which it will burn due to the fireline intensities generated.

3. The extreme rates of spread used in the analysis.

The Sargent & Lundy report uses a spread rate of 2 miles/hour as the probable upper limit. While it may be possible to approach the 2 miles/hour spread rate in one of the three fuel types under very extreme conditions, it is not reasonable to assume that those rates would be sustained by the advancing fire front for any extended period of time. Conditions would have to be considerably beyond the 90% level and on the extreme end of the 1977 conditions to produce those spread rates. Even here they would not be sustained for long runs due to changes in fuels, topography, environmental conditions and the lava beds in the vicinity of the proposed project. The other two fuel types would significantly slow down the fire when encountered.

Even under the very extreme conditions used to estimate the 2 miles/hour in the model 5 (NFFL) above, the other two fuel types cited (model 11 and 12, NFFL)

L-295 (continued)

V2

would slow the advance down to approximately 1/3 miles/hour. Where ever the lavas were encountered the advance would slow down greatly from this last figure due to the discontinuity of the fuels.

4. Multiple fires as a result of lightning storms used as a basis for separation.

When considering the conditions that brought about the Pondosa Fire a separation of up to 50 miles would probably not be significant. During the same period of time as the Pondosa Fire there were in excess of 15 major fires burning in Lassen, Shasta, Siskiyou and Modoc counties as a result of two year drought and multiple lightning strikes.

In fact, greater separation in this vicinity under these conditions could lead to more problems. This would be due to spreading fire fighting forces too thin to cover an increased number of improvements (the transmission lines) instead of being able to concentrate on a more confined area.

The threat of multiple ignitions in this region is certainly not a reason to argue for greater separation.

5. Ignoring the potential fire problem in the Flat Woods south of Big Bend in Shasta County where the proposed transmission lines run 1.5 to 2.5 miles from the existing lines. No inclusion of this area in the Sargent & Lundy analysis of the perceived fire problem.

The proponents asked Sargent & Lundy to analyze the Modoc and Siskiyou portion of the proposed corridors that goes through "heavy timber". This was due to being "uncomfortable" with the fact that a fire (Pondosa) had occurred in that portion in recent years. However, the heavily timbered area of the Flat Woods north of Round Mountain and south of Big Bend in Shasta county was not addressed. The timber types in this later portion are as heavy or heavier thanany portion of the area analyzed. The fuel loads are very heavy and probably exceed that in the area looked at in the Sargent & Lundy report.

The area analyzed in the Sargent & Lundy report has less of a fuel buildup problem and less continuous fuels than the Flat Woods for the following reasons: 1) the Pondosa and Scarface fires significantly reduced a great deal of the untreated fuels that had been there simply by burning them, 2) the lava beds have significant areas of exposed rock with little to no fuel to carry fire or to allow the initiating fire to become a problem, and 3) much of this proposed area is within Forest Service lands that has received fuel treatment following logging operations.

The Flat Woods, on the other hand, 1) have not had any significant fires in recent years to reduce the fuel loads, 2) do not have any significant breaks in the continuity of the heavy timber type, and 3) have not received any significant fuel treatment following the numerous logging operations in the area.

Due to the above, the Flat Woods probably poses a much more significant threat to the security of the transmission lines than the area considered in the

L-295 (continued)

V2

Sargent & Lundy report and yet the lines there are shown under all proposed alternatives as averaging 1.5 to 2.5 miles from the existing lines. If this separation is acceptable in the Flat Woods area with its high fire hazard then it would seem that there would be no need for greater distances in the area of the McCloud R.D. and Modoc N. F. to the north.

6. The estimates of fire spread in the Sargent & Lundy report disregard most of the assumptions and limitations of the fire spread model. The spread estimates are used in an invalid manner.

First, the models assume that the rate of spread over any given time frame is the result of a free burning fire with no interruptions/changes in fuels and/or environmental conditions. There are few if any areas between the existing lines and N-10M that would meet the above limitation. Especially within the fuel model that was chosen to do the analysis (NFFL 5). There would be interruptions by the other fuel types in the area and by lava beds that have very discontinuous fuels separated by significant areas of rock. There would also be considerable suppression action taken on the fire which would also change the resultant spread from that predicted by the model.

The above factors would serve to reduce the spread of the fire significantly from that shown in the Sargent & Lundy report.

Following is a table that shows estimated rates of spread for the 3 fuel types used in the Sargent & Lundy report. The table shows estimates based upon extremely rare conditions that would be in excess of even the 97% conditions. They still do not approach the rates-of-spread reported in the Sargent & Lundy report even under those extreme conditions except in one fuel type.

Tables of Rates-of-spread of fires from BEHAVE runs on the HP-71B.
Conditions for runs are shown below.

ENVIRONMENTAL CONDITIONS USED:97%+ conditions.
1H fm = 2% 10H fm = 2% 100H fm = 6% MFWS = 15mph
Slope =15%

	MODEL 5	MODEL 11	MODEL 12
ROS =	122 CH/HR	31 CH/HR	67 CH/HR
	1.52 MPH	.39 MPH	.84 MPH

7. No alternatives were explored other than transmission line separation to ensure the security of the lines. No consideration was given to fuel treatment/modification.

In areas where there is a continuous fuel type between the proposed line and the existing line fuel treatment can be used to break up the fuels and modify not only the spread rates but also the intensity and volume of smoke the fire would produce. Fuel modification would significant reduce the threat of

L-295 (continued)

V2

wildland fire to the lines in areas such as immediately east of the Burnt Lava Flow.

Modified fuels beds result in conditions that are safer for suppression forces and provide for increased efficiency in controlling wildland fires. The lighter fuel types also produce less smoke and heat load on the transmission lines. What smoke and heat are produced are also of shorter duration.

8. No consideration was given to the detection and suppression capabilities in the area.

There are two fire lookouts that have very good views into the area (Bear Mt. and Round Mt.). There are initial attack suppression crews located a short distance away from the existing corridor and the proposed N-10M (Long Bell and Pondosa). The capabilities of these resources should be at least considered before making the decision to abandon the N-10M alternative.

CARL SKINNER
Fuel Management Officer
Mt. Shasta R.D.
Shasta-Trinity National Forests

L-296

A
B

Please send copy EIS/EIR from the look of all the sur vaying around and over my property it looks like it will take up most of my land, and therefore I am not very happy

Omar S. Beyer
Rt 1 Box 238M
Oak Run Ca 96069

A A copy of the document was sent to the commentor on March 3, 1987.

B Though the width of the proposed route is 1,500 feet, the proposed COTP will require an easement of only 200 feet wide for constructing, operating, and maintaining the line.

L-297

California Farm Bureau Federation
1601 Exposition Boulevard • Sacramento, CA 95815 • Telephone (916) 924-4000

February 25, 1987

Environmental Coordinator
California-Oregon Transmission Project
P. O. Box 660970
Sacramento, California 95866

Re: Comments on COTP Draft EIS/EIR

Dear Coordinator:

K Enclosed are the original and one copy of Comments of the California Farm Bureau Federation on the Draft EIS/EIR for the COTP.

Please file the Comments when received and return the copy endorsed as filed in the enclosed return envelope.

Yours truly,

Dane C. Dauphine

DANE C. DAUPHINE
Assistant Counsel

DCD:kma
Enclosures

K A response was sent to the commentor on February 26, 1987.

L-297 (continued)

In the Matter of:
CALIFORNIA-OREGON TRANSMISSION PROJECT

DOE/FIS - 0128
SCH #85040914

COMMENTS

OF

CALIFORNIA FARM BUREAU FEDERATION

ON THE

DRAFT FIS/EIR

STEVEN A. GERINGER
DANE C. DAUPHINE
Attorneys for

CALIFORNIA FARM BUREAU FEDERATION
1601 Exposition Boulevard
Sacramento, California 95815

L-297 (continued)

COMMENTS OF CALIFORNIA FARM BUREAU FEDERATION

ON THE DRAFT EIS/EIR FOR THE

CALIFORNIA-OREGON TRANSMISSION PROJECT

Based upon the data contained in the Draft EIS/EIR (hereinafter Draft), the proponents of the California-Oregon Transmission Project have chosen Northern Route Alternative D as the preferred route for the project. The California Farm Bureau Federation (hereinafter CFBF) asserts, however, that the Draft does not adequately consider the impact of the project upon agriculture. The CFBF supports the use of the Copic Bay Option as a necessary modification of the preferred route in order to minimize the impact of the project upon agriculture.

A The Draft has attempted to address the impact upon agriculture as a land use impact and as a socioeconomic impact. It has identified many potential long-term impacts upon agricultural practices, including "alteration of irrigation patterns and other farming activities due to placement of towers, restrictions on the types of irrigation systems that can be used, need for additional weed control, reduced crop yields around the towers, modification of agricultural aircraft operations, and the loss of cropland under and around the towers." (Vol. 2A, P. 3.6-3.) These impacts are quantified as a function of miles of cropland crossed by the project, deriving total short-term and long-term impact figures for each route segment. (Vol. 2A, pp. 3.6-16 to 3.6-25.) Yet, not only does the Draft fail to explain what assumptions or data were used to measure the impact upon irrigation systems, weed control costs, aerial spraying, etc., but also the Draft never adequately addresses the significance of these impacts.

B In addressing the project's impact upon agricultural land uses, the Draft determined that a crossing of one-half mile of irrigated cropland is a significant impact upon land use. (Vol. 2A, p. 3.6-28.) It compared the number of miles of irrigated cropland crossed by each northern route alternative and concluded that Alternative D has the least impact upon land use resources.

A The agricultural impact significance criteria presented in Section 3.6.3.3 in Volume 2A of the Draft EIS/EIR emphasizes irrigated farmland. Irrigation is a requirement for land classified as prime farmland or farmland of statewide importance. Since this classification information was not available, the irrigated farmland was considered equivalent in significance. Irrigated farmland was emphasized in part because it is generally the most productive, valuable land. However, the importance of efficient irrigation systems in maintaining productivity was another factor involved in the choice of this significance criteria. Whereas cost analysis of transmission line impacts on irrigation systems, weed control practices, and insect control practices would be informative, the additional data would not have affected the results of the comparison of alternatives.

B We agree that when the monetary aspects of each alternative's impact on agriculture are compared, Alternative D has the greatest long-term effect (i.e. 40% greater than Alternative B), since it crosses the most row crop acreage. When Alternative B is compared with Alternative D, there is a difficult tradeoff between affecting a greater amount of productive farmland vs. a smaller amount of more valuable farmland. Moreover, agriculture was not the only land use factor involved in comparing alternatives. We agree that Alternative D still has significant impacts, particularly on agriculture, but in comparison with the other alternatives, it has the least overall impact.

L-297 (continued)

B (Vol. 1, p. 4.1-37.) It did not compare the quantified long-term impacts upon agricultural uses. (Vol. 2A, Table 3.6-12.) Although the Draft correctly determined that Alternative D does not cross the greatest amount of irrigated cropland, it has failed to consider that the long-term impact upon agricultural uses of Alternative D is at least 40 percent greater than any other alternative. (See Exhibit A to these Comments.) By this measure of the impact, Alternative D has the greatest impact upon agricultural land uses. This impact must be addressed before the conclusion can be drawn that Alternative D has the least overall impact upon land use resources.

C The long-term impact of Alternative D upon agricultural uses is also raised as a socioeconomic consideration, but again the Draft failed to fully confront the issue. The same figures presented as a land use consideration are again put forth as a socioeconomic consideration. (Vol. 2A, Table 3.8-7.) This time, the impacts are not addressed because the Draft has made the arbitrary assumption that an estimated impact less than $2,500.00 per mile is insignificant, thereby determining that Alternative D has no significant long-term impacts upon agriculture and a significant short-term impact in only one route segment. (Vol. 2A, p. 3.8-30, Vol. 1, p. 4.1-32.) The CFBF disputes this determination that the long-term impact upon agriculture of Alternative D is not significant.

D First of all, the CFBF disputes the assumption that there is no long-term impact upon non-irrigated agricultural land and rangeland. The Draft reports a zero dollar long-term impact upon the .18 mile of non-irrigated cropland crossed by Alternative D, ignoring any impact due to loss in crop yield or loss of cropland. (Vol. 2A, Table 3.8-7.) The Draft also fails to address the

E socioeconomic impact upon the 22.48 miles of rangeland crossed by Alternative D. (Vol. 2A, Table 3.6-10.) These impacts must be measured in order to determine whether the long-term impact of Alternative D is significant.

C The assumptions used in preparing the estimates of economic impact to agricultural land are contained in Table 3.6-6 of Volume 2A of the Draft EIS/EIR. To a large degree the determination of significance levels is one of professional judgment. The transmission line corridor is, for the most part, 200 feet wide. A one mile length covers 1,056,000 square feet, or 24.24 acres. An impact of $100 per acre would yield $2,424 per corridor mile. This number was rounded to $2,500 and established as the threshold of significance.

D The route referred to is N-10G. Table 3.8-7 shows that the estimated long term impact to these .18 acres of non-irrigated land as $.0. The amount is rounded to display in thousand of dollars. The actual annual impact, on a long term basis is $10 ($.01 x 1,000). The assumptions used in preparing the estimates of economic impact to agricultural land are contained in Tables 3.6-6 to 3.6-8 of Volume 2A of the Draft EIS/EIR. According to these assumptions, assuming a worse case (i.e., that a tower was located on the land), it is estimated that .05 acres (2,178 square feet, or a 46.67 foot by 46.67 foot area) would be removed from production. (Please note that the actual tower base is 35 feet x 35 feet.) Further assuming that the average yield is 2.8 tons per acre and that the average crop value is $106 per ton, the estimated long term annual impact would be $14.84 (.05 acres x 2.8 tons/acre x $106/ton). The amount of this loss is not significant and would be compensated for in the easement acquisition process.

L-297 (continued)

E Alternative North D crosses a total of 22.48 miles of rangeland (see Volume 2A, Table 3.6-10). The estimated value of rangeland losses were not included in the analyses because the amount of land removed from use is less than other types of crops and because the crop value (i.e., grass) is very low per acre. A conservative estimate of the long term loss can be developed using the assumptions stated in Volume 2A, Tables 3.6-6 to 3.6-8, for the lowest category--non-irrigated land. To make comparisons consistent for segments of various lengths, all analyses are based on impacts per corridor mile. Therefore, according to the following assumptions: (a) 4.8 towers will be needed to cross one mile of land; (b) 0.05 acres of useful land area will be removed per tower; and (c) non-irrigated land produces 2.8 tons of crop per acre and has a crop value of $106 per ton; the annual long-term impact from the towers crossing non-irrigated farmland would be approximately $71.23 per mile (4.8 towers/mile x 0.05 acres/tower x 2.8 tons/acre x $106/ton). The value of losses incurred by the removal of rangeland would be even less than this amount. Therefore, the economic losses suffered are not significant and can be compensated for in the easement acquisition process.

L-297 (continued)

F Second, the CFBF also questions the accuracy of the average loss per mile impact figures reported in the Draft. The Draft reported that Alternative D has a long-term impact of $3,300.00 upon 1.37 miles of irrigated cropland. (See Exhibit A to these Comments.) Spreading $3,300.00 over 1.37 miles results in an impact of about $2,400.00 per mile. Yet, the Draft reported much lower figures: $100.00 per mile in segment N-10A, $1,600.00 per mile in segment N-10E, and $200.00 per mile in segment N-10G. (Vol. 2A, Table 3.8-7.) These figures are contradictory and must not be relied upon to measure the impact of the project upon agriculture.

G Third, the CFBF disputes the assumption that an impact less than $2,500.00 per mile is not significant. An impact far less than this minimum figure can have a devastating effect, leading to the removal of existing cropland from production. Growers cannot control the price they will receive for their commodities, and an examination of actual production cost data will confirm that profit margins in the current economic situation are slim at best. (See Exhibit B to these Comments.) At an estimated production cost of $97.28 per ton of alfalfa, assuming a five ton yield per acre, the cost exceeds the Draft's average crop value of $88.00 per ton. (Vol. 2A, Table 3.6 23.) Even with a good commodity price of $105.00 per ton, an alfalfa grower can expect at best an 8 to 10 percent return. The extra cost imposed by the project would have a significant effect on the value of the cropland, wherever situated, that may be crossed by the project.

H The Draft has further sidestepped addressing the agricultural impact by stating that the project can be sited within Alternative D to avoid impacts to cropland. (Vol. 1, p. 4.1-25.) The Draft has identified a number of mitigation measures, including the siting of towers "near field boundaries or service roads, or either perpendicular or parallel to the crop rows where desirable and feasible to do so." (Vol. 1, p. 5.1-4.) It is claimed that this measure is

F The error results from 0.76 miles of row cropland being inadvertently omitted from the Draft EIS/EIR Volume 2A, Table 3.6-10. Table 3.6-10 was the only table from which this amount was omitted. The dollar amounts shown in Volume 2A, Tables 3.6-12 and 3.8-7 are correct. Section 1.2.3 of Volume 1 of this Final EIS/EIR notes this correction.

G Project staff recognize that the profit margin of farmers is slim and that farmers have almost no control over the sales price of their crops. Because the market is volatile, the price estimates were derived from historical amounts as reported from the County Agricultural Commissioner's Reports (see Volume 2A, Table 3.6-7). In determining the preferred route, impacts were assessed based upon the same price assumptions for all routes. In other words, even if the crop prices were increased the relative impacts between the various alternative routes would remain the same. (As shown in the previous responses (L-297 D and E) the dollar impacts are expected to be very small and compensation for losses can easily be made in the easement acquisition process.)

H We agree that even though towers may be sited "near field boundaries or service roads, or either perpendicular or parallel to crop rows where desirable and feasible to do so," there still could be a significant residual impact. The "no" cited in Table 2 of the Summary for the Draft EIS/EIR is a typographical error, which should be replaced by the word "yes". See the updated Table 2A in Volume 1 of this Final EIS/EIR for the correction. We do believe that siting towers perpendicular to crop rows or on the edge of a field can be an improvement over lines and towers running diagonally, in that aerial application hazards can be somewhat reduced (Resources International, 1985). Although this mitigation measure does not reduce impacts

L-297 (continued)

H partially effective leaving no significant residual impact remaining. (Summary, Table 2.) Yet, no data is presented to substantiate the statement that this method of siting will reduce the long-term impact of the project upon agricultural practices. There is no discussion put forth explaining how or if such siting will avoid reduced crop yields near the towers, additional need for weed control, modification of agricultural aircraft operations, etc.

I Furthermore, in comparing the land use impacts, the Draft has placed a greater emphasis on avoiding Williamson Act agricultural preserves than irrigated cropland, as if the impact upon Williamson Act lands were the better measure of agricultural impact. (Vol. 1, p. 4.1-37.) The Williamson Act Program, however, is not a program to identify prime agricultural lands. Rather, it is a voluntary land conservation program which gives a property tax adjustment to a landowner in return for restricting the use of the land. In fact, an "agricultural preserve" under the Williamson Act may not include any productive agricultural lands since it is defined as "an area devoted to either agricultural use..., recreational use..., or open space use." Gov. Code § 51201(d). Agricultural land placed in an agricultural preserve may actually be less productive on a per acre basis than agricultural land outside an agricultural preserve since agricultural purpose rather than agricultural productivity is the guideline for inclusion under the Act. (See Gov. Code § 51201(b) which permits the inclusion of land held "for the purpose of producing an agricultural commodity for commercial purposes.") The amount of acreage classified as agricultural preserves bears no relationship to the amount of prime agricultural land that may be affected by this transmission line project.

J The CFBF is aware that the choice of Alternative D as the preferred route has raised concern among farmers in the Newell area. (See transcript of Newell

H (cont.) on tractor activities or irrigation practices, some growers have stated a preference for "boundary location in order to minimize cropping area losses and disruption to field operations" (Resources International, Inc.).

I Irrigated cropland was considered as important as agricultural preserves protected under the Williamson Act. The irrigated lands are usually more valuable than non-irrigated land and rangeland which may be in agricultural preserves. Irrigated cropland in the Klamath Basin/Tulelake area was considered an important land use factor even though there is no Williamson Act participation in Modoc county. The irrigated cropland in this area was considered to be the equivalent of Farmland of Statewide Importance. A crossing of at least one-half mile was judged to be significant. The irrigated cropland and agricultural preserve factors were just two of the components among a number of land use items considered in the comparison of alternatives. Although Alternative D was judged to have the least overall impact on land use resource, the Draft EIS/EIR text and tables indicate that it will have a significant impact on irrigated cropland.

J Your support for the Copic Bay option is noted. A change in the preferred route to option North 1 has resulted in moving the line closer to the existing Intertie lines. See Sections 1.1.2 and 1.2.2 of Volume 1 of this Final EIS/EIR for further discussion.

L-297 (continued)

J proponents to modify the preferred route to avoid homes and irrigated cropland. The CFBF joins in this concern and supports the Copic Bay Option described in the Draft. (Vol. 1, p. 4.1-41.) Under this option, the new line would detour around the Newell area by displacing the existing lines further east. The Draft states that this option has no residential, recreational or forestry impacts, and no new impacts on irrigated cropland. (Vol. 1, p. 4.1-41.) Since this option would reduce the long-term impact of the project upon agriculture and would replace those segments of the preferred route which have a significant short-term agricultural impact and residential development, it better complies with the project's routing guidelines. The routing guidelines specifically seek to minimize use of productive forest and agricultural lands, residential and urban areas as well as increase the distance between the project and the existing transmission lines. (Vol. 2A, p. R-1, R-9.) This option is necessary to reduce the overall impact of the project and specifically its impact upon agriculture.

Conclusion

The CFBF disputes the accuracy of the Draft EIS/EIR and disagrees with the determination that Route Alternative D has no significant long-term impact upon agriculture. The CFBF believes that the general impact of the project and its specific impact upon agriculture would be greatly reduced if the preferred route were to include the Copic Bay Option within Alternative D. The Copic Bay Option bypasses the residential and agricultural development in the Newell area and has no new impact upon agricultural land use. The Copic Bay Option would have no impact upon residential, recreational, or forestry land uses, and it would further the objectives of the project by increasing the distance between the

L-297 (continued)

project and the existing transmission lines, thereby increasing the project's reliability.

Dated: February 25, 1987

Respectfully submitted,

Dane C. Dauphine

DANE C. DAUPHINE
Attorney for

CALIFORNIA FARM BUREAU FEDERATION
1601 Exposition Boulevard
Sacramento, California 95815

L-297 (continued)

EXHIBIT A

	Irrigated Crop Land Crossed[2] (miles)	Short-Term Ag Impact[3] ($000)	Long-Term Ag Impact[4] ($000) Total	Annual
Route A[1]				
N - 1B	0	0	0	0
N - 1E	0	0	0	0
N - 1H	0	0	0	0
N - 1I	0	0	0	0
N - 1K	0	0	0	0
N - 1L	.23	2.1	23.0	.5
N - 4A	0	0	0	0
N - 4G	0	0	0	0
N - 4J	0	0	0	0
N - 7H1	0	0	0	0
	.23	2.1	23.0	.5
Route B[1]				
N - 6A	0	0	0	0
N - 6R1	1.36	3.0	21.2	.4
N - 6Z	.60	2.6	31.1	.6
N - 6P	.55	3.0	42.7	.9
N - 6Y	0	0	0	0
N - 6U2	0	0	0	0
N - 6W	0	0	0	0
N - 4K	0	0	0	0
N - 7H1	0	0	0	0
	2.51	8.6	95.0	1.9
Route C[1]				
N - 6A	0	0	0	0
N - 6C	0	0	0	0
N - 6E	.86	5.3	70.1	1.4
N - 6F	0	0	0	0
N - 6H	0	0	0	0
N - 6N	.26	1.4	20.2	.4
N - 6Y	0	0	0	0
N - 6U2	0	0	0	0
N - 6W	0	0	0	0
N - 4K	0	0	0	0
N - 7H1	0	0	0	0
	1.12	6.7	90.3	1.8

L-297 (continued)

Route D[1]	Irrigated Crop Land Crossed[2] (miles)	Short-Term Ag Impact[3] ($000)	Long-Term Ag Impact[4] ($000) Total	Annual
N - 10A	.34	1.9	26.4	.5
N - 10E	1.03	5.7	80.0	1.6
N - 10G	0	4.3	59.0	1.2
N - 10J	0	0	0	0
N - 10K	0	0	0	0
N - 10L	0	0	0	0
N - 10M1	0	0	0	0
N - 10 Alt. 5	0	0	0	0
	1.37	11.9	165.4	3.3
Route D with Copic Bay Option[1]				
N - 10A	.34	1.9	26.4	.5
N - 10 Alt. 2	.8	4.4	60.0	1.2
N - 10 Alt. 3	0	.1	0	0
N - 10 Alt. 4	0	.2	0	0
N - 10K	0	0	0	0
N - 10L	0	0	0	0
N - 10M1	0	0	0	0
N - 10 Alt. 5	0	0	0	0
	1.14	6.6	86.4	1.7

1. Route segments are taken from Table 2.1-1 in Vol. 1 of Draft EIS/EIR. Route segments for Copic Bay Option are taken from page 4.1-41 in Vol. 1.

2. Crop miles crossed are taken from Table 3.6-10 in Vol. 2A.

3. Short-term impact figures are taken from Table 3.6-11 in Vol. 2A.

4. Long-term impact figures are taken from Table 3.6-12 in Vol. 2A.

L-297 (continued)

EXHIBIT 8

1986 Alfalfa Production Costs

Prepared by Don Lancaster, Farm Advisor
University of California Ag. Ext., Modoc County

OPERATION	HOUR/ ACRE	CASH & LABOR COST/ACRE	TOTAL	% OF TOTAL
CULTURAL COSTS:				
Irrigate - 10 times	4.5	Power ($47.60)[1] + Labor[2]	$ 64.03	13.2
Fertilize		500 lbs/AC gypsum-$35/ton[3]	8.75	1.8
Weed Control		Velpar¿ 1-1/2 qts/acre	28.83	5.9
Rodent Control		Ground Squirrel bait applied	4.50	0.9
		TOTAL CULTURAL COSTS	$106.11	21.8
HARVEST COSTS: (Owner/operator costs/hour)[4, 5]				
Swath - 3 times	0.8	$ 52.59	$ 41.83	8.6
Rake - 3 times	0.6	5.00	3.00	0.6
Bale - 3 times	0.9	74.55	67.09	13.8
Haul - 3 times	0.5	49.68	24.84	5.1
		TOTAL HARVEST COSTS	$136.76	28.1
MISCELLANEOUS CASH COSTS:				
Interest on Operation Capital		$242.87 ¿ 12% for 6 months	$ 14.57	3.0
Miscellaneous Overhead			25.00	5.1
		TOTAL MISCELLANEOUS CASH COSTS	$ 39.57	8.1
		TOTAL CASH COSTS PER ACRE	$282.44	58.0
INVESTMENT COSTS:				
Land and improvements (per acre per year)[6]			$203.97	42.0
Principle and Interest for 20 years included in amount				
		TOTAL NON-CASH COSTS	$203.97	
		TOTAL COST PER ACRE	$486.41	100.0
		COST PER TON ¿ 5-TON YIELD	$ 97.28	
		COST PER TON ¿ 6-TON YIELD	$ 81.07	

[1] REA Power (Surprise Valley Electric); PP&L rates should be in the $50-$70/acre range in 1986.

[2] $3.65/hour wage rate.

[3] Price per ton applied.

[4] Owning and operating costs are based on current farm machinery costs and assume a 5-year depreciation and 1,000 to 1,500 hours of use.

[5] Custom harvest rates for 1986 will range from $25 to $30 per ton.

[6] These estimates are based on actual cost data provided by growers and agribusinessmen in Modoc County.

May 1986

L-298

Modoc County Farm Bureau

105 W. 2ND STREET
PO BOX 1692 TELEPHONE (916) 233-FARM
ALTURAS, CALIFORNIA 96101

February 24, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, Ca. 95866

Subject: Draft EIS/EIR for the California-Oregon Transmission project (DOE/EIS - 0128; SCH #85040914)

Dear Environmental Coordinator;

These comments on the Draft EIS/EIR for the California-Oregon Transmission Project are hereby submitted by the Modoc County Farm Bureau on behalf of all members of MCFB representing some 900 member families. Farm Bureau is local, county, state, national and international in it's scope and influence and is nonpartisan, nonsectarian and nonsecret in character. Farm Bureau is a voice of agricultural producers at all levels. California Farm Bureau Federation is the states largest general farm organization, representing more than 100,000 member families in 56 counties. American Farm Bureau Federation likewise is the nations largest general farm organization, representing a membership of 3,430,667 families. Farm Bureau believes America's unparalled progress is based on freedom and dignity of the individual, sustained by basic moral and religious concepts. Property rights are among the human rights essential to the preservation of individual freedom. CFBF policy No. 86 - Transmission and Utility Line Cooridors - "We should use all available means to protect land from transmission corridors where workable alternate routes not passing through agricultural land are available. We urge the use of existing lines to transport power. (Rev. 1986)"

A Our concern is over the inadequacies of alternatives contained in the DEIS/EIR. It is inadequate in that it ignores a workable option as prepared by the Modoc County/ Klamath County Powerline Committee (MCKCPC). This proposal, known as the John Cross Proposal, would eliminate the adverse impacts which would result from the construction of the "Preferred Route". MCFB is in support of MCKCPC and the John Cross Proposal. We believe in the preservation of agricultural land.

A Comment noted. See response to L-330 H.

L-298 (continued)

Modoc County Farm Bureau

105 W 2ND STREET
PO BOX 1692 TELEPHONE (916) 233-FARM
ALTURAS, CALIFORNIA 96101

B The DEIS/EIR is inadequate in that it does not recognize the fact that 72% of Modoc County land is in public ownership. We believe that the power transmitted for public uses be transmitted on public lands. The "Preferred Route" has been concentrated on private lands. The "Cross Proposal" would put the transmission line on public lands, not over, prime irrigated and highly productive farmland.

C The DEIS/EIR is inadequate in that it ignores the lead agencies own Routing Guidelines. Their Routing Guidelines for the project as found on pgs. B-7 and B-9 of vol. 2A read as follows;

- Minimize (use of) highly productive agricultural lands.
- Emphasize (use of) barren and low productivity land.
- Minimize (use of) prime farmland.
- Minimize (use of) other productive farmlands.

Yet the "Preferred Route" contained in the DEIS/EIR would cross directly over prime, irrigated and highly productive farmland with no mention of emphasizing the barren land as would be found through the alternative route known as the Cross Alternative.

D The DEIS/EIR is inadequate in that the economic impact along the "Preferred Route" has not been addressed. Loss of county revenue would be experienced due to reduction of prime farmland. Increased production costs would be experienced by affected farmers in the form of irrigation costs, weed control, ground erosion, aerial seeding and spraying, not to mention the safety to pilots and irrigators.

E We at MCFB strongly support and encourage the "Cross Proposal"; For the preservation of agricultural land, reducing the economic effect in an already highly depressed economy, and the use of Public land for Public benefit. The MCKCPC has put before you a working alternative. We strongly support that their concerns and recommendations be included in the final EIS/EIR, with a decision made to accept the Cross Proposal.

Sincerely,

Howard C. Klassen
Director MCFB

B Volume 4A of the Draft EIS/EIR, in the Land Use and Land Status sections, shows the relative amounts of public land to private land. The belief that power transmitted for public uses should be transmitted on public lands is noted. Whereas the preferred route may cross more private land than public land in Modoc County, the overall COTP would cross more public land than private land.

We agree that the John Cross proposal, similar to the Copic Bay option, would cross a greater amount of public land than the preferred route. See also response to L-330 H.

C To "minimize" (or "emphasize") means to reduce (or increase) certain environmental impacts where possible, since it was recognized that the impacts could not be totally eliminated and still meet the objectives of the project.

Although the 1,500-foot wide preferred route crosses some highly productive agricultural land, the right-of-way for the proposed COTP can be routed in this area to minimize impact to productive farmlands. The routing process for the COTP took into account a number of factors in identifying the alternatives to determine the preferred route, including consideration of the highly productive agricultural lands, prime farmland, and other productive farmlands, as well as engineering and other environmental constraints. See also response to L-330 G.

D See responses to L-14 A, L-204 E, L-329 T, L-330 W13, T-10 D, T-175 A, T-175 B, and T-175 H.

E Your support for the John Cross alternative is noted. See response to L-330 H. See also response to L-298 C.

L-299

Neumiller & Beardslee
A PROFESSIONAL CORPORATION
ATTORNEYS AND COUNSELORS
FIFTH FLOOR WATERFRONT OFFICE TOWER II
509 WEST WEBER AVENUE
STOCKTON, CALIFORNIA 95203
(209) 948-8200

MAILING ADDRESS:
P.O. DRAWER 20
STOCKTON, CALIFORNIA 95201-3020

REFER TO FILE NO:

February 25, 1987

California-Oregon Transmission
Project
Post Office Box 660970
Sacramento, California 95866

Attention: Environmental Coordinator

Re: Draft EIS/EIR for California Oregon Transmission Project in Los Banos-Gates Transmission Project: Routes Under Consideration for the California-Oregon Transmission Project 0128 SCH No. 85040914

Gentlemen:

This office serves as special counsel to Reclamation District 2072 (Woodward Island) and in that capacity has been asked to comment on the above referenced Draft EIS/EIR. The Reclamation District, as a public agency, would be adversely impacted should the project proceed as recommended in the underlying documents.

A On behalf of the Reclamation District, this office has reviewed the Draft EIS/EIR and finds that that document is legally inadequate as a matter of law, and respectfully requests that changes be made in the same so that it can meet the minimum standards established by the National Environmental Protection Act and the California Environmental Quality Act. Our written comments to the documents are numerous and are summarized herein.

B It is our opinion that the finding contained in the draft Report to the effect that South Alternate B is the most environmentally sound alternative is arbitrary and capricious, and contradicts evidence disclosed in the study. For these reasons, the Report cannot be certified by the Agency as being legally adequate.

C

D For instance, South Alternate B is longer, and causes a greater short-term and long-term loss per route mile by $1,700.00 per mile. South Alternate B also crosses more

A See response to L-203 B.

B See response to L-203 C.

C See response to L-203 D.

D See response to L-203 E.

L-299 (continued)

D miles of agricultural preserve land and more miles of irrigated crop land than South Alternate A. In addition, South Alternate A traverses the least amount of organic soil, whereas South Alternate B traverses nearly four times the amount of organic soils. Thus, South Alternate A is better from the perspective of earth/resources/geographic hazards.

E The draft Report also concludes that South Alternate A is superior from the perspective of protecting and preserving wildlife. Specifically, there is a much greater chance for wildlife collisions from South Alternate B than from South Alternate A.

F The Report thus suggests that South Alternate A has a number of attributes making it the superior alternative. This allegation appears to be the product of the writers of the draft document as opposed to a conclusion that is based upon sound reasoning. However, the Report contains a conclusion that South Alternate A, South Alternate B, and South Alternate C do not differ substantially from one another.

G Even more difficult to understand is the Report's major conclusion that South Alternate B is identified as the environmentally superior alternative. Certainly there are attributes of South Alternate A and South Alternate C making those superior alternatives, and yet without any analytic bridge or intermediate rationale, South Alternate B is identified as the superior alternative. (Of course, it is less than coincidental that South Alternate B is also the route that is preferred by the Agency.)

At only one portion of the Report does it disclose the basis for finding South Alternate B to be the environmentally superior alternative. Specifically, the Report in a major conclusion provides, "B was identified as the environmentally preferred alternative because it minimized impacts to developed and planned land uses."

This is a legally incompetent conclusion for several reasons. First, it flies in the face of other statements in the Report suggesting that other alternatives were superior.

Second, it disregards factors other than developed and planned urban land uses. Why should developed and planned land uses be the variable for deciding which alternative is superior? There is absolutely no analytic framework to justify an emphasis upon developed and planned land uses as a basis for making these decisions.

E See response to L-203 F.

F See response to L-203 G.

G See response to L-203 H.

L-299 (continued)

G Third, the Report totally neglects the impact of this project to farming. The design of the transmission lines across farmland will take valuable farmland out of production, (and more so under Alternate B than others), will make cropping rows more difficult, and will increase costs due to uncertainties of irrigation practices due to the transmission poles. The impact to agricultural land is neither quantified nor qualified in the body of the Report thereby skewing the analysis in favor of the alternative that crosses farmland as opposed to urban land. Unless the Report assigns a value to the impact to agricultural lands, the Report is little more than a self-serving document that does not fulfill the goals and objectives of environmental laws. Finally, the conclusion is incompetent in that by avoiding urban land and designing the transmission line across agricultural property, the condemnation expense to the Agency will be the least. As a recent California Court of Appeals case clearly enunciated, cost may not be a distinguishing factor between alternatives.

N

H This is not to say that the Reclamation District necessarily favors one alternative over another. Rather, these comments are directed toward the adequacy of the Draft EIS/EIR to fully disclose environmental information, and to discharge its duty to examine in good faith the potential alternatives. As presented, the discussion of alternatives falls short of the type of analysis expected for a Draft EIS/EIR.

I Also, the alternatives discussion ignores rebuilding existing lines to accommodate the pending project. Rebuilding existing lines would be clearly the environmentally superior alternative by traversing the least amount of organic soil, minimizing wildlife conflicts and mitigating aesthetic impacts. Yet this alternative is ignored. Why?

J The Draft EIS/EIR also fails to address two impacts of special significance to the Reclamation District. First, in the opinion of engineers and private construction managers, new power lines may interfere with the effective operation of large equipment required for needed levee work. The problems accruing from reclamation work that is frustrated by additional transmission lines are obvious and significant.

K Also, the installation of the transmission lines will devalue land values, thereby restricting revenues collected by all reclamation districts. This is a secondary impact of great import inasmuch as it will restrict the financial abili-

N See response to L-203 Q.

H Comment noted.

I See response to T-70 B.

J See response to L-309 O1.

K See response to L-309 N1.

L-299 (continued)

K With fewer financial resources available to make repairs, reclamation districts will be compelled to reduce or curtail essential maintenance work. Again, the environmental consequences of potential breaches of levees due to insufficient funds are obvious.

L It is apparent that the agency seeks to avoid the increased cost and attendant political controversy that would result from installation of the transmission lines across more urbanized areas. In its zeal to avoid these collateral problems, the Agency has failed to prepare a legally adequate document.

M

Respectfully submitted,

NEUMILLER & BEARDSLEE, A
PROFESSIONAL CORPORATION

By _____
STEVEN A. HERUM

SAH/km
cc: Dante John Nomellini, Esq.

L The routing guidelines for land use stipulated that the crossing of highly productive agricultural land would be minimized. In some locations other factors such as engineering considerations and/or other environmental resource constraints were such that agricultural lands could not be totally avoided. Project staff did consider a preliminary route through the Antioch urban area, because it minimized impacts on the Delta's agricultural and wildlife resources. The Draft EIS/EIR, Volume 2A, page 2.4-2, discusses this route in greater detail and explains why it was found to be infeasible.

M The standards of adequacy of an EIS/EIR are discussed in the response to L-203 B. The alleged effort to avoid the "collateral problems" mentioned in this comment is irrelevant to the adequacy of the Draft EIS/EIR.

L-300

Neumiller & Beardslee

A PROFESSIONAL CORPORATION

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STOCKTON, CALIFORNIA 95203

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REFER TO FILE NO.

ROBERT L. BEARDSLEE
THOMAS J. SHEPHARD, SR.
DUNCAN R. MCPHERSON
RUDY V. BYLAPPA
ROBERT C. MORRISON
JAMES W. DYKE
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STEVEN O. CRABTREE
MICHAEL J. DYER
GERALD L. HOBRECHT
DEMETRA N. GEGES
JEANNE ZOLEZZI

February 25, 1987

California-Oregon Transmission
Project
Post Office Box 660970
Sacramento, California 95866

Attention: Environmental Coordinator

Re: Draft EIS/EIR for California Oregon Transmission Project in Los Banos-Gates Transmission Project: Routes Under Consideration for the California-Oregon Transmission Project 0128 SCH No. 85040914

Gentlemen:

This office serves as special counsel to Reclamation District 2024 (Orwood Tract) and in that capacity has been asked to comment on the above referenced Draft EIS/EIR. The Reclamation District, as a public agency, would be adversely impacted should the project proceed as recommended in the underlying documents.

A On behalf of the Reclamation District, this office has reviewed the Draft EIS/EIR and finds that that document is legally inadequate as a matter of law, and respectfully requests that changes be made in the same so that it can meet the minimum standards established by the National Environmental Protection Act and the California Environmental Quality Act. Our written comments to the documents are numerous and are summarized herein.

B It is our opinion that the finding contained in the draft Report to the effect that South Alternate B is the most environmentally sound alternative is arbitrary and capricious, and contradicts evidence disclosed in the study. For these reasons, the Report cannot be certified by the Agency as being legally adequate.

C

D For instance, South Alternate B is longer, and causes a greater short-term and long-term loss per route mile by $1,700.00 per mile. South Alternate B also crosses more

A See response to L-203 B.

B See response to L-203 C.

C See response to L-203 D.

D See response to L-203 E.

L-300 (continued)

D miles of agricultural preserve land and more miles of irrigated crop land than South Alternate A. In addition, South Alternate A traverses the least amount of organic soil, whereas South Alternate B traverses nearly four times the amount of organic soils. Thus, South Alternate A is better from the perspective of earth/resources/geographic hazards.

E The draft Report also concludes that South Alternate A is superior from the perspective of protecting and preserving wildlife. Specifically, there is a much greater chance for wildlife collisions from South Alternate B than from South Alternate A.

F The Report thus suggests that South Alternate A has a number of attributes making it the superior alternative. This allegation appears to be the product of the writers of the draft document as opposed to a conclusion that is based upon sound reasoning. However, the Report contains a conclusion that South Alternate A, South Alternate B, and South Alternate C do not differ substantially from one another.

G Even more difficult to understand is the Report's major conclusion that South Alternate B is identified as the environmentally superior alternative. Certainly there are attributes of South Alternate A and South Alternate C making those superior alternatives, and yet without any analytic bridge or intermediate rationale, South Alternate B is identified as the superior alternative. (Of course, it is less than coincidental that South Alternate B is also the route that is preferred by the Agency.)

At only one portion of the Report does it disclose the basis for finding South Alternate B to be the environmentally superior alternative. Specifically, the Report in a major conclusion provides, "B was identified as the environmentally preferred alternative because it minimized impacts to developed and planned land uses."

This is a legally incompetent conclusion for several reasons. First, it flies in the face of other statements in the Report suggesting that other alternatives were superior.

Second, it disregards factors other than developed and planned urban land uses. Why should developed and planned land uses be the variable for deciding which alternative is superior? There is absolutely no analytic framework to justify an emphasis upon developed and planned land uses as a basis for making these decisions.

E See response to L-203 F.

F See response to L-203 G.

G See responses to L-203 H and L-203 Q.

L-300 (continued)

G Third, the Report totally neglects the impact of this project to farming. The design of the transmission lines across farmland will take valuable farmland out of production, (and more so under Alternate B than others), will make cropping rows more difficult, and will increase costs due to uncertainties of irrigation practices due to the transmission poles. The impact to agricultural land is neither quantified nor qualified in the body of the Report thereby skewing the analysis in favor of the alternative that crosses farmland as opposed to urban land. Unless the Report assigns a value to the impact to agricultural lands, the Report is little more than a self-serving document that does not fulfill the goals and objectives of environmental laws. Finally, the conclusion is incompetent in that by avoiding urban land and designing the transmission line across agricultural property, the condemnation expense to the Agency will be the least. As a recent California Court of Appeals case clearly enunciated, cost may not be a distinguishing factor between alternatives.

H This is not to say that the Reclamation District necessarily favors one alternative over another. Rather, these comments are directed toward the adequacy of the Draft EIS/EIR to fully disclose environmental information, and to discharge its duty to examine in good faith the potential alternatives. As presented, the discussion of alternatives falls short of the type of analysis expected for a Draft EIS/EIR.

I Also, the alternatives discussion ignores rebuilding existing lines to accommodate the pending project. Rebuilding existing lines would be clearly the environmentally superior alternative by traversing the least amount of organic soil, minimizing wildlife conflicts and mitigating aesthetic impacts. Yet this alternative is ignored. Why?

J The Draft EIS/EIR also fails to address two impacts of special significance to the Reclamation District. First, in the opinion of engineers and private construction managers, new power lines may interfere with the effective operation of large equipment required for needed levee work. The problems accruing from reclamation work that is frustrated by additional transmission lines are obvious and significant.

K Also, the installation of the transmission lines will devalue land values, thereby restricting revenues collected by all reclamation districts. This is a secondary impact of great import inasmuch as it will restrict the financial ability of reclamation districts to maintain and repair levees.

H Comment noted.

I See response to T-70 B.

J See response to L-309 O1.

K See response to L-309 N1.

K With fewer financial resources available to make repairs, reclamation districts will be compelled to reduce or curtail essential maintenance work. Again, the environmental consequences of potential breaches of levees due to insufficient funds are obvious.

L It is apparent that the agency seeks to avoid the increased cost and attendant political controversy that would result from installation of the transmission lines across more urbanized areas. In its zeal to avoid these collateral

M problems, the Agency has failed to prepare a legally adequate document.

Respectfully submitted,

NEUMILLER & BEARDSLEE, A
PROFESSIONAL CORPORATION

By _____
STEVEN A. HERUM

SAH/km
cc: Dante John Nomellini, Esq.

L See response to L-299 L.

M See responses to L-203 B and L-299 M.

L-302

James C. Campbell
9163 Stevenson Bridge Rd.
Dixon, CA 95620

February 25, 1987

Environmental Coordinator
California-Oregon Transmission Project
P. O. Box 660970
Sacramento, CA 95866

SUBJECT: Draft EIS/EIR for California-Oregon Transmission Project

I have reviewed the draft report and have the following comments:

A 1. Because the preferred alternative route involves upgrading the existing 230 KV line, better clarification is needed on any upgrade required to the lower portion of the towers. On page 10, Vol. 1 of the Draft Summary, it is stated "...steel support members added to bases..." but the Vol. 1 Draft Figure 2.1-3 shows no change between the existing and upgraded versions. No further mention of base upgrading occurs except with relation to specific towers in extra stress positions. Any structural members added to the base which would further close the existing base openings would be unacceptable. Currently, some agricultural tractor operations can be conducted thru the existing base. The towers are currently tolerated because of this ability to mechanically control weeds. Losing this ability would necessitate weed control thru chemicals, greatly increasing cost and also increase the present loss of production. If this were to occur, my favorable position of an upgraded alternate route would be reversed.

B C 2. Volume 1, Draft Figure 3.0-7 does not designate the vernal pools or the Federal endangered plant species in the Jepson's Praire Preserve. Also, it does not show the possible Swainson Hawk use areas identified in the GPPL applicant's wildlife testimony maps on alternate route 39S. This area is between Cache Creek and Putah Creek on the cnetral upgrade proposal.

D 3. Volume 1, Draft page 3.1-25, 3.1.4.3 does not indicate that special-status plants do occur at the Jepson Praire Preserve.

E 4. Volume 1, Draft page 3.1-28, 3.1.5.3 does not indicate that two more threatened raptor species, the Black

A Approximately 10 percent of the structures on the upgrade portion of the line would require foundation modifications to accommodate the loadings of the new conductor. These modifications would include the addition of two to four legs and/or the use of additional fill material. In these few cases, it is likely that mechanical control of weeds would not be feasible; however, for the remaining 90 percent of the line, existing agricultural practices can be continued.

B These important resources were shown on Figure 4-3G of Volume 4A of the Draft EIS/EIR.

C We are unaware of any Swainson's hawk use areas near the proposed upgrade route, based on information provided to us by Ron Schlorff of CDFG. Because this section is an upgrade of the existing route, no significant impacts on Swainson's hawk habitat will occur. See Section 1.1.5 of Volume 1 of this Final EIS/EIR for mitigation adopted to reduce impacts to wildlife.

D Such plants do occur at the Jepson Prairie Preserve as is discussed in Section 4.1.4.3 of Volume 1 of the Draft EIS/EIR.

L-302 (continued)

E, F Shouldered Kite and the Northern Harrier, frequent this area. Also, the riparian habitate in the central section Area B should be identified.

G 5. Volume 1, Draft page 4.1-13 and 14, 4.1.2.3 does not indicate that soil impact will only be short term if proper construction methods are used to avoid soil compaction from wet soil in the agricultural land use areas.

H 6. In addition to the information in Volume 1, Draft page 4.1-23, 4.1.5.3, special-status raptor nest sites should be identified within 1000 feet of the right-of-way center line. This mitigation measure is necessary so that construction activity does not distrub the raptors at nesting time.

I 7. The term "winter months" in mitigation measure 5.1-10, #8 requires clearer definition. Construction on agricultural area soils shall not take place between October 15 and April 15. This time frame could be shortened depending upon weather conditions and approval from property owners. Subsoiling to a minimum depth of three feet will be necessary in agricultural areas to break up compaction.

Thank you for the opportunity to comment on this project.

Sincerely,

James C. Campbell

E Neither species is listed as threatened by the state or federal government. The black-shouldered kite is "fully protected" under state law. Its populations have increased dramatically over the last 30 years, and are healthy. The northern harrier is probably declining in California and is designated as a "species of special concern" by DFG (Remsen 1978). This designation holds no special legal status. We could not address all species individually in the Draft EIS/EIR. The transmission line is not expected to cause significant impacts to either species. The northern harrier usually flies very close to the ground and the kite is a very agile flier.

F The riparian habitat referred to by the commentor cannot be identified from his description. The COTP will minimize disturbance to riparian habitat and removal of riparian trees by careful siting of the right-of-way, structures, access roads, and construction areas.

G Comment noted. Information on the short-term nature of compaction of agricultural soils has been incorporated in Section 1.1.4 the Final EIS/EIR.

H See response to L-302 C.

I The term "winter" in mitigation measure number II.A.15 (Final EIS/EIR, Volume 1, Section 1.1.5) is used to indicate a period of relative wetness. The intent of the mitigation measure is to avoid construction during wet periods. As periods of wetness vary from year to year, they cannot be quantified (other than in general terms) into given months. In the event of a dry winter, construction could continue throughout the season.

Mitigation measure number II.A.15 also states that in areas to be restored, compacted soils will be subsoiled and disked.

L-303

WESTLANDS WATER DISTRICT

3130 NORTH FRESNO STREET / P.O. BOX 6056, FRESNO, CALIFORNIA 93703
TELEPHONE: (209) 224-1523
TELECOPIER: (209) 224-1560

BOARD OF DIRECTORS
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MANAGER
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SECRETARY
DAVID ORTH
TREASURER

February 23, 1987

Environmental Coordinator
California-Oregon Transmission Project
P. O. Box 660970
Sacramento, CA 95866

Dear Sir:

Reference is made to your memorandum of January 19, 1987, extending the period for receiving comments on the Los Banos-Gates Transmission Project Draft EIS/EIR until March 2, 1987.

A The District's Board of Directors, at its regularly scheduled meeting of November 17, 1986, adopted Resolution No. 827-86 which requests that PG&E locate its 500KV transmission line (Los Banos-Gates) on the western part of the San Joaquin Valley outside of the boundaries of Westlands Water District.

Enclosed is a copy of the District's Resolution No. 827-86. A copy of the Resolution was also previously forwarded to PG&E and the Fresno County Public Works and Development Services Department.

Sincerely,

Terence M. Garley
Chief Engineer

Enclosure

A The preferred route for the Los Banos-Gates Project coincides with the route requested by Westlands Water District.

L-303 (continued)

RESOLUTION NO. 827-86

WESTLANDS WATER DISTRICT

LOCATION OF PG&E TRANSMISSION LINE

WHEREAS, PG&E is planning to install a 500 KV transmission line on the western boundary of Westlands Water District; and

WHEREAS, one of the routes under consideration by PG&E is the route lying outside the District boundaries; and

WHEREAS, the location of said line within the District would adversely impact farming operations within Westlands; and

WHEREAS, this Board of Directors believes that it would be more cost effective for PG&E if it were to install the line outside of Westlands Water District since that area is not presently being farmed.

NOW, THEREFORE, BE IT, AND IT IS HEREBY, RESOLVED that PG&E is requested to locate its 500 KV transmission line on the western part of the San Joaquin Valley outside of the boundaries of Westlands Water District.

AYES: Directors Stone, Giffen, Hurlbutt, Indart, McFarlane, Smith, Turnquist, and Woolf

NOS: None

ABSENT: Director Ulrici

ADOPTED: November 17, 1986

L-304

CALIFORNIA-OREGON TRANSMISSION PROJECT

WRITTEN COMMENT FORMS

There may not have been enough time to raise and discuss all of the issues you consider important. You may also think of other issues later that should be considered.

If you have other issues, concerns, or general comments that you would like to have considered by the California-Oregon Transmission Project team, please use the following space to write them down. Then drop this form at the meeting registration desk, or give it to one of the staff. Thank you.

A B I am appalled at your decision to ignore agricultural lands because of cost. What will the long range cost be to the farmers? I sincerely hope the affected farmers insist on being paid for their long term loss of income and loss of value to their land. If there is any justice in this nation the cost of destroying farmland will be much greater than I'm sure your cost studies have indicated.

Workshop Date: _____

Location: _____

Name/Address (Optional) Linda Micka
P.O. Box 339 Macdoel CA 96058

For more information, contact: Lawrence T. Klein, Project Director
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866
(916) 924-3995

A Agricultural lands were analyzed as part of the Draft EIS/EIR. A detailed discussion of the impacts to agricultural lands is presented in Section 3.6 of Volume 2A of the Draft EIS/EIR. The economic impacts are further discussed in Section 3.8 of Volume 2A of the Draft EIS/EIR. Affected farmers will be compensated for their short- and long-term losses of income through the value of the easement for the transmission line, which will be established by appraisal and through negotiations. The amount received by the farmer should provide compensation for loss of productive land, cost of additional measures for harvesting land around the towers, and other such factors. The actual cost of easements may likely differ from the amounts projected in the Draft EIS/EIR. In making those estimates, we have tried to be conservative and overstate, rather than understate, crop losses. Please note that these estimates were prepared for the purpose of comparing alternative routes, not for determining damage claims. See responses to L-330 G and L-330 H regarding Project options which would minimize impacts to farmland.

B See responses to L-14 B and L-184 A.

L-305

LAW OFFICES OF
GREGORY D. THATCH
1730 I Street, Suite 220
Sacramento, CA 95814
(916) 443-6956

March 2, 1987

Environmental Coordinator
California-Oregon Transmission Project
Post Office Box 660970
Sacramento, CA 95866

Dear Sir/Madam:

Please be advised that this firm represents the Trust Under the Will of Evelyn Dierssen Ross with respect to the California - Oregon Transmission Project and Los Banos - Gates Transmission Project. This letter is being forwarded on behalf of the Trust and serves as comments to the Draft Environmental Impact Statement/Environmental Impact Report ("hereinafter EIS/EIR").

The Trust is the owner of approximately 300 acres of farmland (Assessor Parcel Number 158-020-14) on Sherman Island in Sacramento County (hereinafter called "Trust Property"). The Trust Property is currently being farmed by George Dierssen III, a trustee and beneficiary of the Trust. The EIS/EIR identifies a transmission line extending approximately one-half mile over the western portion of the Trust Property pursuant to preferred Route S-8C. (EIS/EIR, Vol. 4A, Figure 4-26) Under this design, as many as two towers may be placed on the Trust Property, since tower-to-tower spans are anticipated to range from approximately 1,100 to 1,400 feet. (EIS/EIR, Vol. 3A, P. A-2)

A Our opportunity to comment on the EIS/EIR has been limited due to the fact that Mr. Dierssen did not receive notice of the proposed project until January 7, 1987. Mr. Dierssen attended a meeting on January 13, 1987 at Brentwood where he expressed his dissatisfaction with the location of the towers and transmission line on the Trust Property. However, Mr. Dierssen had been unsuccessful in obtaining a copy of the EIS/EIR until this firm was retained on February 19, 1987. On that day, we obtained a copy of these documents. Thus, only a minimal amount of time has been afforded to review the EIS/EIR and prepare these comments.

B

Our client's principal concern with the project is the proposal to place a tower or towers within the boundaries of the Trust Property. Under the proposed design, at least one of these towers is identified as being placed well within the boundaries of the Trust Property. The placement of these towers on the Trust Property, especially any placement well within the boundaries of the Trust Property, will result in the loss of prime agricultural land. Moreover, such a placement will completely disrupt the existing roll sprinkler system. Further, the tower or towers and the overhead transmission line will prevent the use of aerial applications of seed, fertilizer and chemical sprays. We submit that the environmental impacts resulting from the placement of the towers and transmission line

C

A The public involvement process for the proposed COTP began in early 1985 and consisted of numerous public meetings and workshops through mid-1986, culminating in public review and comment on the Draft EIS/EIR in early 1987. Section 1.1.7 of Volume 1 of this Final EIS/EIR provides a comprehensive description of the public involvement process. To announce the availability of the Draft EIS/EIR and the public hearings on the Draft EIS/EIR, newspaper advertisements were issued during the weeks of December 5, 1986, December 17, 1986, and January 26, 1987. These advertisements included announcements regarding the availability and locations of the Draft EIS/EIR. Owners potentially affected by the preferred route were notified of the availability of the Draft EIS/EIR through Project newsletters based on names and addresses obtained from County records showing ownership of the potentially affected properties. The Evelyn Dierssen Ross Trust was mailed notices of the availability of the Draft EIS/EIR.

B All requests for the Draft EIS/EIR document were accommodated. There should have been no reason why Mr. Dierssen was unable to obtain a copy of the Draft EIS/EIR.

L-305 (continued)

C on the Trust Property are significant, cannot be mitigated, and clearly outweigh the benefits of such placement.

As stated, the EIS/EIR identifies the placement of a tower or towers well within the boundaries of the Trust Property. The towers are described as having a 35 foot by 35 foot base. The D EIS/EIR further provides that no crops may be planted under or through the tower. (EIS/EIR Vol. 2A, P. 3.6-22) Also, an access road to the towers will need to be constructed which will cover an area 15 feet in width, averaging 300 feet in length. (EIS/EIR, Vol. 2A, P. 3.6-21) Accordingly, if a tower or towers are constructed upon the Trust Property, a significant amount of the most productive farmland in California will be permanently destroyed.

The Trust Property lies within the Southern section of the study area of the proposed project. The EIS/EIR provides that the land in the Southern section contains some of the most productive farmland in California. (EIS/EIR Vol. 1, P. 3.1-30) The EIS/EIR specifically identifies the Trust Property as agricultural preserve (EIS/EIR Vol. 4A, Figure 4-2G) and notes that the Sacramento County General Plan classifies the Trust Property as intensive agriculture. (EIS/EIR Vol. 2A, P. 3.6-62)

In evaluating the environmental impacts of the proposed project, the EIS/EIR refers to the California Land Conservation Act, also known as Williamson Act, (Govt. Code Section 51200 et. seq.) and the Federal Farmland Protection Policy Act. (7 U.S.C. 4201 et. seq.) (EIS/EIR Vol. 2A, P. 3.6-25)

The Trust Property has been placed under a Williamson Act Contract pursuant to the California Land Conservation Act. Landowners are encouraged to participate in such contracts so land can be preserved for agricultural uses. Such preservation prevents agricultural lands from being converted to urban uses. E The construction of a tower or towers and transmission line on the Trust Property designated as agricultural preserve would serve to frustrate the Williamson Act Contract in that our client would be effectively precluded from farming a significant portion of the Trust Property.

Similar to the California Land Conservation Act, the policy of the Federal Farmland Protection Act is to protect environmentally significant agricultural land from irreversible conversion to uses which result in its loss as an environmental or essential food production resource. To enforce this policy, F federal agencies are required to identify and take into account the adverse effects of federal programs on the preservation of farmland. Alternative actions that could lessen such adverse effects are required to be considered. Thus, placement of a

C Comment noted. See responses to specific comments below.

D For the purpose of analyzing impacts to farming, it was assumed that crops were not replanted under the transmission line towers. However, crops are generally replanted under the towers and farming operations are only discontinued at the concrete footing locations. Many farmers continue normal farming operations around the towers. To analyze the impacts for the purposes of the Draft EIS/EIR, a road 300 feet long and 15 feet wide was assumed for each tower. In reality, an access road is constructed to towers only where necessary. If the road is in fact built across farmland, the farmer would be compensated for damages. The road would be removed by the construction contractor or by subsequent farming operations and the land again returned to farming.

We do not believe that the land other than that used for footing locations would be permanently destroyed for farming activities. See also L-14 A and T-175 D.

E We believe that transmission lines and towers can have an impact on agriculture, depending on the location of the line, type of crop, irrigation practices, etc. The potential impacts are discussed in Section 3.6.2.2 in Volume 2A of the Draft EIS/EIR. See also response to L-204 E. However, we are not aware of any instances where farming has specifically been precluded beneath transmission line conductors, although we agree that farming under individual towers may be precluded. Long-term impacts to agriculture on the 300 acre Trust property are anticipated because the property is in an agricultural preserve, but farming will still be feasible on the parcel. Significance criteria for agricultural impacts are presented on page 3.6-28 of Volume 2A of the Draft EIS/EIR. See also response to T-30 C.

F There is no provision in the Farmland Protection Act that would prohibit the placement of towers and a transmission line on farmland. We have identified and taken into account the adverse impact the Project would have on farmland. We have identified prime farmland and farmland of statewide importance that would be

L-305 (continued)

F tower or towers and a transmission line on the Trust Property would be inconsistent with the policy set forth in the Federal Farmland Protection Act.

G Farm activities, such as irrigation, cultivation, planting, weed control, chemical applications and harvesting, will be permanently affected as well. (EIS/EIR Vol. 2A, P.3.6-3)

Wheat, barley, corn and sugar beets are the crops which are grown on the Trust Property. Wet ground is needed for the production of these crops. In order to provide for this, the Trust Property is equipped with a roll sprinkler system. The cost of such a system is significant. The placement of a tower or towers within the cultivated land will render this irrigation system impossible to use. To continue using this sprinkler system, the system would need to be totally dismantled, physically moved past the towers and reassembled. This procedure, which would need to be repeated constantly throughout the growing season, would take at least a day to complete on each occasion. As a result, crop yields will be seriously reduced while production costs will rise. (EIS/EIR, Vol 2A, P. 3.6-4) The economic results will be monumental.

H Of particular note is the fact that the tower which is identified as being placed well within the boundaries of the Trust Property will be constructed on the most productive area of the farm. The loss of the use of the sprinkler system in this area will thus result in a major loss to our client. As but one example is the fact that our client currently holds a contract for sugar beet production. The only area of the Trust Property suitable for growing sugar beets is exactly that area that will be rendered useless by the construction of a tower.

I In order to fertilize, seed and chemically spray the Trust Property for such things as weed control, aircraft are used. The erection of a tower or towers and transmission line on the Trust Property presents collision hazards for aircraft (EIS/EIR, Vol. 2A, P. 3.6-3) and may prevent the use of a aerial application all together. Without the use of aerial applications, a crop cannot be efficiently and economically produced.

It is critically important to recognize that there is no available alternative to the use of aircraft. There are two fundamental reasons for this fact. Firstly, for much of the year the ground is too wet to permit the use of ground equipment within the fields. Secondly, Sherman Island is a windy area with variable and inconsistent wind patterns. In order to spray, the wind conditions must be proper. For ground spraying, this means that equipment and personnel would need to be brought to the site and would then sit waiting for the proper wind conditions. Days

F (cont.) affected and found that a significant residual impact would occur on several types of farming operations. Three alternatives were identified in the Delta - A, B, and C - and were considered carefully for their potential to lessen such adverse impacts. Given the agricultural nature of the Delta region, it is virtually impossible to find a route that does not affect productive farmland. Therefore, we feel that the COTP is consistent with federal policy which states that federal programs, to the extent practicable, should be compatible with state, local, and private programs to protect farmland.

G Short- and long-term agricultural economic effects were analyzed and are shown in Volume 2A of the Draft EIS/EIR in the far right-hand column of Tables 3.8-6 and 3.8-7. The column is entitled "Average per Corridor Mile." The average loss per segment mile was estimated to avoid dilution of impacts resulting from averaging losses over the entire route. For a discussion of effects on sprinkler irrigation systems, see response to T-6 D.

H COTP staff have discussed the problem with Mr. Dierssen's attorney and it appears that the tower location can be moved to avoid interference with the sprinkler system.

I See responses to L-14 A and T-175 H.

L-305 (continued)

I could literally pass before the conditions were correct. The cost of this is clearly prohibitive. In fact, our client reports that ground spraying companies will not even agree to service the Trust Property because of these conditions.

J The only mitigation measure the EIS/EIR identifies with regard to these significant impacts is that towers will be set near field boundaries or service roads. (EIS/EIR, Vol. 1, P. 5.1-4) However, the proposed design of the transmission line over the Trust Property will not allow the towers to be placed near a field boundary or service road. Rather, the tower or towers will need to be placed in or around the highest production area of the entire farm. Quite clearly, therefore, the Trust Property will be severely impacted by the proposed project and no adequate mitigation measure has been identified to eliminate or reduce such impacts.

In light of the foregoing, we submit that neither towers nor a transmission line should be placed on the Trust Property. Moreover, neither towers nor a transmission line will need to be

K placed on the Trust Property. Feasible alternatives to Route S-8C clearly exist.

One acceptable alternative is Route S-8A or a modified version of that route. Route S-8A will maintain distance from the existing intertie lines. This route is also the most direct route across Sherman Island, thus minimizing the overall acreage of agricultural land on the Island that would be affected. (EIS/EIR, Vol. 2A, P. 2.3-22) In fact, we note with considerable interest that the discussion of Route S-8A in the EIS/EIR, particularly across Sherman Island, appears to conclude that Route S-8A is actually the preferred route with S-8C being a less acceptable alternative.

L If the entire design of route S-8A is for some reason deemed less than desirable, a modification of this route should be considered. Such a modification might include the transmission line crossing the San Joaquin River as proposed by Route S-8C, thus taking advantage of the narrowest river crossing. (EIS/EIR, Vol. 2A, P. 2.3-22) Immediately after crossing the river, the line could then be constructed on the west side of the existing lines, following the same route across the Island as proposed by Route S-8A. This route would cross over the Island more directly than Route S-8C thus, affecting less agricultural land.

M As a second alternative, the existing towers and transmission line could be upgraded and utilized. Apparently, this method will be utilized in a substantial portion of the proposed project. (It appears as though the project design provides for over one-half of the existing transmission line to

J It appears that an adjustment can be made to the tower location on the Trust property so that it can be placed at a field boundary.

K Route segment S-8A is located on the west side of the existing Intertie. This route segment connects with route segments S-9A, S-9B, and S-9C into Tracy Substation. This route was ruled out in part because it would require crossing the existing Intertie west of the Tracy Substation, along with possible reconstruction of the Intertie to provide sufficient separation in that area. This route also would cross near the Byron Airport facility and would require construction of two new river crossings. See also response to L-309 VV.

L A modification of route segment S-8A in order to utilize the existing San Joaquin River crossing to the east of the existing 500 kV Intertie, and subsequent re-crossing of the existing 500 kV Intertie to relocate to the west, would require crossing the existing Intertie where the two lines are sited on adjacent rights-of-way. This would not meet COTP reliability criteria to prevent a simultaneous failure of all three transmission lines which could cause catastrophic outages throughout the western United States.

M Approximately 170 out of 190 miles of the existing Western double circuit Shasta-Tracy, Cottonwood-Tracy 230 kV transmission line will be upgraded in its present location. This is possible because the line does not parallel the existing AC Intertie. The line does parallel the Intertie in the area south of the Sacramento River. The line south of the river cannot be upgraded in place because of the reliability needs of the Project to prevent a simultaneous outage of all three 500 kV lines.

L-305 (continued)

M be upgraded). Constructing a new line on Sherman Island would affect vital agricultural land and environmental resources to a much greater extent than impacts associated with an upgrade. Most certainly, upgrading the existing line and maintaining prime farmland located on the Island outweighs the benefits of a new route, especially considering the extensive use of upgrades through the project.

N As an additional but far less acceptable alternative, the location of the towers could be moved from the highest farm production area of the Trust Property to the outer boundaries of the property. This location would seemingly allow for the continued use of the existing irrigation system. However, if the transmission line crosses over or is immediately adjacent to the Trust Property, aerial applications of seed, fertilizer and chemical sprays will still be affected.

The above comments represent our client's response to the EIS/EIR during the review and comment period. We request that you give serious consideration to these comments. If the project were built as proposed, the environmental impacts would be significant, would be unmitigated, and would cause our client significant harm. Clear and reasonable alternatives exist to avoid such a result.

Very truly yours,

Gregory D. Thatch

GDT:mlm
cc: Mr. George Dierssen III
C009.LTR

N Locating towers at the outer boundaries of the property has been considered and appears to be feasible. See also response to L-14 A.

L-306

Public Utilities Commission

STATE OF CALIFORNIA

March 2, 1987

Rick A. Lind
Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Dear Mr. Lind:

The staff of the California Public Utilities Commission (CPUC) appreciates the opportunity to review the Draft EIS/EIR for the California-Oregon Transmission Project (COTP). A project of this magnitude and importance to the economy of California requires careful consideration by all parties, including the CPUC as a Responsible Agency under CEQA.

Our detailed comments on the report are contained in Attachment A to this letter. These comments are made to assist the Lead Agency create an EIR that is complete and objective and that will contain the information necessary for the CPUC to fulfill its job as a Responsible Agency.

A As a Responsible Agency, the CPUC's obligation is to independently evaluate the project's significant impacts, alternatives, and mitigation measures. Pursuant to its responsibilities under the Public Utilities Code, the CPUC must review the need for the project. Your response to these comments will contribute significantly to the CPUC's better understanding of the Project, to the formulation of a Final EIR that will allow the CPUC to reach the independent conclusions required of a Responsible Agency, and to the CPUC's ability to review expeditiously the investor-owned utilities' applications for certificates of public convenience and necessity.

We can appreciate the difficulties you faced in preparing a document as comprehensive as the Draft EIS/EIR for the COTP. However, we believe the information we request in our comments is available. We have endeavored to cite to those information sources in our comments.

A We understand that it is the Public Utility Commission's policy to require the applicant(s) to show need for the project. The investor-owned utility participants in the COTP are the entities which are subject to CPUC jurisdiction.

L-306 (continued)

We hope our comments are clear and useful. Should you have any questions, please contact Mike Burke at (916) 322-7316.

Thank you again for the opportunity to review the Draft EIS/EIR.

Sincerely,

Victor Weisser
Executive Director

cc: President Hulett
Commissioner Vial
Commissioner Duda
Commissioner Wilk
Janice E. Kerr
William R. Ahern
David E. Morse
Burton W. Mattson
William F. Dietrich
Mike Burke
Sheldon Rosenthal
James E. Scarff
John Busterud, PGandE
Tim Still, SCE
Mike Danna, SDG&E

L-306 (continued)

ATTACHMENTS

A. Detailed Comments

B. Letter from David E. Morse to Andy Niven of PGandE regarding investigation of renegotiated transmission service contracts and requirements rates.

C. Newsletter #1 of the Inland Intertie.

D. Environmental Protection Plan for the Devers-Valley Serrano Project.

L-306 (continued)

ATTACHMENT A
(33 pages)

DETAILED COMMENTS ON DRAFT EIR/EIS

1. THE ENVIRONMENTAL DATA ARE TOO GENERAL AND THE ANALYSIS TOO SPECULATIVE.

B C D E

The EIR does not have a sufficient level of site-specific data for the North of Tesla facilities to reach conclusions regarding project preferred and environmentally superior routes. The data does not support the determination that many of the significant impacts could, as alleged, be mitigated to a level of insignificance.

The EIR should contain data collected in the field along the project route that identifies the presence and location of critical environmental resources. For special status plants and animals, that data should be collected at the appropriate time of year to determine the presence and extent of such species or their habitat. The discussion of field surveys on Pg. 2.2-8 of Vol 2A should be expanded to describe the exact nature, timing, and location of field surveys conducted, and should address why the Spring months (generally considered as the most important for identifying special status plant habitat) were avoided.

F G H I

The document throughout appears to rely on a three-step process for analyzing impacts: 1) display of data in a scale too large to accurately assess the existence of critical resources; 2) analysis of impacts through an overlay process where juxtaposition of the project and an environmental resource constitutes an impact; and 3) reliance on the blanket assumption that mitigation measures could be applied to mitigate adequately the impact. The generality of the data in the Draft EIR would normally be associated with a screening study to determine the appropriate corridor. While a valuable step in the process, it does not allow for the specific analyses and findings needed for an EIR, and does not support many of the findings and conclusions in the report.

Specifically, the following areas are among those needing further documentation:

J

a. The maps in Section 3.0 of Volume 1 and those in Volume 2A are all at a scale of 1:250,000. This scale is too large to determine distribution of resources, and does not allow conclusions to be drawn regarding the effectiveness of routing or spanning as mitigation. A more appropriate scale would be at least 1:62,500 for those areas where critical resources

B See response to L-306 F.

C See response to L-306 F.

D Detailed field surveys are being conducted in 1987 and 1988 to respond to environmental requirements beyond CEQA and NEPA such as the Threatened and Endangered Species Act and the Antiquities Act. The Draft EIS/EIR adequately analyzed potential impacts within 1,500-foot wide routes. The COTP will avoid disturbance and adverse impacts to such resources during siting of the right-of-way, structures, access roads, and construction areas.

E The field surveys referred to by the commentor were reconnaissance-level only within corridors several miles wide. Field surveys of special-status plants will be conducted during the appropriate months of 1987 and 1988. See response to L-306 D.

F The large study area for the COTP dictates that a "winnowing" process be used in selecting the best location for the proposed transmission line. That process should continue even beyond the selection of a 1,500-foot wide route into the selection of a 200-foot wide easement.

The COTP conducted a three-phase analysis of determining the impacts associated with the proposed transmission line. Phase I identified the study area and 3-5 mile wide corridor segments and served as a starting point for route identification. The size of the study area and the COTP's complexity demanded that a comprehensive approach be taken to identify corridors. Phase II involved a multidisciplinary approach to identify the location of 1,500-foot wide alternative transmission line routes within identified corridors. This included field studies that were done to assist with siting the 1,500-foot wide routes and the substations. Site-specific cultural and biological resources

L-306 (continued)

F (cont.) surveys will be conducted in 1987 and 1988. In Phase III, the affected environment and the environmental consequences of identified routes were analyzed and measures to mitigate potential impacts were evaluated. This three-phase approach provided a level of detail appropriate for the analysis of potential impacts and for identifying a preferred route. Please refer to Volume 2A of the Draft EIS/EIR for further details on the corridor, route selection, and impact analyses methods. See also responses to L-203 H and L-371 E. See also Section 1.2.2 of Volume 1 of this Final EIS/EIR for further discussion of the routing process.

Mitigation is an important part of the environmental analysis. The COTP Participants or other entities responsible for the operation and maintenance of the transmission line, as part of its construction and operation practices, will employ a number of feasible mitigation measures to limit impacts. Implementation would be assured by first preparing a compliance monitoring plan, and second, including the specifications of the plan in construction contracts for work on the COTP. Inspectors representing the COTP would monitor construction activities and will have the authority to enforce environmental requirements in the contract specifications. Section 1.1.5 of Volume 1 of this Final EIS/EIR presents the adopted measures.

G See response to L-306 F.

H See response to L-306 F.

I See response to L-306 F.

J A map scale of 1:250,000, developed from 1:100,000 scale base maps, was selected because of the large area covered in this EIS/EIR. Maps at 1:62,500 scale were used by discipline specialists to analyze impacts during the routing process. In addition, the use of high-quality color affected environment maps minimized the need for smaller scale maps because of their clarity and detail. Resources of the COTP study area are presented in Section 3.0 of Volume 2A of the Draft EIS/EIR.

L-306 (continued)

J

occur, or alternately, the report could contain a detailed written description of the resources.

K

b. The discussion of lavatube collapse in Table 2 of the Summary in Vol 1., particularly the effectiveness of routing adjustments as mitigation, is not supported by data elsewhere in the report. Such a conclusion cannot be drawn without specific locations of the lavatubes.

c. The discussion of siting adjustments as mitigation for sedimentation of streams in Table 2 of the Summary in Vol. 1 is not supported by data elsewhere in the report. A conclusion that such mitigation is totally effective cannot be drawn without first delineating the actual route.

L

d. The discussion of right-of-way adjustments to avoid wells, aquifer recharge areas, and streams as mitigation of impacts on water supplies in Table 2 of the Summary in Vol. 1 is not supported by information elsewhere in the document. A conclusion that such mitigation is totally effective cannot be drawn without knowing the location of these resources and the actual route of the project.

e. The discussion of siting adjustments as mitigation of impacts on special status aquatic species in Table 2 of the Summary in Vol. 1 is not supported by information elsewhere in the document. Conclusions regarding the effectiveness, regardless of how tentative they are, cannot be drawn without determining the location of the habitats, the final route, and the amount of residual impact expected.

f. The discussion of siting adjustments as mitigation of the impacts to Redband Trout habitat in Table 2 of the Summary in Vol. 1 is not supported by information elsewhere in the document. Conclusions regarding the effectiveness of such mitigation cannot be drawn without identifying specific locations of habitat, and the specific location of the project features in that area.

M

g. The discussion of siting adjustments to span small wetlands in Table 2 of the Summary in Vol. 1 is not supported by information elsewhere in the document. Conclusions that such mitigation is totally effective cannot be drawn until the locations of such wetlands and the project features are determined.

h. The discussion of siting adjustments as mitigation of impacts on wetlands of high quality in Table 2 of the Summary in Vol. 1 is not supported by information elsewhere in the document. Conclusions that such

K

Mitigation measure II.B.3 in Section 1.1.5 Volume 1 of of the Final EIS/EIR is sufficient to avoid impacts to the COTP from lava tube collapse. When a final centerline has been selected it will be possible to determine if specific tower placement adjustments are required. Final routing adjustments in lava tube areas will be coordinated through the appropriate land management agencies.

Regarding siting adjustments as mitigation to sedimentation of streams, the route delineated is the basis for the statement in the preferred route. It is the judgment of the COTP environmental resource specialists and the COTP engineers that the preferred route offers the opportunity for a nominal 200-foot wide easement in which mitigation of sedimentation can be accomplished.

L

Commitments to site specific routing and biological investigations are contained in Section 1.1.5 of Volume 1 of this document.

Mitigation measure III.F in Section 1.1.5 of Volume 1 of this Final EIS/EIR reads as follows:

A biological assessment will be prepared pursuant to Section 7 of the Endangered Species Act to identify impacts to federally listed and candidate aquatic plant and wildlife species. Where impacts are identified, appropriate mitigation will be developed in consultation with the USFWS. As soon as practical after locations of access roads and tower sites are known, consultation will be initiated with fish and game departments to identify site-specific impacts to water resources and state-listed endangered, threatened, or otherwise sensitive aquatic plant and wildlife species. Where impacts are identified, appropriate mitigation will be developed in consultation with the fish and game departments.

The "document," or Draft EIS/EIR, is composed of 8 separate volumes. Volume 2A, Phase III report, specifically details the information that the commentor says is lacking from the document. Section 3.3.4 identifies the specific data developed for quantification and analysis of impacts. Page 3.3-5, Table 3.3-1, Table 3.3-2, Table 3.3-3, page 3.3-10 and 3.3-11 provide the detailed information the commentor requires to develop conclusions concerning the effectiveness of the mitigation measures.

M

The information referred to was included in Volume 3A, Technical Appendices, Appendix E "Wetlands and Floodplains Crossed by the Preferred Alternative." Site specific surveys of the wetlands that may not be able to be spanned will be conducted in consultation with the U. S. Army Corps of Engineers. If necessary, a Section 404 permit will be obtained. An update to the wetlands and floodplains Report is presented in Section 1.5.5 of Volume 1 of this Final EIS/EIR.

L-306 (continued)

M

mitigation is totally effective cannot be drawn until the locations of the wetlands and the project features are determined.

N

i. The discussion of siting adjustments as mitigation of impacts on unique or sensitive plant communities in Table 2 of the Summary in Vol. 1 is not supported by information elsewhere in the document. Conclusions that such mitigation will be totally effective cannot be drawn without determinating the locations of the habitat and project features in that area.

j. The discussion of siting adjustments as mitigation of impacts on vernal pools in Table 2 of the Summary in Vol. 1 is not supported by information elsewhere in the report. Conclusions regarding the effectiveness of such mitigation cannot be drawn without determining the locations of vernal pools and project features in their vicinity.

O

k. The discussion of the use of siting adjustments as mitigation of impacts on big-game habitat in Table 2 of the Summary in Vol. 1 is unsupported by information elsewhere in the report. Conclusion that such mitigation would be totally effective cannot be drawn without determining the locations of the habitat and the project route.

l. The discussion of siting adjustments as mitigation of impacts on nest and den sites of special-status and sensitive wildlife in Table 2 of the Summary in Vol. 1 is not supported by information elsewhere in the report. Conclusions cannot be drawn that such mitigation would be totally effective without determining the locations of nest and den sites and project features.

P

m. The discussion of routing adjustments as mitigation of impacts on residential communities in Table 2 of the Summary in Vol. 1 is not supported by information elsewhere in the report. The recent discovery in hearings on the EIR of a residential community on the Pit River Rim illustrates that insufficient data has been gathered regarding the affected landowners and residents along the route to draw conclusions regarding the level of impact and the effectiveness of mitigation.

Q

n. The discussion of spanning as mitigation of impacts on archaelogical or historic sites in Table 2 of the Summary in Vol. 1 is not supported by information elsewhere in the report. Conclusions that such mitigation is totally effective cannot be drawn until the locations of these sites and the project features are determined, and only then after an evaluation of

N

See responses to L-306 K, L-306 L, and L-306 M.

In addition, a biological assessment as per Section 7 of the Endangered Species Act is being prepared. There will also be site specific surveys of the centerline conducted and completed prior to construction. Appropriate mitigation will be developed in consultation with the U. S. Fish and Wildlife Service and the appropriate State Fish and Game Departments. See mitigation measures presented in the biological resources portion of Section 1.1.5 of Volume 1 in this Final EIS/EIR.

O

The information referred to can be found in the Draft EIS/EIR, Volume 2A, Phase III Data and Impact Analysis Report, Section 3.5. More specifically, see Sections 3.5.4.3 and 3.5.4.4 and Tables 3.5-2, 3.5-3, 3.5-5, 3.5-6, and 3.5-7.

P

Please see information contained in the Draft EIS/EIR, Volume 2A, Phase III, Section 3.6 for a response to this comment. Section 3.6.3.1, page 3.6-14 details data collection methods for developed land use. Discussions with the Shasta County Planning Department did not reveal the presence of a residential community in the Flatwoods area. The area is heavily timbered, surrounding areas are sparsely developed, and early aerial overflights did not reveal the presence of any homes. Contacts with the affected landowner led to the identification of a new route option presented and analyzed in the Supplement to the Draft EIS/EIR that avoids many impacts to the community. Other new route options in the Supplement were also the result of contacts with affected landowners.

Q

The requested information can be found in Volume 2A, Section 3.9 of the Draft EIS/EIR. The effectiveness of the mitigation measures stems from the Memorandum of Agreement (MOA) between TANC, Western, the State Historic Preservation Officers and the Advisory Council on Historic Preservation. Their signatures on the MOA attest to the satisfactory nature of the mitigation measures. Consultation with Native Americans will further assure the acceptability of the mitigation measures currently adopted. Additional measures may be developed during the Native American consultations.

L-306 (continued)

Q

whether the project features would diminish the archaelogical or historical value of the sites.

R

o. The discussion of spanning as mitigation of impacts to properties of architectural signifigance in Table 2 of the Summary in Vol. 1 is not supported by information elsewhere in the report. Conclusions that such mitigation would be totally effective cannot be drawn until the locations of these properties and project features are determined, and only then after an evaluation of whether the project features would diminish the architectural significance of the property.

S

p. The conclusion made on Pg. 13 of the Summary in Vol 1 that there will be no anticipated significant impacts to forestry, vegetation, prime farmland, water quality, recreational facilities, earth resources, or ambient noise levels are not supported by information elsewhere in the report. Such conclusions cannot be drawn until the location of project features and critical resources are determined, and the effect of rerouting to mitigate other significant impacts is taken into consideration.

T

q. Because of the heavy reliance on route or site adjustments as a mitigation measure, the EIR should contain a discussion, based on the appropriate site and project-specific detail, of the conflicts that may arise in the mitigation process, and how they will be resolved. For example, the report should address what would occur if a site adjustment to mitigate one impact causes another. Such an occurance could create a significant residual impact, and is not addressed in the report.

U

Finally, without the results of field surveys conducted at the proper time of year, a determination of the environmentally superior route is not supportable.

V

W

The severity of this deficiency could be partially mitigated by the use of an Environmental Protection Plan and related activities during construction, as TANC contemplates (this approach will be discussed in more detail later, and a copy of a Plan used by the CPUC in a prior proceeding is attached). However, even with such a plan, fundamental deficiencies in the level of site-specific data still persist, and leaves the CPUC staff unable to advise the CPUC on the independent conclusions required of a Responsible Agency by CEQA.

R

A survey has been undertaken and it was determined that no sites of architectural significance will be affected by the COTP. The results of the survey are documented in the Historical Resources Study for the California-Oregon Transmission Project (Owens, 1986).

S

The paragraph on page 13 of Volume 1 of the Draft EIS/EIR refers only to the Pacific Northwest Reinforcement Project, not the COTP/Los Banos-Gates portion of the proposals. The discussion and evaluation of environmental impacts for the Pacific Northwest Reinforcement Project are contained in Volume 2C of the Draft EIS/EIR document.

T

All potentially significant impacts that may occur within the 1,500-foot wide preferred route were characterized as part of the analysis presented in the Draft EIS/EIR. An adjustment of the centerline of the COTP within the 1,500-foot wide route would not result in a potentially significant impact that is not already characterized in the Draft EIS/EIR.

U

Resource specialists in plant and wildlife biology were members of the team that recommended the environmentally superior route. Their knowledge of the alternate routes and field visits to particularly sensitive areas are sufficient to make a comparison of the routes as documented throughout the Draft EIS/EIR. The biological surveys for threatened and/or endangered plant species are being conducted during the spring and summer months of 1987 and 1988 pursuant to environmental requirements beyond NEPA and CEQA. Locations of sensitive plant species were not considered in the comparison of alternatives. This is because the location of sensitive plant populations are usually quite small in areal extent and can easily be avoided by making adjustments in the centerline within the 1,500-foot wide route.

L-306 (continued)

V The CPUC, TANC and Western have consulted throughout 1986 and 1987 to coordinate the CEQA/NEPA requirements for the COTP and the Los Banos-Gates Project. Under an Interagency Agreement, the CPUC has provided the necessary CEQA and NEPA documentation for the Los Banos-Gates Project, including the information necessary to identify the environmentally superior route for Los Banos-Gates. Since a similar process was used for the COTP, the basis for the CPUC's concern is unclear.

Identification of the environmentally superior route was based on extensive research and field review to identify major areas where potentially sensitive resources exist. With the 1,500-foot wide alternative routes under consideration, detailed field surveys for all study routes were not required to determine the environmentally superior route. A detailed field survey as characterized by the comment will be conducted in 1987 and 1988, and will result in the identification of site specific sensitive resources that can be avoided through adjustments of the proposed centerline within the 1,500-foot wide route. The compliance monitoring plan for the COTP will be based on the results of the surveys. Section 1.1.5 of Volume 1 of this Final EIS/EIR further describes the compliance monitoring plan. See also responses to L-203 H and L-371 E.

W Site-specific surveys of all route alternatives and options were not practicable prior to the selection of the preferred alternative due to the large geographic area, number of routes, and excessive costs. Selected areas of certain routes were surveyed early in the route identification process as described in response to L-325 L. Detailed biological and cultural resources surveys of the preferred route, access roads, and other areas of surface disturbance will be completed in 1987 and 1988 and documented as part of the biological and cultural resources assessments for the COTP.

L-306 (continued)

X 2. PROJECT COSTS.

Project cost estimates mentioned first on Pg 1.5-1, and used throughout the report, should contain all, not 7/16 of the Los Banos-Gates costs. The assumption that the Southern California participants need only 7/16 of the line's capacity does not justify prorating the cost of this portion of the COTP unless TANC can demonstrate there are cost-effective uses of the other 9/16 of the Los Banos-Gates capacity.

Y Based on confidential information provided to the CPUC by PGandE pursuant to Sec. 583 of the Public Utilities Code and General Order No. 66-C we can conclude that the only reason for constructing Los Banos-Gates at this time is to satisfy the requirements of the Memorandum of Understanding between the COTP Participants. Without the COTP, the Los Banos-Gates portion of the Project would not be constructed until the late 1990's, or early in the next century, if at all.

Z The EIR should account in some fashion for all of the Los Banos-Gates costs. Any Statement of Overriding Considerations, or any analyses or conclusions in the EIR based on 7/16 of Los Banos-Gates costs would be deficient.

3. ALTERNATIVES.

AA Alternatives are not adequately addressed, and some seem to be improperly rejected.

BB a. Mix of Alternatives.

None of the resource plans that were compared in Section 2 of Volume 1 include a mix of actions. The development of a "mixed strategy" alternative would more accurately characterize the actions that would or could be taken by the state's utilities in lieu of the COTP, and is the best means, in our experience, for concluding whether these measures will or will not meet the Project's objectives, once they are clearly articulated.

CC For a project of this magnitude, a single alternative is unrealistic; rather, a series of several measures would probably be taken, including:

- QF's,
- Mid-range and peaking plants,
- Conservation and load management,
- Rate adjustments, such as a reduction in the requirements rates or transmission service charges currently paid to IOU's by Munis,
- Other transmission lines, such as the Trans-Sierra Project, the Inland Intertie, or other configurations of this or other projects,

X Only 7/16 of the costs of the Los Banos-Gates costs are considered to be Project-related because only up to 7/16, if any, of the transfer capability of the Los Banos-Gates line may be needed to transmit Northwest power to the Southern California Participants. As stated in Section 1.5 of the Draft EIS/EIR, the remaining transfer capability of the Los Banos-Gates transmission line is assumed to be attributable to purposes other than the importation of energy and capacity from the Northwest. It is a generally recognized principle of cost allocation that project costs and benefits should be allocated in proportion to the use of the facilities. Since the Project may require the use of only 7/16 of the line's capability, only 7/16 of the costs are considered. The balance of the costs and benefits from using the remaining transfer capability are appropriately excluded from the analyses of the Project. The other uses of the Los Banos-Gates transmission line, if the line is constructed, are associated with system requirements of Pacific Gas and Electric Company, and are unrelated to the COTP.

Y We note the comment and cannot add any additional information on any confidential communications between PGandE and the Public Utilities Commission.

Z See response to L-306 X.

AA See responses to L-306 BB through L-306 MM.

BB It is difficult to clearly articulate one mixed strategy which all of the Participants would consider to be a "preferred" mix. The CEC endeavors to do this in their biennial report, although individual utilities are not always in agreement with "adjustments" made to their individual forecasts. Therefore, in the early development of the COTP, four alternative resource plans were selected. To some degree, each of the alternatives quantitatively analyzed is a "mixed strategy" in that approximately 7600 MW of Qualifying Facility (QF) power is added to the California statewide resource mix from 1985 to 2004 (see the Draft EIS/EIR, Volume 3A, Appendix B, Table 5-1) which exceeds the CEC's forecast for QF resources. The QF's in the assumption are not selected site by site. The Draft EIS/EIR analysis allows for the continuation of non-utility sponsors bringing forward projects rather than assuming utility or government control over individual site selection. Similarly, specific conservation programs are not selected for implementation in the resource plans presented in the Draft EIS/EIR analysis of the COTP. Continuation of the existing conservation programs and incentives is assumed. The refurbishments alternative is more site specific. The combined effect of these assumptions is a "mix" of resources.

Each of the above categories is reflected in the utility resource plans at a level exceeding the CEC 1985 forecast. The excess of the sum of the resources within these categories over the sum of the resources in the CEC plans is a mix of alternatives not considered in those plans. Even with this additional "mix"

L-306 (continued)

BB (cont.) alternative the COTP is cost effective because it can still displace construction of new combustion turbine capacity and operation of fuel resources without displacing conservation or QF resources.

CC Utilities will use energy received over the COTP to displace the highest cost displaceable generation in operation on their system, usually gas or oil fired. They will use firm capacity contracts allowing them to rely on deliveries over the COTP to avoid construction of dispatchable peaking type resources, such as combustion turbines (CT's). If additional QF or cogeneration facilities are available, it is desirable that they be dispatchable type resources to displace the same oil or gas-fired generation and to avoid construction of the same CT peaking facilities.

For a discussion of a larger mix of alternatives generation see the response to L-306 BB. For a discussion of additional conservation as a portion of that mix see the response to L-3 S. For a discussion of alternative transmission lines and transmission upgrades see the responses to L-306 EE and L-306 V2. "Peaking plants," as referenced in the comment, is assumed to mean CTs which are considered at length in the basic Draft EIS/EIR analysis. "Mid range" plants are assumed to mean combined cycle plants or plants generally having somewhat higher fixed capital costs than CTs but less than baseload coal and having energy costs that are lower than CTs but substantially more than baseload coal. In a scenario with more mid-range plants firm capacity, purchases or exchanges would displace more capital costs. Energy benefits would not change materially because there is substantial oil and gas-fired generation already on the system. Thus adding mid-range plants to the alternative scenario could show substantially greater COTP benefits and has little chance of showing fewer benefits.

"Rate adjustments" could offer municipal utilities an alternative to the COTP if the duration of the rate were sufficient to assure the benefits equal the life time benefit of participation in the COTP. To date, there is no data on how such an offer could be made on a long-term basis consistent with the needs of the supplying utility and its ratepayers. Short-term rate adjustments do not replace long-term opportunities. This is especially true since there is short-term availability firm surplus capacity and energy in excess of probable long-term amounts in the Northwest.

What "rate adjustments" involving transmission service changes might mean or how reduced charges for the very limited interregional access allocated to municipal utilities by the IOUs could be an alternative is not clear in the comment. If what is contemplated in the comment is a new transmission arrangement making a portion of existing Intertie capacity available to municipal utilities, the arrangement would have to provide benefits to the municipal utilities that generally are equivalent to the long-term benefits of the COTP. It would require a clear understanding of such a concept to begin to evaluate it as a COTP alternative and compute overall benefits to California.

L-306 (continued)

CC

- Measures to further enhance the capacity of the existing interties, such as phase shifters, series compensation, etc.

DD

The renegotiation of requirements and/or transmission service rates, is a serious possible alternative. We have already begun to investigate this option with the PGandE and SCE, as evidenced by the attached letter (Attachment B).

EE

The CEC's analysis of capacity needs in the state indicates a more economic time for pursuing new capacity would be the mid to late-1990's. As can be seen in the attached newsletter, the Inland Intertie falls in this time frame. This project, considered in conjunction with the Trans-Sierra Project, appears to be a feasible alternative means of providing transmission capacity and economy energy to much of California.

FF

On Page 2.5-11, the report states, "It is not the objective of the Combined Projects to displace conservation, load management, or renewable and preferred energy generation technologies." Without a discussion of these measures and technologies in the context of a mixed strategy, this statement cannot be supported.

One valuable source for evaluating when the supply of these preferred measures and technologies is exhausted is the California Energy Commission. In their Electricity Report VI, the CEC described need tests for new energy facilities. It states that the principles in the need test "..apply to all utility projects, including those proposed by municipal utilities." The need test includes elements for physical need and economic need. The report states, "Utility projects will be considered physically needed if the utility can demonstrate that at the avoided costs published by the utility (including an offer based on the proposed project), there will not be sufficient energy from its own core resources, new QFs, or purchases readily available from other sources to meet forecasted energy and capacity requirements."

Economic need is described by the CEC as a product of the following two conditions:

"(1) The applicant demonstrates that it cannot purchase power with the necessary attributes (e.g., reliability, dispatchability) from Qualifying facilities at the avoided cost of the project;

(2) The applicant demonstrates that it cannot purchase power with the necessary attributes from a neighboring utility for less than the avoided cost of the proposed project."

DD See response to L-306 CC. The letter referenced in the comment does not contain enough detail to permit evaluation of renegotiation. The fact that the investor-owned utilities, municipalities and Western are working together to develop the COTP indicates a desire by all parties to pursue this transmission expansion. There have been many opportunities for contract renegotiations to commence during the meetings and discussions involving COTP. No proposal providing benefits generally equivalent to the COTP over its life has been made.

EE The net economic benefits of the COTP as compared to the net economic benefits of a combination of the Inland Intertie and the Trans-Sierra transmission line are addressed on pages 102 and 103 of Appendix B in Volume 3A, and in Section 2.5 of Volume 1 of the Draft EIS/EIR. That economic comparison shows the COTP to be substantially superior to the Inland Intertie for Southern California utilities and superior to a combination of the Inland Intertie and the Trans-Sierra transmission project for Northern California utilities.

See the response to comment L-306 II regarding the timing of the need and economic value of the COTP for development as scheduled.

FF For a discussion of conservation, load management, and renewable and preferred energy generation technologies in the context of a "mixed strategy" see the responses to L-306 AA through L-306 CC.

L-306 (continued)

The report also states that an offer for QFs based on the cost of the proposed project should be published for at least one year before this test can be satisfied.

GG

TANC's inablilty to directly implement such a strategy does not justify its absence from the EIR. The CEQA Guidelines state that limits on jurisdiction or authority do not limit the consideration of alternatives. We note TANC's member utilities, if not TANC itself, could implement a mixed strategy. If this alternative is feasible, it might compete favorably with the project from an environmental perspective, and perhaps be the environmentally preferred alternative.

HH

Table 2.5-1, which compares various alternatives, is not supported by any information in the report. For example, the last column attempts to rank the alternatives environmentally, but is not supported by anything other than several broad statements made in the text of the report. Also, conclusions are reached regarding the economic preference of all of the "Other Non-Transmission Alternatives", but, according to the first column in the table, only one alternative, SW Economy Purchases, was even evaluated.

b. The No Project Alternative.

II

The No Project Alternative is improperly characterized. Statements regarding the need to construct new power plants and burn additional oil are unsupported. Using the CEC's adopted reserve margin levels, one can only conclude that no additional capacity would be required through at least 1996, thus invaldating any assertion that additional power plants would be required under the no project scenario.

JJ

The assertion that additional oil burning would be required to offset the loss of economy energy is only partly true. It's unrealistic to assume the entire burden would be absorbed by oil-fired plants, as opposed to a mix of oil, more efficient usage and upgrades of existing transmission capacity, and, in later years due to increased oil prices, conservation and load management.

Much of the language in the discussion of the No Project alternative is unsupported. For example:

> "Increased reliance on the use of inefficient oil and gas burning units would result in higher costs to California ratepayers and could result in impacts to air quality." (Pg. 2.4-1, 2nd Paragraph).

The report contains no analysis whatsoever of ratepayer impacts to justify this statement, and does not firmly

GG

This comment addresses only the municipal Participants in the COTP. It is not clear what would be accomplished by a strategy involving offers to purchase power from Qualifying Facilities by these Participants based upon their cost for the COTP.

QFs in California have access to contracts based on avoided costs of the resources that would be constructed. Completion of the COTP is not expected to avoid all new resource construction in California. The cost of power obtained via the COTP is expected to be lower than the costs of resources on which avoided costs for QF pricing is based. In effect, if the "strategy" inferred in this comment is pursued, it would offer a lower price to QFs than is presently available.

HH

Table 2.5-1 in Volume 1 of the Draft EIS/EIR is not intended to "rank" the alternatives. Rather, it is a best effort to tabulate the diversity of alternatives discussed in Section 2.5 of Volume 1.

Footnote 2 to the referenced table indicates that when a quantitative economic analysis was not performed, a qualitative analyses was done. The text of the qualitative analyses includes preliminary cost estimates.

II

The CEC staff draft of California's Energy Outlook, 1987 Biennial Report does not yet include the COTP as a resource "likely to be available". The excerpt below is part of Table 4-5 in the staff draft report, which implies increased oil and gas consumption to generate electricity in the 1990s.

Utility Reliance on Oil and Natural Gas
(Percent of Total Generation GWh)

	1990		1997	
Planning Area	GWh	Percent	GWh	Percent
No. Calif. Utility Oil & Gas	11,109	12	21,237	20
SCE Utility Plants	8,718	11	21,932	24
LADWP Utility Plants	5,837	23	7,994	30
SDG&E Utility Plants	1,603	12	5,324	33

The above table shows 27,267 GWh of electricity generated by oil and gas in 1990. In 1997, the total is 56,487 GWh, more than double (207 percent of) the 1990 total. This represents an increase of 29,220 GWh produced by additional oil and gas generation.

Contrary to the CPUC staff's assertions, it is likely that additional gas fired generation, in the form of combustion turbines would be constructed by members of TANC in the absence of the COTP as discussed in the responses to comments L-306 N2 and O2. Even if, as the CPUC staff asserts, no new capacity is

L-306 (continued)

II (cont.) needed in 1996, the life of the COTP extends for at least 50 years, or 45 years beyond 1996. Therefore, even if new oil or gas fired capacity was not needed until 1996 (a position not shared by all of the COTP participants), the No COTP Alternative will result in greater burning of oil and gas as evidenced in the CEC table shown above, and in the longer term more oil and gas fired capacity is expected to be added in the absence of the COTP.

JJ The economic analysis for the COTP (Volume 3A, Appendix B of the Draft EIS/EIR) estimates 3,330 GWh of energy delivered over the COTP from the Northwest in 1997 (Table 7-2). This equals approximately 11 percent of the 29,220 GWh increase in utility oil/gas generation from 1990 to 1997 as forecast by the CEC in ER6. See response to L-306 II for further discussion of future utility reliance on oil and gas.

The study incorporates over 5200 megawatts of refurbishments between 1992 and 2002. The Southern California Edison resource plans used in this study include 505 megawatts of additional generation at the Big Creek Hydro Project and additional capacity associated with the Edison Balsam Meadows project. Balsam Creek and Big Creek are included in both the with- and without-COTP resource plans and are therefore not an alternative to COTP.

Comments regarding theoretical near-term alternatives to combustion turbines ignore the need to replace the near term option (if it was available) after PGandE is no longer in an excess capacity position. The near-term option referenced in the comment, regardless of the price at which it could be made available, is of perhaps four to seven years duration after the relevant 1991 period, whereas the COTP will have a commercial life of at least 50 years.

For a discussion of transmission alternatives including upgrades of existing lines, see the discussion on pages 101-103 of Appendix B, Volume 3A, Draft EIS/EIR. Also see responses to L-306 EE and V2.

Other alternatives such as conservation, other generation, and load management are considered in the Draft EIS/EIR. For a discussion see pages 103-106 of Appendix B, Volume 3A. See also the responses to the specifics in the responses to L-306 O2 and L-306 AA through II.

In regard to oil or gas burning to "firm" the non-firm energy delivered over the COTP, in dry water years more oil or gas would need to be burned than in average years, but to the extent any firm or non-firm energy is delivered over the COTP there will be less gas or oil burned than would occur if the COTP was not built. Analyses of the life cycle of the COTP appropriately assume average water year conditions, such that major reductions in burning of oil/gas is attributable to the COTP.

L-306 (continued)

JJ

establish the cost-effectiveness of the proposed project. The assertion regarding air quality is unsupported. Furthermore, the report does not contain any indication of oil burning caused by the use of existing facilities to "firm" the energy attributed to COTP, which is all, or substantially, non-firm energy.

KK

> "As discussed in Section 1.0, the Combined Projects are expected to significantly enhance the reliability of the WSCC area transmission systems." (Pg. 2.4-2, 1st Paragraph).

The referenced discussion of reliability in Section 1.0 contains no supporting information. It is simply another assertion that reliability would be enhanced. If the COTP were built, the design criteria calling for adequate separation provide a level of statistical protection against catastrophic outages of both lines. However, the contention that the Project enhances the overall reliability of the entire WSCC system is not supported by any information in the report.

LL

> "It is also conceivable that in the absence of the Combined Projects increased loads would occasion diminished service reliability and high cost emergency actions." (Pg. 2.4-2, 2nd Paragraph).

This statement unsupported, and in conflict with the most recent CEC Electricity Report.

> "...the oil embargo of 1973 has shown that world oil prices and supplies are strongly influenced by the actions of a relatively few oil-exporting countries who have the ability to quickly and sharply reduce oil supplies and increase prices accordingly. Consequently, the more extensive use of oil and gas may subject California ratepayers to significant uncertainties regarding future supplies and prices of these fuels." (Pg. 2.4-2, 4th Paragraph).

This statement does not take into account measures already taken or other available measures to soften the impact of another severe shortage, such as the massive strategic petroleum reserve built up since 1973. It fails to indicate that BPA and other Pacific Northwest utilities have taken actions in the recent years (i.e. rate hikes) that are not dissimilar to those taken by OPEC in 1973, and that the COTP makes California more vulnerable to BPA's future actions.

MM

> "In the longer term, however, selecting the no action alternative would mean that the Participants would undertake other transmission construction projects or would participate in the construction of other generation resources which would each have

KK

Reliability has been a major concern to COTP Participants and other utilities in the WSCC area. Numerous studies have been made of the power flows and interconnected system stability to analyze system responses to unscheduled (emergency) changes in loads, generation or transmission as well as responses to scheduled events. These studies represented the different seasonal loads, availability of certain resources at different times, alternate scenarios of transfers occurring between areas, and a variety of outages. Participants and other utilities have reviewed study results. COTP studies are well documented, voluminous, and relevant sections of the studies can be made available for review at the offices of the COTP Project Manager.

One significant improvement in reliability, due to the presence of the COTP, may be elimination of the Northeast/Southeast Islanding Scheme as a remedial action for the loss of two 500 kV AC Intertie lines.

LL

There is no evidence that the strategic petroleum reserve, particularly at the lower than authorized level to which it has been filled, would serve to provide any reasonable protection against major interruptions in oil supplies on a sustained basis. In respect to comparing BPA rate increases to OPEC pricing actions in 1973, the circumstances between OPEC pricing and firm capacity, firm energy and surplus power pricing from the Northwest are quite dissimilar. Firm capacity sales from the Northwest are typically negotiated on terms which fix the value for specific periods. Since there are, in the long term, numerous alternative sources of electric capacity and firm energy, the price to be set by the Northwest is limited by the cost of available alternatives. The establishment of Northwest prices in the economic analyses performed for the COTP at a discount from the development cost of alternative resources in California reflects this relationship.

In terms of surplus non-firm energy sales, a significant portion of these sales are the result of water from the federal hydroelectric system which must be sold or spilled, which is not analogous to OPEC's abilities to elect to simply defer production. While the Northwest could reasonably elect to spill rather than sell surplus at unreasonably low rates, the reasonable discount from California utilities' cost of oil and gas fired generation as the basis for surplus sales prices assumed in the economic analysis of the COTP is not expected to provoke sustained spills as a mechanism for the Northwest to increase prices for surplus sales. That is, the pricing mechanism assumed in the Draft EIS/EIR is expected to be sufficient for BPA and other Northwest utilities to market available energy.

L-306 (continued)

MM

environmental impacts associated with their construction." (Pg. 2.4-3, 1st Paragraph).

Based on the CEC's Electricity Report VI, this statement is true only in the last years of the century, and only in the SDG&E and SMUD service territorities.

4. MITIGATION.

NN

The mitigation measures listed in the report are not comprehensive nor detailed enough to ensure adequate mitigation. The mitigation measures are written in such conditional and permissive language, that any degree of mitigation could ultimately be implemented without violating the requirements in the EIR. The EIR should contain an analysis of which measures are feasible and appropriate, and a specific listing of which measures are being implemented, and where. Furthermore, these mitigation measures should be the product of a detailed impact analysis, and not be used as protective measures to minimize the need for such an analysis.

OO

The reference to the development of a mitigation plan on Pg 5.1-1, while a concept the CPUC staff endorses, should be more clearly defined to support the contentions that this approach would be effective. Even with additional clarification, a mitigation plan would still be unable to overcome the lack of site-specific data mentioned in comment # 1. The effectiveness of this approach, in our experience, relies heavily on the means by which the mitigation plan is developed and implemented. The EIR should contain some discussion of the type of data that will be collected, the type of analytical work to occur in developing the plan(s), the procedure for selecting and implementing the measures, the persons and/or agencies TANC will rely upon to oversee the process, and the institutional or organizational structure for making and implementing decisions.

This concern stems from the probability that conflicts will inevitably occur between the project's objectives (e.g. schedule, costs, etc.), and the objective of reducing environmental impacts to the lowest reasonable level. By providing further explanation of the mitigation process and its participants, doubt can be removed about the methods and criteria to be used for mediating these conflicts. Furthermore, the CPUC staff recommends that TANC, as a protective measure, enlist the participation of representatives from the appropriate outside agencies to assist in the development and implementation of a mitigation plan for the COTP.

PP

Attached is a copy of a recent Environmental Protection Plan developed and implemented by the CPUC for the Devers-Valley-Serrano Transmission Line. We offer it as a guide to the type of mitigation planning appropriate for an EIR (Attachment E).

MM The COTP is planned to be operational in 1991, which precedes by a short time "the last years of the century." The economic analysis of the COTP is based on its long-term commercial life. The statement concerning the COTP displacing some need for the COTP Participants to undertake other transmission or generation projects is valid whether that displacement occurs before or after the year 2000. The expected development of the COTP also provides an opportunity to make maximum use of the Pacific Northwest surplus, which cannot be achieved by the No Action Alternative.

NN See response to L-295 C.

OO Section 1.1.5 of Volume 1 of the Final EIS/EIR gives details on the mitigation plan and the involvement of the agencies.

PP The Devers Valley-Serrano transmission line environmental protection plan, along with other existing compliance plans, are being utilized to develop the site specific monitoring plan for the COTP.

L-306 (continued)

5. ASSOCIATED FACILITIES.

QQ

The EIR, on Page 2.1-21, discusses the potential associated facilities for the COTP. These include facilities for the City of Alameda, the City of Lodi, the City of Palo Alto, the City of Santa Clara, the Modesto Irrigation District, and the Turlock Irrigation District. The EIR should include a clearer definition of Associated Facilities, and must establish or clarify the causal relationship between the COTP and these and other facilities originally described in the Notice of Preparation. The EIR must address the environmental impacts of those facilities.

Full disclosure of the relationship between the COTP and its associated facilities is essential. The definition of Associated Facilities in the report is unclear. They are defined on Pg. 2.1-21 as, ".. potential new facilities involving COTP Participants considering the option of direct connections with Western's system to obtain COTP power." The definition should account for the possibility of interconnections with systems other than Western's, and for required upgrades/modifications within an individual utility's own system.

RR

The EIR makes confusing references to associated facilities, some of which may be quite significant in both cost and environmental impact (e.g. the potential 230 kV line running from Tracy or Tesla to MID or TID, as described in the NOP). The EIR states that the above facilities are not associated facilities for two primary reasons:

1. The facilities have other uses in addition to allowing transfer of COTP power.

2. The MOU guarantees wheeling to all Participants.

On the first point, TANC must demonstrate that there is no causal relationship between the COTP and the facility in question because other objectives would require the construction of the facility even if the COTP were not constructed.

The second point is confusing. The MOU guarantees wheeling to all Participants, but does not discuss the adequacy of existing facilities. Because of this, it is unclear why this provision of the MOU was used to describe the relationship between the COTP and the Associated Facilities.

The EIR should account specifically for all associated and related facilities mentioned in the original and supplemental Notice of Preparation for the COTP, as well as any discovered since then. For those facilities which are not Associated Facilities, the causal relationship between them and the COTP should be clearly severed. Associated Facilities should be described as clearly as possible, and their estimated costs included in the economic analysis. If a discussion of their

QQ See response to L-306 RR.

RR The term "associated facilities," as used in the MOU and in the Draft EIS/EIR, is not used to mean only those facilities directly caused by the projects. The MOU includes in its discussion of associated facilities some that are necessary because of the COTP, some that already exist, and some that might be developed "to serve as alternative methods of delivering" power transmitted over the COTP. The Draft EIS/EIR consequently includes such facilities as associated facilities. (It is not understood why the comment says that they are not referenced as associated facilities.)

Associated facilities were identified in the NOP's for the COTP and Los Banos-Gates Project. During project planning, those facilities that are necessary because of the COTP were identified, and they are analyzed in the EIS/EIR. System studies have demonstrated that the existing system, along with the facilities described in detail in the EIS/EIR, is sufficient to deliver power to the COTP Participants. The facilities studied in the Draft EIS/EIR are those necessary to exchange the additional power between the two regions and to meet the intent of the COTP MOU. The purpose of considering them together was to assess their cumulative impacts, to promote a coordinated decision-making process, and to provide a basis for economic analysis on a statewide basis.

Other associated facilities would provide other benefits not directly caused by construction of the projects. Decisions whether to construct such facilities would be based on those benefits. There is no direct causal link between such facilities and construction of the COTP.

L-306 (continued)

RR environmental effects is not included, then the EIR should describe what future analysis will be performed and when.

6. SCHEDULE.

SS The schedule in Figure 2.1-10 of the EIR shows the CPUC reaching an "early" decision within three months of the time TANC issues its NOD, and an "expected" decision after six months. The "early" decision should be changed to January of 1988, and the late decision should be changed to April, 1988, to reflect the CPUC staff's best estimates of probably timetables.

7. UNAVOIDABLE ADVERSE IMPACTS.

TT The discussion of unavoidable adverse impacts in section 4.7 of the report is too general to provide useful notice to potentially affected individuals. Furthermore, the discussion is prefaced with an unsupported and inappropriate finding that "... the benefits from construction and operation of the projects are expected to significantly outweigh potentially adverse effects."

The report should contain a discussion of unavoidable adverse impacts that specifically describes what will occur from construction and operation of the project, where it will occur, when, and for how long.

8. THE DEIR'S ASSUMPTIONS REGARDING NORTHWEST NONFIRM ENERGY PRICES

The cost-effectiveness of the project is a critical part of the purpose and need for the project (i.e., "benefit from additional economy energy purchases" and "to meet present and future power needs at a reduced cost" [Vol.1, p. 1.3-2 and 1.3.1] The DEIR states, "The cost-effectiveness of the Combined Projects for California as a whole depends upon: ... the cost of producing electricity in California relative to the price of Northwest energy and capacity;..." [Vol.1, p.1.5-2] The DEIR also states, "Northwest energy prices were assumed to be set equal to a percentage (ranging from 60 percent to 75 percent) of California avoided costs which were, in turn, based on the costs of operating combustion turbines" [Vol.1, p. 1.5-3] These assumptions regarding the relationship between Northwest energy prices and California avoided costs are not consistent with California Energy Commission forecasts, actual experience, CPUC Staff judgment, or statements by California utilities in a California Parties Brief. These sources indicate that California utilities have been charged a larger percentage of avoided costs for NW power than the DEIR assumes.

UU

SS Comment noted. The schedule has been revised to reflect a number of events. See Section 1.1.2 of Volume 1 of this Final EIS/EIR.

TT See Table 2 and page 13 of the Abstract section of Volume 1 of the Draft EIS/EIR for a description of the location and duration of these types of effects and see Section 1.1.4 of Volume 1 of this Final EIS/EIR for a revised explanation of the relationship between unavoidable adverse impacts and benefits.

UU The Energy Commission 1986 draft Electricity Report (ER-6) was not available in the winter and early spring of 1986 when the information was being prepared for the Draft EIS/EIR. As a result the Draft EIS/EIR could not explicitly reference that report's assumptions or conclusions regarding the relationship between Northwest energy prices and California avoided costs.

The PNW prices used in the Draft EIS/EIR were developed as a function of the marginal cost of gas-fired generation and not on California avoided costs. The gas-fired energy price upon which the PNW energy sales prices were based assumed a 9500 Btu/kWh heat rate in a gas-fired steam unit. In developing PNW prices, the economic study presented in the Draft EIS/EIR relied on discussions with Northwest utilities and on historical data recorded after the BPA Near-Term Intertie Access Policy went into

L-306 (continued)

UU (cont.)

effect. These data showed, for example, that Southern California Edison paid Pacific Northwest prices equal to 60%, 49.5%,70% and 72% of their marginal cost of gas-fired generation in the 1st, 2nd, 3rd, and 4th quarters of 1985, respectively.

Two sets of PNW price streams were used in the Draft EIS/EIR. Under the "Strong OPEC" scenarios, PNW energy (both firm and non-firm) was priced at 75% of the marginal cost of gas for summer, fall, and winter months, and 60% during spring. Under the "Weak OPEC" scenarios PNW energy was priced at 82% of gas costs for all but the spring months. Spill months (spring) remained at 60% of the marginal cost of gas.

Because resources other than gas operate at the margin, the PNW prices assumed will represent a higher percentage of California's avoided costs than marginal gas costs. This is because gas-fired generation is one of the most expensive types of resources dispatched (generally surpassed only by premium-fueled combustion turbines). The addition of other less expensive generating types acts to reduce the average cost of all units operating at the margin. Avoided costs are generally outputs of production cost simulation models.

Figure 1.1.1-1 in Section 1.1.1 of Volume 1 of this Final EIS/EIR shows graphic comparison of the CEC projection of Pacific Northwest energy sales prices and the range of price assumptions used in the Draft EIS/EIR. The Draft EIS/EIR forecast brackets the CEC forecast used in the 1986 Electricity Report.

L-306 (continued)

a. The DEIR's Assumptions

The DEIR uses six sets of forecasts for Northwest nonfirm energy prices: high, medium, and low nonfirm energy prices for the Strong OPEC scenarios; and high, medium and low nonfirm energy prices for the Weak OPEC scenarios. For example, for the Strong OPEC/medium nonfirm energy forecast, the EIR states, "Northwest energy prices were assumed to equal 60% of California's marginal cost of gas during the spring and 75% during the summer, fall and winter." [Vol. 3A, Appendix B, p. 61]. The marginal cost of gas referred to is the Strong OPEC/ medium gas price forecast. In the same way, the Weak OPEC/medium gas price forecasts and the /high forecasts were used to create the nonfirm energy price forecasts.

VV TANC's low nonfirm energy price forecast is Bonneville Power Administration's (BPA) published rate forecast, showing a negative 1.2% real escalation [Ibid., p. 60]. This appears to be from a forecast made in 1985. The EIR should specify which BPA published forecast was used.

b. Price Forecasts and Historical Data from Other Sources

WW In contrast to these assumptions, government agencies and major California utilities have stated that California pays a higher percentage of avoided cost for Northwest nonfirm energy.

(1) California Energy Commission

The California Energy Commission's Draft Final Electricity Report 6 (ER-6) states, [p. 5-34]

> While there is little firm data available, the California utilities report that the PNW [Pacific Northwest] is now able to extract about 75 to 85 percent of the benefits of most spot market transactions. At current low gas prices, this often means that California realizes only 2 to 3 mills/kWh for PNW energy.

(2) CPUC

CPUC Staff review of available data on actual prices paid and marginal costs shows that California utilities pay approximately 80-97 percent of marginal costs in the summer, fall and winter for Northwest nonfirm energy, not 75 percent. In the spring the percentage is approximately 80-90, not 60 percent. (The concentration of prices appears to be at the high end of the range.) The actual margin is only a few mills per kilowatthour. CPUC Staff judgment is that the margin will remain within a few mills, or, under current conditions, will be 90-95 percent in the summer, fall and winter, and 85-90 percent in the spring.

VV The source for the BPA forecast was the BPA 1985 Wholesale Power Rate Schedules as referenced in the testimony of David Armstrong:JJB:5640 (WP-85 PLMD-3692N). The rates shown in the Draft EIS/EIR are expressed in constant 1987 dollars and were adjusted for inflation using an annual escalation rate of 6% consistent with the inflation rate assumption used throughout the study.

WW See response to L-306 UU. The California Energy Commission 1986 draft final Electricity Report (ER-6) was not available when the Draft EIS/EIR data was prepared. Energy Commission ER-6 Committee gas price forecasts were adopted in July 1986. This forecast is shown in the Draft EIS/EIR for comparative purposes on page 67. The Energy Commission Electricity Report ER-5 was not used because it was considered outdated by the drastic changes that occurred in the world oil market during the winter of 1985 and spring of 1986. An analysis of several utility industry government forecasts of fuel prices was conducted to develop a consensus forecast to reflect the most recent expectations for fuel prices during the study period.

As explained in the response to L-306 UU, the Draft EIS/EIR bases PNW prices on the marginal cost of gas generation, not on California's average avoided costs. The historical data available supports a much larger margin between PNW prices and the marginal cost of gas than inferred by the CPUC staff.

L-306 (continued)

XX

It is unclear from the DEIR what circumstances TANC expects to occur to cause the Northwest to give up the price gains they have made under the Near Term Intertie Access Policy (IAP), and propose to continue for 20 years under the Long Term IAP (which could be renewed at its end for another 20 years if they continue to be satisfied with the price gains). TANC should reveal the assumptions they are making which change the market and drive prices lower, so that all decisionmakers in this process can review the assumptions and the evidence, and come to the most informed decision.

(3) California Parties

YY

Several of the COTP participants, namely PGandE, SCE, and SDG&E, argued in a California Parties Brief that "...BPA itself is attempting to limit California's benefits from BPA purchases to as low as 2 mills/kWh. ["Comments of the California Parties", July 18,1986, FERC Docket Nos. EF85-2011-003 and EF85-2021-003, p. 19.] With market competition stifled by BPA's Near-Term and Long-Term Intertie Access Policies, there is no reason to believe that BPA will reverse this situation.

c. Other Problems

Other problems with the nonfirm energy price forecasts are explained below.

ZZ

(1) BPA Rate Forecasts

The BPA rate forecast used in the analysis is out of date and lower than the summer 1986 BPA nonfirm energy standard rate forecast made in BPA testimony on the Southern California Edison contract, shown in Table A-1 [1986 Southern California Edison Contract Formula Rates Hearing, Bonneville Power Administration, Witness D. Armstrong, Exhibit SC-86-E-BPA-01, Attachment 3, p. 5, Column e].

Also, in BPA's current rate case, BPA has proposed a non-firm rate cap. The CPUC Staff has prepared a forecast of rates under this proposal, using TANC's medium fuel price forecast under Weak OPEC, which is shown in Table A-2. The EIR must be amended to include a more realistic BPA nonfirm rate forecast than the one currently used in the EIR analysis, and should use the most recent rate cap proposal.

A final point is that BPA itself assumes a flat 75 percent as the percentage of avoided costs that California pays [BPA Draft Intertie Development and Use EIS, Appendix A, Section A.1.2, p. A-2].

XX

The Draft EIS/EIR does not assume the Northwest will give up price gains made under the Near-Term Intertie Access Policy. Only prices charged under the new policy were considered in developing PNW price relationships. Historical data for 1983 and the first three quarters of 1984 were disregarded because they were not considered relevant to current circumstances. The prices assumed in both the Weak and Strong OPEC scenarios are consistent with the Near-Term Intertie Access Policy. They assume price relationships that are higher than those recorded after the policy went into effect.

YY

This information, dated July 18, 1986 was not available at the time the Draft EIS/EIR was prepared. The statement is unclear as to whether BPA has succeeded or only attempted to limit California's benefits. Furthermore, the change in transmission capability with completion of the COTP is expected to favorably influence the ability to secure greater amounts of PNW power at rates favorable to California utilities, while providing substantial net revenue to the Pacific Northwest. We can only respond knowing the context of the entire document. As stated above in the response to L-306 WW, the Draft EIS/EIR does not assume BPA will relinquish market power. On the contrary, the Draft EIS/EIR economic analysis uses price relationships that attribute more benefits to the Northwest than has historically been the case.

ZZ

For some modeling purposes, BPA uses 75% of a buyer's avoided cost minus two mills as the price of PNW energy. The Draft EIS/EIR assumption of 75% of the marginal cost of gas represents a higher percentage of California's avoided cost than BPA uses for modeling purposes. See responses to comments L-306 WW and L-306 YY.

L-306 (continued)

(2) Forecast Methodology

A1

In addition, TANC's medium and high forecasts for nonfirm energy prices are fixed percentages of the estimated gas price forecasts. Therefore, these do not represent a sensitivity analysis of the relationship between nonfirm prices and California's marginal costs, since the percentages are constant. The EIR must include variations in the relationship between nonfirm prices and California's marginal costs. (Also, see comment 15. a. below.)

TANC's Northwest price forecast also gives undue weight forecasted BPA prices, compared to other Northwest sellers who have greater pricing flexibility. Since the non-Federal producers have more pricing flexibility, their prices follow California's avoided costs more closely. This is supported by the actual data, and there is no market structure change on the horizon which would be expected to alter this.

The fuel types for Northwest energy generation sold to California are forecasted in BPA's IDU DEIS (page 4.2-17, Table 4.2.14). This document forecasts that 50 percent of the energy sold over the COTP will be produced by coal facilities and 50 percent from hydro. BPA does not sell coal-produced energy. Further, BPA controls only two-thirds of the PNW hydro. Of the 50 percent hydro sold over the COTP, on average only 67 percent will be from BPA (if not less since on average over the life of the interties, only 50 percent of the energy has been from BPA). Therefore, non-BPA sellers will on average sell 67 percent of the energy over the COTP (the 50 percent coal, and 33 percent of the other 50 percent hydro). Since only a fraction of the incremental energy on the COTP will likely be from BPA, the prices of non-Federal producers should dominate the aggregated Northwest price forecast.

d. Summary

B1

TANC's assumptions regarding the relationship between Northwest nonfirm energy prices and California marginal costs are inconsistent with statements by other parties. The Final EIR must be premised on 1) higher nonfirm energy price forecasts reflecting the predominance of non-federal sales 2) and a more reasonable forecast of BPA nonfirm prices. In addition, the sensitivity analyses regarding the relationship between nonfirm prices and California avoided costs should be modified to include cases in which the percentage of avoided costs paid varies. Without this analysis, the TANC Final EIR will be inadequate for the CPUC's use.

C1

A1 The medium and high forecasts of energy prices were not intended to serve as a sensitivity analysis of the relationship between PNW non-firm energy prices and the marginal cost of gas. Northwest sellers other than BPA do have greater pricing flexibility than BPA, both up and down. Flexibility to increase prices will be constrained by the market. Sellers will not price their power on a sustained basis at a price above which it is cost effective for buyers to pay. If Northwest prices are lower than those assumed in the analyses in the Draft EIS/EIR, such pricing would further enhance project economics.

The Draft EIS/EIR agrees that some of the energy supplied over the Intertie will be generated from coal-fired plants. The methodology assumes that the price of PNW energy will be market driven, i.e., a function of California's gas costs rather than PNW embedded costs. The BPA IDU/EIS addresses the impact of such additional coal-fired generation in the Pacific Northwest.

B1 See the response to L-306 UU and Figure 1.1.1-1 in Volume 1 in this document which shows the reasonableness of the Northwest prices used in the COTP Draft EIS/EIR economic analysis. See response to L-307 W for further discussion of the reasonableness of the method of estimating the relationship between the Northwest price and California utility Northwest energy value.

C1 See responses to L-306 UU and L-307 W.

L-306 (continued)

9. THE NORTHWEST'S CAPACITY SURPLUS

The DEIR states, "Under low fuel price conditions, capacity credits are critical to the economics of the COTP." [Vol.1, p.1.5-5] The DEIR also states, "The cost-effectiveness of the Combined Projects for California as a whole depends upon: the long-term..." [Vol.1, p.1.5-2,3] Given these facts, the assumptions about the future Northwest capacity available to California are crucial. But TANC's assumptions on this subject are inconsistent with the Northwest's own forecasts, as explained below.

D1

a. TANC's Assumptions

TANC's forecasts of Northwest surplus capacity includes four scenarios:

- o Zero capacity credit (no incremental purchase of Northwest capacity by California utilities)
- o Limited, assuming a 600 MW capacity purchase (by California from the Northwest) for 40 years (1991 through 2030)
- o Moderate, assuming a 1300 MW capacity purchase from 1991 to 2010 followed by only 600 MW from 2011 to 2030.
- o Extended, assuming a 1490 MW capacity purchase (High load forecast) or 1430 MW (medium and low load forecasts) between 1991 and 2010. Then a 600 MW purchase from 2011 to 2030.

E1

Except for the Zero Capacity Credit scenario, TANC's assumptions would require that the Northwest continue to maintain excess firm capacity, for sale to California, rather than allow Northwest resources and loads to come into balance.

b. BPA's Forecasts

Tables S-1A and S-1B in BPA's 1987 Pacific Northwest Loads and Resources, Technical Appendix, [pages TA-584 and TA-585] show BPA's estimates of "Regional Firm 30 Hour Peaking Surplus/Deficit" and "Regional Firm 70 Hour Peaking Surplus/Deficit" respectively. These tables show that the available firm surplus capacity will be less than the firm rating of the future Pacific Intertie (5500 MW), including the upgraded AC lines (3200 MW, 2400 MW firm) and the upgraded DC line (3100 MW). For example, the 30 hour table shows that by the operating year 1997-8, the Northwest will have less than 5500 MW of 30 hour per week firm surplus capacity during California's peak months of June to September. The 70 hour table shows that by the operating year 1990-1, the Northwest will have less than 5500 MW of 70 hour per week firm surplus capacity during California's peak months of June to September.

F1

D1 The analysis of capacity available for delivery over the Project in the Draft EIS/EIR includes the potential for purchased firm resource capacity, purchases of system capacity from BPA and Northwest utilities, purchased capacity from B.C. Hydro and capacity exchanges from BPA and others. In addition to firm capacity transactions, the Draft EIS/EIR projects that there will be economy energy purchases. Thus, the COTP capacity (and the total capacity of all transmission lines) must exceed both the amount of economy energy and the amount of firm capacity assumed in the analysis.

The CPUC staff states in comment 9.b. (see comment L-306 F1) that the Northwest, alone, will have 5500 MW of firm surplus capacity during California's peak months at least in the early years of the analysis. In addition, BC Hydro has offered the capacity from Peace River Site C for sale under firm contracts. Thus, the limited and moderate scenarios discussed in CPUC comments at 9.a. (L-306 E1) are reasonably related to known potential sources of firm capacity. The zero capacity and extended capacity scenarios are reasonable bounds on the analyses.

See also responses to L-306 E1, L-306 F1, L-306 J1, L-306 O1, L-306 P1, and L-3 T.

E1 The Draft EIS/EIR does not assume the Northwest will construct or maintain excess firm capacity for purposes of export. By virtue of seasonal diversity between the two regions there will be surplus NW capacity in the summer to be sold to California under seasonal or energy exchange arrangements. The CPUC staff states the existence of at least 4,000 MW of such seasonal diversity at comment 9.c. (L-306 G1) (even though they cite no basis for the limit). See also the response to L-306 D1 and L-3 T.

The Draft EIS/EIR does not assume BC Hydro will construct Peace River Site C. BC Hydro's announced intention to do so does, however, add to the credibility of the range of capacity estimates used in the analysis.

F1 This CPUC staff comment is predicated on the idea that the expanded Intertie would be used exclusively for firm capacity contracts. This is not, in all likelihood, how the COTP will be used, nor is it how the existing Intertie transmission lines are used. Currently a portion of the Intertie lines are kept open, free of firm contracts, to allow the utilities to take advantage of the non-firm energy market at any given hour. It is unrealistic to try and match transmission line capacity to the amount of firm contracts available in the Northwest. This is one of BPA's main arguments when they apply a 600 megawatt capacity [illegible] assumes that the DC line will

L-306 (continued)

F1 (cont.) have no firm capacity contracts on it and will be used exclusively for the sale of non-firm energy.

The Draft EIS/EIR analysis also assumes that BPA would not fill all of the firm capability of the Intertie with firm contracts. The CPUC staff comment indicates 800 MW of transfer capability would be available for non-firm; 3,200 MW from the upgraded AC plus 3,100 MW from the upgraded DC less, during at least the early years, 5,500 MW of potential firm capacity transactions. Greater than 800 MW would be needed in some months of the year to market non-firm surpluses. It is especially true that more than 800 MW are required if BPA does not sign seasonal contracts which could be shaped around the spill months.

It is also important to note that during many weeks 30 hours of operation is not needed to achieve the benefit of 5,500 MW of capacity delivered over the Intertie.

See also the response to L-306 D1.

L-306 (continued)

c. The Northwest's Load and Resource Balance

In at least one reference, the DEIR states that the PNW will eventually reach a load/resource balance: "Once the Pacific Northwest no longer has a surplus of firm power,..." [Vol.1, p. 1.2-1] Assuming that the Northwest brings its loads and resources into balance, the remaining firm surplus would be a function of the "natural diversity" between the regions. "Natural diversity" refers to the fact that California is a summer-peaking region and the Northwest is a winter-peaking region. Since the Northwest plans for its winter peak, it has excess capacity available during California's summer peak. The historical difference between the Northwest's resources and its capacity needs in the summer has been about 4000 MW. TANC has presented no evidence that a future load/resource-balanced Northwest would have a greater "natural diversity" than 4000 MW. This "natural diversity" of 4000 MW will be less than the transfer capability of the Pacific Intertie.

G1

d. Resources in Canada and to the East of the Pacific Northwest

The DEIR assumes that resources from Canada, Montana, and other states will contribute to the capacity surplus. This assumption does not fit with BPA's Intertie Access Policy (IAP) which inhibits the access of non-PNW utilities to the intertie in general, and specifically prohibits both non-Northwest utilities access for assured firm delivery and Northwest utilities from buying and reselling non-Northwest surplus firm electricity.

Relatedly, since implementation of the IAP, the only major new project proposed has been the Peace River (Site C) hydro facility in Canada. There does not seem to be a physical transmission limitation preventing California's purchase of Site C power, but BPA has created an institutional barrier, the IAP, to such a transaction.

H1

For the DEIR to be useful to the CPUC, TANC must identify (1) the non-PNW capacity surplus (including size, timing, and prices), (2) how this surplus can be sold to California given the IAP's prohibitions, and (3) BPA's cost for wheeling it to California.

I1

e. BPA's IDU Draft Environmental Impact Statement

BPA's IDU Draft EIS indicates taht the Pacific Northwest will not be able to sell capacity to California in excess of 2550 or 3150 MW (section 4.8.2.2, page 4.8-3). The existing interties can carry these amounts without COTP. BPA suggests that it will restrict sales to California to 2550 MW without COTP, and will allow up to 3150 MW with COTP. This is an administrative restriction imposed by BPA, not a physical constraint of the lines. Given the physical capacity of the existing lines, it appears inappropriate to attribute incremental capacity to the COTP. Even taking into consideration BPA's policy, at most only

J1

G1 The comment cites no source for a 4,000 MW limit on Northwest resources summer excess over summer loads. Also, British Columbia summer resource excess should contribute to capacity available during California's summer peak.

Appropriate sizing for the COTP would provide transfer capability for both capacity and non-firm energy transactions.

See also the responses to comments L-306 D1, E1, F1 and I1.

H1 BPA's proposed Intertie Access Policy (IAP) provides three ways for firm capacity from resources outside the Pacific Northwest (PNW) to be transmitted over the COTP:

1. Non-PNW resources may replace PNW resources which are retired or withdrawn from assured delivery contracts;

2. Canadian resources may receive assured delivery provided:

   a. BPA receives some benefits, and
   b. the assured delivery does not substantially interfere with BPA's Power Marketing Program; and

3. Other non-PNW resources may be transmitted when there is transmission capacity available with the result that for every hour that the resource would have been transmitted, either

   a. the resource capacity is transmitted, or
   b. the COTP is fully loaded.

The CPUC comments suggest simultaneously that the IAP will prohibit receipt of firm capacity over the COTP, and that no non-firm power is available to load the COTP. These two conditions are mutually exclusive under the IAP. For any hour in which COTP Participants relied on receiving firm capacity, they can either receive the firm capacity or they will receive the capacity as a delivery of non-firm because the line is fully loaded.

The proposed IAP is an institutional barrier to California utilities' purchase of Peace River Site C power only if B.C. Hydro and BPA cannot find some mutual benefits in the transaction and the COTP is not built.

L-306 (continued)

I1 See the above response to L-306 H1.

With regard to wheeling costs, the analysis does not attempt to separately forecast component parts of the prices California would pay to obtain firm capacity over the Intertie. Wheeling charges are incorporated in the 50 to 75% of combustion turbine annual costs assumed for pricing of firm capacity purchases.

The Draft EIS/EIR does not identify specific non-PNW resources to be purchased because the specific contracts are yet to be negotiated. Potential sources include the Peace River Site C from B. C. Hydro and general surplus from Eastern Montana and Wyoming. This surplus is reasonably expected to exist. B. C. Hydro publicly has stated its intent to develop Site C. Other studies document a broad surplus existing in Western Systems Coordinating Council (WSCC) subareas. For example, a June 1986 study projects up to a 69.7 percent capacity reserve factor in 1993 for the WSCC subarea, including the Northwest, Western Wyoming, and Northern Nevada. The same study indicates another WSCC subarea which includes Utah, Colorado, and Eastern Wyoming as potentially the second most surplus region in the United States. Kalt, Joseph P.; Lee, Henry, and Hamilton, James T.; "A Review of the Adequacy of Electric Power Generating Capacity in the United States, 1985-93 and 1993-Beyond", John F. Kennedy School of Government, Harvard University, Table ES-1.

J1 BPA has demonstrated its intent to implement Intertie access policies which administratively allocate part of the Intertie to firm capacity and part to economy energy transactions. As noted in the response to L-306 D1, the Draft EIS/EIR analyses assume more capacity is available than BPA's conservative estimate. Nevertheless, BPA's institutional decree that 600 MW of firm capacity will be available over the COTP can reasonably be interpreted as the minimum firm capacity benefit from COTP. As discussed in response to comment L-306 D1, sources other than BPA are or will reasonably be available for the sale of capacity or for energy/capacity exchanges.

L-306 (continued)

J1 600 MW of capacity can be attributed to the COTP for economic analysis.

f. Summary

K1 1. The EIR's assumptions contradict the Northwest's own forecasts. TANC's hypothetical "Limited", "Moderate", and "Extended" surplus conditions do not match the Northwest's forecasts of its own loads and resources.

By the Northwest's calculations, the surplus capacity available to meet California's peak summer needs will no longer exceed the transfer capability of the existing Pacific Intertie by the operating years 1990-1 or 1997-8. TANC's forecasts of a continuing 40-year surplus, justifying the need for the COTP, are contrary to the Northwest's own forecasts.

L1 2. The EIR ignores the "natural diversity" between the regions, which probably will limit the long-term Northwest surplus to approximately 4000 MW.

M1 3. The EIR must reconcile our-of-region capacity sales with BPA's Intertie Access Policy.

N1 4. The EIR must reconcile the BPA IDU Draft EIS capacity sale amounts with its own analysis.

O1 5. If TANC assumes that the Northwest would add resources in the Northwest to maintain the surplus in the 21st century, the costs of these additional resources must be included in the benefit/cost analysis. In addition, if new resources are added to serve California, California would likely pay higher prices than 50% or 75% of the cost of gas turbine (the cheapest form of capacity), and these higher prices must be factored into the Final EIR analysis.

P1 In conclusion, TANC must either adopt the published forecasts by Northwest utilities (i.e., BPA or the Northwest Power Planning Council) or explain and justify not using these forecasts.

Q1 In addition, the Final EIR must take into account BPA's Intertie Access Policy and the costs of new Northwest resources, if any are assumed.

10. ASSUMPTIONS REGARDING NORTHWEST ENERGY AVAILABILITY

Part of the stated purpose and need for the Combined Projects is increased access to Northwest energy. For example, TANC's members cite "...access to additional sources of power to meet projected growth in demand,..." [Vol.1, p. 1.3-1] The Southern Cities cite "...increased needs for power..." Ibid.

K1 See responses to L-306 D1 through L-306 J1, especially responses to L-306 D1 and L-306 E1, for further explanation of assumptions on available Pacific Northwest resources.

L1 The study does not ignore "natural diversity"; in fact "natural diversity" supports the fact that surplus capacity will be available long term. As the Pacific Northwest region loads grow and its winter peak season surplus is eliminated, the region will need new resources to meet its peak, which will provide summer surplus available for California. Thus development of resources solely for its own peak needs can result in summer capacity becoming available for California. See response to L-306 E1.

M1 See responses to L-306 H1 and L-306 I1.

N1 See responses to L-306 D1 through L-306 L1 for an explanation of the differences between the BPA IDU Draft EIS capacity availability assumptions and those assumed in the COTP Draft EIS/EIR.

O1 No new resources are assumed to be added in the Northwest except those needed to meet Northwest loads. Resources brought on line to serve Northwest firm energy loads provide more capacity than is needed to meet Northwest firm capacity load growth. See for example, the discussion in BPA's 1987 rate proceeding, Marginal Cost Analysis, WP-87-E-BPA-01, line 16 page 9 through line 2 page 10. In addition, see response to L-3 T. Since new capacity is added to meet PNW loads, it is assumed that sales of resulting surplus capacity will be priced based on market considerations.

P1 The Draft EIS/EIR analyses relied extensively on the draft 1986 Northwest Power Planning Council data published in August 1985 and supplemental with data from BPA. The analyses extend beyond these forecasts in recognition that Northwest surpluses are not the only potential sources of power to be transmitted over COTP. See, for example, responses to comments L-306 D1 and L-306 L1.

Q1 See responses to L-306 H1, L-306 I1, L-306 M1, and L-306 O1.

L-306 (continued)

a. Firm and Nonfirm Energy: BPA's Model versus SCE's Model

To develop forecasts of Northwest energy availability, TANC's consultant, EMA, rejected BPA's System Analysis Model in favor of Southern California Edison's (SCE) Northwest Model. [Vol. 3A, App. B, pp. 66-69] Using this model, EMA made forecasts of "Energy Available from the Northwest" during dry, average, and wet hydro conditions. Ibid., p.68.

Bonneville Power Administration's Draft Environmental Impact Statement on Intertie Development and Use (IDU DEIS) assumes that, "The regional firm energy surplus ranges from 2600 average megawatts (aMW) in 1986 to near balance in 1998." [p. A-3] Furthermore, the IDU DEIS uses BPA's estimates of nonfirm energy availability.

R1 S1 T1 Recognizing that TANC's study was inconsistent with BPA forecasts, TANC undertook a benchmark study between the BPA and SCE models. To achieve some similarity in results, TANC used SCE inputs for BPA's model. An implicit assumption in this benchmarking effort is that SCE's assumptions about Northwest loads and resources are superior to BPA's [Ibid., p. 66].

U1 There is clearly a discrepancy between TANC's forecast of future Northwest energy availability and the Northwest's own forecast. The Final EIR must present the assumptions for Northwest loads and resources compared to the rejected BPA assumptions. The reasons for rejection of BPA's assumptions about its own loads and resources must be explained for public scrutiny.

b. Nonfirm Energy

(1) BPA's Forecasts of Average Nonfirm Energy

BPA testified at FERC in 1984 that the Pacific Northwest (PNW) average availability of nonfirm energy is 3300 aMW [FERC Docket No. EF81-2011-003 and EF82-2011-003, Direct Testimony of Walter J. Pollock, p. 18]. The Northwest Parties also testified that the average availability of nonfirm energy in the PNW is 3300 aMW. [Ibid, Direct Testimony of Bruce E. Mizer.] Administrative Law Judge David Miller adopted 3300 aMW in his initial decision.

V1 W1 X1 It appears that TANC does not use 3300 aMW of nonfirm energy. The SCE model, for example, uses higher nonfirm energy availability than does BPA. TANC must reconcile this difference. Otherwise, the CPUC, as a Responsible Agency will have difficulty relying on SCE's model over BPA's model. Furthermore, to the extent TANC incorporates BPA's IDU DEIS, the nonfirm energy BPA assumes in that document and TANC's assumptions in the COTP DEIR must agree. To the extent that the models used for the EIR assume 4100 aMW rather than 3300 aMW, some explanation must be made of how and where the Northwest utilities found 800 aMW nonfirm energy (a 24% increase) between 1984 and now without any

R1 This comment confuses firm surplus energy with total energy availability under differing assumptions of meteorological conditions. Firm surplus energy represents energy that is available to meet load under a recurrence of a critical dry hydrological condition. Firm surplus energy is only one component of total available energy.

The COTP Draft EIS/EIR study used the Northwest Power Planning Council (NPPC) draft 1986 forecast published in August 1985. The Southern California Edison (Edison) Pacific Northwest Energy Model prepared by the Edison Electric System Planning Division forecasts of loads and resources in Eastern Montana and Wyoming were added to the forecast. (The manual describing the operation of the model is available in the COTP Project Manager consultant's office.) The NPPC is Congressionally authorized to fulfill the responsibility for preparing forecast of loads and resources for the Pacific Northwest for planning purposes. The NPPC does not market power nor own or develop power resources. The independent role of the NPPC makes its forecasts a more objective source of information. Eastern Montana and Wyoming were added because while they are not in the PNW region as defined by the Pacific Northwest Power Act, they do have strong transmission connection with the Northwest.

The BPA SAM model used in the BPA IDU EIS to model available capacity and energy requires an input assumption that reduces the amount of surplus energy identified as available. This input is the marginal cost above which California will not purchase energy. A cost curve of three hour blocks is input to represent California's marginal costs. The SAM model will not dispatch surplus capacity for sale to California unless the regional costs are below the cost curve value. The curve is predetermined in the SAM model using a linear programming model designed to capture California operating costs. For the Draft BPA IDU EIS, this model relied on CFM 5 data (prepared in 1984) to represent California loads and generating resources. This is one reason why the SAM model used by BPA produces lower forecasts of energy available than the Edison model.

L-306 (continued)

R1 (cont.) The Edison model identifies all available energy not required to meet PNW loads. The only category of generation not considered is thermal peaking units and some Pacific Northwest Qualifying Facilities. No market constraints are input to limit possible energy transfers. The only limitations are due to transmission capability. Market factors come into play when the total energy available number is input to a production cost model. Production cost models determine how much energy will be purchased based on economics, i.e. based on a utility's load and the operating cost of its other units. (For example, in this analysis there was rejection of PNW energy, especially in the early years due to economics.) Because a production cost model was used here, it was more appropriate to use an estimate of the total energy available rather than one that eliminates certain amounts of generation from consideration.

Note also that BPA agrees with the production from the Northwest hydroelectric sources, alone, of 4,100 aMW at page 3-12 of the Draft IDU EIS between average hydro year conditions and critical water year conditions. They agree with the production of 16,400 aMW of hydro an average year and 12,300 aMW during a very low water year. Even so, the Draft EIS/EIR analyses do not use 4100 aMW as a specific input assumption. Rather, total capability of the (broader) PNW capability is used under a variety of economic and hydrologic conditions.

S1 See response to L-306 R1.

T1 See response to L-306 R1.

U1 See responses to L-306 R1 and L-306 V1. The differences discussed in those responses represent different methods of how to model the effect of future market forces on interregional transactions. The BPA model reduces the amount of energy available based on market assumptions and the Edison model uses the market conditions established in the different model scenarios to determine what energy sale transactions will take place based on the total surplus available. The energy production capabilities of BPA resources are not dissimilar in the two approaches.

V1 See response to L-306 R1. At page 3-12 of the IDU Draft EIS, BPA implies that the Northwest hydro resources can produce 4,100 average MW more during an average year than during a very low water year. Additionally, BPA determined that some coal generation would be used in the Northwest to produce additional energy if the Project were completed, see for example, Table 4.2.14 of the IDU Draft EIS. The IDU Draft EIS also reflects the availability of energy from B. C. Hydro on page 4.2-27.

L-306 (continued)

W1 As explained in responses to L-306 R1 and L-306 V1, there are explicit differences between the Draft COTP EIS and the IDU Draft EIS on the issue of availability of energy from the Pacific Northwest. Many factors other than planning criteria can cause changes in non-firm capability, e.g. additional units at existing projects and changes in non-power operating constraints. BPA's most recently published projection of resource capability during a future study period, 1992 and beyond, is a better basis for analysis than sworn testimony about resource capability that existed in 1982 and 1983. Furthermore, the availability of energy from others in the Northwest besides BPA and from outside the Pacific Northwest region as defined in the Pacific Northwest Electric Power Planning and Conservation Act explains a significant portion of the differences in energy availability assumptions between the BPA IDU Draft EIS and the COTP Draft EIS/EIR.

X1 See responses to L-306 R1, L-306 V1, and L-306 W1.

The COTP analysis did not use either 3,300 or 4,100 aMW of availability as a specific input assumption. The references in the COTP Draft EIS/EIR Appendix B to Volume 3A to 4,100 aMW is average year water conditions, which is 800 MW greater than the 3,300 aMW stated by BPA as available in dry years.

L-306 (continued)

X1

change in the resource planning bases in the Northwest. As the discrepancy now stands, BPA's testimony presented under oath at the FERC is the best publicly-documented analysis.

(2) Northwest Uses of Nonfirm Energy

Y1

It is not clear whether TANC has properly reduced the gross PNW nonfirm availability for PNW uses. TANC must properly deduct PNW nonfirm uses in the Final EIR and document these uses so that Responsible Agencies may verify these critical assumptions. The PNW nonfirm uses include at least:

a. Direct Service Industries (DSI) uses, of 1000 aMW [CEC's ER-6]
b. Firming nonfirm, i.e., it is wise not to plan on sales to California which the PNW might use in the future within the PNW unless some assurances are made. This amounts to about 700 aMW. [CEC, ER-6]
c. WNP-3 settlement (193 aMW)
d. BPA's industrial incentive nonfirm rates
e. Monthly variation in nonfirm is not all storable, so while the 3300 aMW is the average availability, that which is transferrable to California is less (In other words, the 7000 aMW nonfirm availability in March (on average) cannot be stored to be sold in September when the availability is zero, even though the 7000 aMW is part of the 3300 aMW average).
f. BPA/PNW willingness to spill to fulfill their rate design goals (e.g., maximizing revenues within their rate designs).
g. PNW coal plants that are uneconomic to run at low oil/gas prices.

Z1

(3) CEC's Determination of Nonfirm Energy for Planning Purposes

Moreover, TANC must either use the CEC's determination of nonfirm energy for planning purposes or explain why that determination is rejected. The CEC has adopted 13,150 GWh (1500 aMW) of nonfirm energy from the PNW for planning purposes. Even allowing for monthly variations, the existing interties can import all the available nonfirm energy in the PNW on average when 13,150 GWh is assumed for planning.

(4) Non-Regional Nonfirm Energy and the IAP

A2

BPA defines the PNW to include Oregon, Washington, Idaho, and western Montana. SCE/TANC appear to define the PNW to include Wyoming, Montana, British Columbia, and perhaps more. The Final EIR must explain this difference. TANC

Y1

The COTP analyses in the Draft EIS/EIR take multiple sources of energy into account, see responses to L-306 R1, L-306 V1 and L-306 W1. There is more potential non-firm energy available than the amounts determined in the analyses as the basis of the benefits. Economic constraints result in some of the available energy to not be sold to California utilities in a number of the scenarios modeled. Specific quantification of other consumptive uses of energy would differ according to economic and water conditions but the net availability for use of COTP is reasonably represented by the Project analysis in the Draft EIS/EIR.

Specific responses to subparts of this comment:

a. With respect to Direct Service Industries (DSI), uses of PNW non-firm power BPA recently projected (high case) total DSI loads to be less than 3,400 aMW, 1987 rate proceeding, WP-87-E-BPA-03A1, Table 6 plus Table 11. BPA plans, acquires and operates firm resources to meet three quartiles of the DSI load, thus only one quartile of DSI load can become a non-firm load. Further, when DSI's curtail production they rationally curtail that portion of load which is least firm. Also, for a rate premium of one-half mill or six-tenths mill the DSI's can opt to receive firm service for all of their load, Section III.A.2 of the Variable Industrial Rate and Section IV.A.1 of the Industrial Firm Power Rates. Even if the DSI's operate at full load the DSI contract provides that BPA will use "borrowed firm energy" to serve their load for much of the year (see Redman, E., "Non-firm Energy and BPA's Industrial Customers," 58 Wash L. Rev 279 (1983). The combination of the foregoing make it difficult to determine an average usage of non-firm to serve DSI loads. It is, however, probably less than half of 850 aMW, one-fourth of 3,400 aMW, the highest total DSI load recently estimated by BPA.

b. Firming non-firm, a review of the NPPC plans reveals that the Northwest is considering "firming non-firm" because it may be economically rational to do so. The rates assumed for non-firm sales over the COTP should be sufficient to change the economics of the "firming non-firm" concept. The selection by the NPPC of 700 MW of combustion turbines to firm non-firm is predicated on belief that "it is not clear that market conditions in California will allow much of an increase in prices from now on," page 7-3, 1986 Northwest Conservation and Electric Power Plan. As the COTP analysis assumed higher non-firm prices than occurred during 1986, it is not evident that 700 MW of combustion turbines will be installed in the Northwest.

L-306 (continued)

Y1 (cont.)

c. WNP-3 Settlement - This contractual arrangement does not convert non-firm to firm. It may substitute BPA for private Northwest utilities as the entity that must plan firm resources but it does not change the regional load resource balance.

d. BPA's industrial incentive non-firm rates. BPA developed incentive rate concepts to use otherwise unmarketed non-firm. The COTP will increase the market available for non-firm energy. The prices assumed in the COTP analysis would make future offers of industrial incentive non-firm uneconomic unless the COTP were already substantially loaded.

e. The Edison model used to forecast surplus energy meets all PNW loads, both firm and interruptible, before identifying energy available for sale to the Pacific SW. See the response to comment L-306 R1. The model does not allow energy to be stored from one month to the next.

f. See response to L-306 UU and L-306 XX for a discussion of pricing assumptions for Northwest nonfirm. The prices assumed are higher than historically obtained by the Northwest. The occasions on which it has been alleged that BPA spilled energy when markets were potentially available have all involved lower prices than are assumed in the Draft EIS/EIR analyses.

g. The COTP analysis assumes coal-fired generation is available for export after meeting Pacific Northwest energy requirements and after displacement of some of the higher cost dispatchable Qualifying Facility generation in the Northwest and after displacement of some of the energy that would have been produced by Northwest combustion turbines and combined cycle generation.

Z1 See responses to L-306 Y1, L-306 B2, and L-306 C2.

The COTP analysis assumes that the Intertie is used for both import of economy non-firm energy and firm capacity simultaneously. Accordingly, the Intertie must be larger than the capability required for either function taken independently.

A2 There is a difference in definition between the area called the Pacific Northwest by BPA and the area used in the Edison model to assess PNW firm and non-firm energy availability. The BPA definition is based on the geographic area outlined in the Pacific Northwest Electric Power Planning and Conservation Act. It includes the state of Oregon, Washington, Idaho, Montana west of the Continental Divide, portions of Nevada, Utah, and Wyoming that lie within the Columbia River drainage basin, and any rural electric cooperative customer not in the geographic area described above, but served by BPA on the date that the Pacific Northwest Power Act went into effect. The Edison model includes the same geographic area as well as Eastern Montana and Eastern Wyoming. British Columbia is included in the Edison model, but is usually shown as a separate item by BPA. Neither data set includes the proposed 900 MW Peace River Site C plant in British Columbia or resources which may be available in Alberta, Canada.

See also the response to L-306 R1.

L-306 (continued)

B2 must reconcile the fact that BPA's Near-Term and Long-Term Intertie Access Policies (NTIAP and LTIAP), will not allow non-PNW (the way BPA defines it) energy through the Pacific Intertie until the PNW sells all it has at the price it wants. (For example, IAP condition 2 lets the PNW utilities have access to fill the Intertie with nonfirm energy they wish to sell at any price.) When non-PNW sellers gain access, the access is limited and price competition will not increase intertie allocation and market share. TANC must reconcile the reduced availability of non-PNW nonfirm with its assumptions in the DEIR. To the extent the energy does make it through the PNW, TANC must reconcile its assumptions on the non-PNW price with its assumptions of the PNW price, including transmission charges by BPA and non-BPA Northwest utilities for wheeling non-Northwest electricity.

(5) Revenue Maximization

C2 In a similar vein, TANC must reconcile the experience of BPA and the PNW spilling huge amounts of water as part of their marketing program to California. This is believed by the BPA and PNW sellers to be a rational action, under the assumption that they earn more revenues selling less at the price they want than more at a lower price. For example, the PNW spilled about 4300 GWh in the spring of 1986 rather than sell it to California even though the existing Interties were sufficiently vacant that they could have carried the energy. At that time California was paying an estimated 85 percent of its decremental cost to the PNW (not the 60% that TANC assumes as the spring runoff price). There has been no change in subsequent or proposed rate schedules to indicate a change in practice and no reason to think this behavior will not be repeated. The EIR ignores this experience, by assuming high energy imports and low prices. TANC must reconcile this assumption with actual experience (and the fact that nothing has changed to alter to conditions which resulted in this behavior) in order to assure the CPUC that the EIR's conclusions are reasonable.

(6) Estimates of Energy over the COTP: BPA's IDU DEIS versus the COTP DEIR

D2 The EIR incorporates BPA's IDU DEIS in parts but does not reconcile the imports estimated for the COTP in the two documents:

B2 See responses to L-306 H1 and L-306 I1.

No reconciliation is required. The COTP analysis took into account the maximum schedulable capability of COTP. To the extent PNW non-firm and firm capacity transactions completely load the COTP, it is not relevant whether the deliveries are firm or non-firm, since the maximum possible deliveries are being received by the California utilities. There is no reason to believe competition from the PNW in times of large availability of non-firm will increase competitively determined prices from non-PNW sources. Rather, competition should reduce prices.

Thus, the circumstance postulated in the question can not be detrimental to the analysis. If the available space on the COTP is loaded with PNW non-firm to the exclusion of non-PNW non-firm, then the supply of non-firm is very large, and benefits from COTP exceed the average assumed in the analysis. Either sufficient non-firm is available from the PNW to load the line, or there is space for non-PNW transactions. Larger total intertie capacity will reduce the frequency and duration of situations where PNW non-firm is adequate to load the total space available on all interties. Thus, pricing of non-firm will be subject to greater competition as a result of the COTP, even with the proposed IAP.

C2 The comment does not provide sufficient information to determine all of the causes of spill in the PNW. Under present operation criteria for the BPA federal hydroelectric system, substantial releases are made in the spring in the form of spill releases to meet biological requirements for the fishery in the Columbia River Basin. This "fish flush" is expected to account for a significant portion of the 1986 spill referenced in this comment. Even if the implication in the comment regarding the reason for spill during 1986 is true, there is no evidence that higher future oil and gas prices will cause spills by BPA for the sake of influencing surplus sales prices in future years under different conditions. Oil and gas prices at the time were depressed below the prices assumed for those fuels in the COTP analysis.

It is not possible to forecast how much energy the PNW may spill rather than sell. Such a forecast would be entirely speculative. It is only reasonable to forecast what energy may be available for sale and at what price it can be sold in the available market.

Also, a larger total Intertie capacity between the regions will reduce the frequency with which PNW non-firm is adequate to load all available space on regional interties. Thus even if BPA has a policy of withholding non-firm from the market, there will be fewer opportunities for BPA to do so after COTP is built. Under BPA's Intertie Access policy, BPA cannot control access by other sellers when the amount of non-firm available for sale is less than the available capacity on the Intertie.

C2 (cont.) The comment also confuses the marginal cost of gas with the avoided cost of California utilities. The analysis assumes prices equal to 60% to 75% of the marginal cost of gas generation. The comment does not provide enough information to determine whether 85% of detrimental cost was inconsistent with 60% to 75% of marginal cost of gas. At times the marginal cost of gas generation is more expensive than the actual detrimental cost of energy from resources then operating. That is, the availability of a block of energy can adjust the incremental operating unit to a different point of efficiency in its operating curve, or displace in total, a less efficient generating unit.

L-306 (continued)

D2

Year	Sales to PSW over COTP (aMW)	
	BPA IDU EIS [1]	TANC DEIR [2]
1992	117	383
1997	113	380
2002	134	290
avg	121	351

[1] Table 4.2.3: maximum minus DC upgrade, NW total including non-regional.
[2] DEIR, Vol. 3A, Table 7-2.

BPA's estimates include non-PNW (as BPA defines the PNW) sellers, yet the TANC numbers are nearly three times those estimated by BPA (351/121=2.9).

c. Summary

E2

The Final EIR must reconcile each of these forecasts. At a minimum, the Final EIR must use the BPA forecast or justify why this forecast was rejected, with sufficient detailed information for decisionmakers to independently judge the forecasts. The EIR must also explain whay the CEC's forecast for planning purposes was not used.

11. **ADEQUACY OF EXISTING CALIFORNIA GENERATING CAPACITY**

The DEIR states that "The Combined Projects can provide additional benefits to California by enabling utilities to delay construction of generating capacity. [Vol.1, p.1.5-5] The EIR also assumes that the Combined Projects would bring needed capacity to California, beginning in 1991.

F2

California currently has considerable excess generating capacity and a large number of proposed third-party power projects (Qualifying Facilities or QF's). Despite this situation the EIR assumes that California needs new utility-owned generating capacity in the early 1990's. This assumption is inconsistent with the California Energy Commission's Electricity Report Six, which states that California utilities do not need additional capacity prior to 1994 except for San Diego Gas and Electric Company (SDG&E). CEC Draft Final ER-6, pp. 3-10 through 3-12. In addition, the CPUC Staff has constructed an aggregate reserve margin analysis which does not support the EIR's assumptions.

a. EIR Assumptions

G2

The EIR presents a resource plan for California on pages 30 and 31 of Volume 3A, Appendix B. The plan shows a statewide reserve margin of 21.3 percent in 1985 which rises to 30.4 percent in

D2

See responses to L-306 R1 through L-306 C2. The limitations of the BPA SAM model to forecast extra regional non-firm sales and the differences in the sources assumed to be available are discussed in the response to L-306 R1.

Also, it should be noted that the BPA IDU EIS results are not a direct input to the COTP analysis. These are independent analyses using different models and assumptions as discussed above. See especially the response to L-306 R1.

E2

The Northwest Power Planning Council data was used because it represents an objective source of information on the region. This data, in combination with Eastern Montana and Wyoming loads and resources, is consistent with filings made before the California Public Utilities Commission by Southern California Edison in the Palo Verde-Devers application. Incentives exist for large energy sellers, such as BPA, to underestimate the amount of power available. If Pacific Northwest power were considered scarce, the price buyers are willing to pay could go up accordingly.

The NPPC forecast is also considered more appropriate than the CEC's forecast due to the purpose of the NPPC's forecasting effort as discussed in the response to L-306 R1.

F2

Contrary to the inference in the CPUC statement, the resource plan used in the study does include substantial third-party power projects, as given in the California utilities' CFM VI resource plan filings (pages 30-31 of the economic analysis). The resource plan allows for 4,500 MW of cogeneration and QF capacity to be added between 1985 and 1991, with an additional 3150 MW added over the study period 1991-2004. Although the CEC's ER-6 was not available in July of 1986, when this analysis was completed, these totals are consistent with the ER-6, which shows 4,500 MW of cogeneration and other QF capacity coming on line between 1985 and 1990.

The statewide reserve margins resulting from the capacity additions assumed in this study range from 20 percent to 30 percent, if a fairly generous capacity is assigned to the new and existing Intertie for the purposes of calculating reserve margins. The one-year occurrence of a 30 percent reserve margin results from the addition of 1,600 MW in 1991, and that reserve margin falls to 25 percent within two years. It is customary for system reserve margins to briefly exceed long-term targeted

L-306 (continued)

F2 (cont.)

reserve margins when blocks of new resources become available to the system. The flexibility of the COTP Participants to phase in new capacity purchases as needed to optimize the use of existing resources could reduce the actual reserve margin increase. If only 600 MW of capacity were assigned to the COTP, for the purposes of the reserve margin calculation, the reserve margin in 1991 would be 28 percent, falling to less than 23 percent in 1993, and averaging around 21 percent over the following decade, which is a prudent reserve margin for planning purposes. See also the response to L-306 H2 with regard to capacity additions in the early 1990's in the absence of the COTP.

L-306 (continued)

G2

1991, which is the first year of the COT project. Reserve margins in the 1990's decline sharply from this 1991 value to 26.5 percent in 1992. TANC's target reserve margins in the 1990's decline to 22.4 in 1999. The target reserve margins in the years 2000 through 2004 vary from 22.2 to 23.0 percent. To meet these excessively high target reserve margins, TANC's resource plan includes the addition of Pacific Northwest firm capacity (in part via the COTP) and thousands of megawatts of combined cycle units or combustion turbines.

Traditional utility planning, in its most simplistic approach, adds capacity when reserve margins fall below a certain, prespecified level. The DEIR uses excessively high target reserve margins.

H2

The CPUC Staff has developed reserve margin analyses, shown in Table A-3. The first block is the EIR analysis. It shows a reserve margin, based on TANC's capacity credit for the line, that always exceeds the reserve margin criterion. The criterion is substantially exceeded in the early years of the project. In the CPUC Staff's view, a proposed project which causes reserve margins to be high is "excess capacity". For a utility with excess capacity, proposed capacity additions should not receive full credit for new capacity.

The second block of the table shows the statewide reserve margins without the COTP, using the CEC planning criteria. [See Comment 14. d.] This analysis shows that the state does not need the COTP for capacity.

The last block shows the reserve margin analysis using the utilities' own planning criteria. This shows that no capacity is needed (statewide) until 1993, and the capacity credits for the line are minimal until 1994. Even under the utilities' assumptions, there are no years in the 1990's in which 1300 or 1490 MW (TANC's Northwest Extended Surplus assumptions) are needed.

The point is that none of the utilities in California (except the Sacramento Municipal Utility District) need capacity until the mid-1990's.

I2

TANC's analysis appears to add capacity not based on traditional utility planning principles, but instead based some other criteria. Resources were added to match "reserve criteria and/or the appropriate share on the new line". [Ibid., p. 82] This is unclear and must be clarified in the Final EIR.

J2

The capacity analysis of the COTP is contradictory to the CEC's and CPUC Staff's analyses. The EIR should eliminate, or at least reduce, the capacity value given to the project in the early 1990's, and reduce the capacity value given in the late 1990's. The Final EIR must use the CEC's analysis of capacity needs in California or explain and justify why the CEC's analysis was rejected.

G2

The resource plan presented in the Draft EIS/EIR on pages 30 and 31 of Volume 3A, Appendix B is the aggregation of all California utilities' published CFM VI data. The plan does not indicate that the full capacity of the line is needed by all parties in 1991, but suggests that the load grows into this capacity within a few years. In the early years of operation, surplus power purchases are a key component of the economic value of the COTP. The lower resultant reserve margins in later years after surplus power availability is reduced exhibits the reasonableness of the timing of construction of the COTP.

Reserve margins of 20-25% are not often characterized as "excessively high". Typical generation planning studies will use reserve margins in just that range for basic targets. PGandE, for example, specified a 24% reserve margin for the development of high and low resource additions in this study.

The reserve margins calculated in the report are "targets" only in the later years of the economic analysis presented in the Draft EIS/EIR. (See discussion of reserve margin in the response to L-306 F2.) The reserve margins presented in Table A-3 of Appendix B in Volume 3A of the Draft EIS/EIR are presented primarily to exhibit the reasonableness of the statewide reserve margins with the COTP and associated Northwest purchases. Note that it includes a fixed quantity for firm capacity supplied from the Northwest with the new AC line and other upgrades supplying 1,580 MW. If the BPA estimate of only 600 MW in additional firm capacity sales was used, the reserve margins would be about two percentage points lower in every year.

H2

The COTP provides access to firm capacity, firm energy and non-firm energy for a period of fifty years or longer. The firm capacity which can be delivered over the COTP is but one portion of its benefits to the California utilities. The CPUC's comment questions only the difference between 1991 and the mid 1990's as the time after which there is a need for a few hundred megawatts on a statewide basis to contribute to an approximately 57,000 MW combined statewide utility capacity. Minor differences in planning criteria, load growth assumptions and power resource availability on a statewide basis can alter the year in which several hundred MW of capacity is "needed" on a statewide basis. The fact that a number of the COTP Participants are proposing capacity additions during the 1991 to 1995 period if the COTP is not constructed is evidence that the CPUC staff's position on the timing of need for new capacity is not universally held by the state's utilities, many of which are not subject to CPUC jurisdiction. It should be noted that the economic sensitivity analysis conducted for the project presented in Appendix B of Volume 3A of the Draft EIS/EIR evaluates the COTP under a broad range of capacity credit levels, not just at the 1300 MW and 1490 MW levels referenced in the CPUC staff's comments.

L-306 (continued)

I2 Unit additions in general were justified by each individual utility as necessary to match reserve requirements and other traditional planning goals. CFM VI filings were used, with reasonable updates to that data, which were available in early 1986.

Unit additions in the case without the COTP were made to maintain reserve margins at acceptable levels over the study period, up to each company's COTP share. This results, for example, in SCE's and PGandE's combustion turbine additions in the without-COTP cases being spread out over several years. These additions are given explicitly, by company, in Appendix C of the economic analysis section (pages 122-125) to Appendix B of Volume 3A of the Draft EIS/EIR.

Capacity additions in the resource plans for the high and low load growth cases were based on several criteria. First, each utility maintained the reserve margins established in the base case resource plans. Second, changes were made to the scheduled unit additions. For example, SCE's contingent retirements in the base case were accelerated in the low load case, and PGandE's planned geothermal additions were delayed. Both PGandE and SCE assumed that a substantial share of additional capacity needed under the high load growth case could be obtained from third-party cogeneration and Qualifying Facilities.

J2 As the Draft EIS/EIR explicitly states, the capacity value of the COTP was not held uniformly at the levels suggested by the resource plans. The three capacity credit scenarios use different capacity values.

The total capacity additions, including COTP, combustion turbines in place of COTP capacity, and other resource additions yield a reserve margin with which the CPUC staff takes issue. The additions which yield the early "capacity value" to which the staff objects are primarily additions which TANC and other municipal utilities plan to make if they do not have access to capacity from the Northwest on the new line.

L-306 (continued)

12. RESOURCE PLANS USED IN THE ANALYSIS

The need for the Combined Projects is a function of the loads, resources, and generating costs of California utilities. For example, the DEIR states that "The Combined Projects can provide additional benefits to California by enabling utilities to delay construction of generating capacity." [Vol.1, p.1.5-5] In utility planning, loads and resources are compared in "resource plans". One of the purposes of a resource plan is to identify the generation resources needed to meet forecasted peak and energy demands.

K2 The EIR uses resource plans that have not been made public and that, at least in some cases, differ from the published resource plans of the utilities. The plans are based on demand forecasts which significantly differ from the California Energy Commission's demand forecasts.

a. The EIR's Assumptions

The EIR is based on nine hypothetical resource plans for California designed to meet TANC's estimated capacity expansion requirements. [Vol. 3A,App. B, pp. 29-36] The nine plans included generic additions composed of 1) out-of-state coal capacity, 2) combined cycle units, 3) combustion turbines, and 4) combined cycle units until 2004, when out-of-state coal would be added.

The nine resource plans were evaluated using the "medium fuel prices under the Strong OPEC oil market scenario..." [Ibid., p. 36] Subsequently, "A further set of calculations were performed using the medium fuel price forecasts within the Weak OPEC scenario, ..." along with medium load growth in California. [Ibid.] In the end, two resource plans (Plans H and F) were selected for the probabilistic analysis of the COTP. Apparently combined cycle units make up the primary generic capacity additions. If the COTP were not built, combustion turbines are assumed to provide the "missing" capacity.

L2 b. The EIR's Resource Plans Do Not Match Those of the State's Utilities

An earlier TANC document [Preliminary Results Memo, TANC, July 1, 1986, p. 3] states that the two selected resource plans "differ substantially from those supplied by the utilities." If still true in the DEIR analysis, the specific differences between the resource plans used in the EIR analysis and the utility resource plans must be identified and justified.

This mismatch makes the selected resource plans an invalid basis for analysis of the COTP. Key areas of disagreement are the assumptions by TANC that: 1) Specific California utilities, such as PGandE and SCE, have capacity needs in the next 10 years; 2) those needs will be met by new utility-owned combined cycle units rather than by Qualifying Facilities (QF's).

K2 The resource plans presented in the Draft EIS/EIR developed in the course of the economic analysis are least-cost resource plans given the base-case assumptions. The only differences between the utility resource plans as filed with the CEC for input to the CEC Electricity Report and the plans used in the Draft EIS/EIR study are in the classification of generic baseload additions which appear in the resource plans of all of the utilities in the state: the resource plan in the study in the Draft EIS/EIR uses intermediate-load capacity (as opposed to baseload or peaking capacity) which is modeled as combined-cycle capacity.

The peak demand forecasts are similar to the CEC's ER-6 load forecasts. See the notes on that topic in Chapter 4 of the economic analysis in Appendix B to Volume 3A of the COTP Draft EIS/EIR.

See response to L-306 L2 for additional information on this topic.

L2 The differences in the resource plans used in the economic analysis--namely supplying generic capacity with combined cycle units rather than by the generic coal units specified in CFM VI--are given specifically in the Draft EIS/EIR in Table 5-1 (CFM VI data) and Table 6-3 (the resource plan used). Section 5 of the economic analysis in Appendix B of Volume 3A of the COTP Draft EIS/EIR is devoted to a detailed description of the justification for this choice and the specific differences between this plan and the CFM VI plan.

Evaluating the capacity needs of California utilities was not the objective of the resource plan evaluation. Rather, this evaluation was directed towards identifying the type of capacity to supply the capacity needs embodied in CFM VI filings. Three broad classes of capacity were considered: baseload, intermediate-load, and peaking. These were represented by coal-fired steam units, gas-fired combined cycle units, and gas-fired combustion-turbine units.

L-306 (continued)

M2 The Final EIR must include the plans which the utilities submitted to TANC, the plans the utilities submitted to the CEC and the CPUC in the same time frame, and the plans which TANC used. The Final EIR must explain the differences between these plans for each utility. The Final EIR must either use official resource plans of the utilities or the CEC, or it must justify the use of TANC's plans.

c. Resource Needs for Northern California Municipal Utilities

TANC, representing northern California municipal utilities, disagrees with PGandE regarding whether TANC's share of the line should be regarded as firm capacity or not. [Ibid., p. 119] PGandE does not assume the capacity to be firm. On the other hand, "the members of TANC consider their shares to provide firm capacity and, without the line, would install new capacity or make additional purchases." [Ibid.]

N2 The direct result of TANC's assumption being adopted for the EIR is a need for new capacity in the short term, due to refusing capacity which could be purchased from PGandE. The majority of the combustion turbine additions in the "Statewide Resource Plans" are proposed by TANC itself, 675 MW in the base case. [Ibid., pp. 122-124]

O2 TANC's need for capacity appears to represent a policy decision by TANC to obtain firm capacity and energy from the Northwest (via the COTP) or from new municipal combustion turbines rather than continuing to purchase requirements power from PGandE. Thus, California (except SMUD) does not really need additional combustion turbines to serve TANC's near-term loads. There will be ample capacity in the state, particularly considering the number of QF's likely to come on line in the next five years. [See D. below. Also, cf. Comment 12 and Comment 8 regarding a QF offer by municipals.] If this is not correct, the EIR must explain why not.

d. Other Deficiencies in the Resource Plans

The DEIR states that "The two resource plans used here were judged to be reasonable plans under the medium price forecast in the Strong OPEC scenario." [Vol.1, p.1.5-13] The price forecast has a 10.89 percent (nominal) growth rate and implies a return to the oil price inflation rates of the 1970's.

P2 The resource plans without the COTP assume that combustion turbines (CT's) would be appropriate substitues for the COTP. This is contradictory to the experience of the 1970's which included major policy initiatives (such as the Fuel Use Act) to reduce oil and gas generation and instead rely more heavily on non-oil/gas fuels. Due to this contradiction, TANC's resource plans are not internally consistent. They are not sensitive to major changes in fuel prices.

L2 (cont.) The resource plans tested did not exclude cogeneration and qualifying facilities from supplying new capacity: cogeneration and QF's supply 34% of the capacity additions between 1985 and 2004, a total of 7,639 MW. These additions are included in all of the nine resource plans. In contrast, the generic capacity additions by which the nine plans differ contribute only 22%, or 5,042 MW, of the total capacity additions.

M2 The statewide plans submitted to TANC are included as Table 5-1 in the economic analysis presented in Volume 3A of the Draft EIS/EIR. Unit-by-unit tables of capacity data are available for review at the offices of the COTP Manager's consultant.

The statewide plan used is included in the report as Table 6-3 in the economic analysis. The difference is only in the units designated as "generic coal" in the as-submitted resource data: these units are re-designated as gas-fired combined-cycle units.

N2 TANC's combustion turbine (CT) additions in place of capacity to be delivered over the COTP are 425 MW in the short term (1991), with the remaining 225 MW distributed over the nine-year period from 1992 through 2000. It is correct that TANC members' 1991 CT additions in the without-COTP case are a majority of the statewide additions of 625 MW. These additions are based on the needs of TANC members. These new capacity resources would be developed to provide lower total revenue requirements to the TANC members' ratepayers as compared to continued wholesale power purchases.

The publicly owned utility Participants in the COTP will pursue other resource options if the COTP is not built. Several of the TANC member utilities have in recent years pursued and have plans to pursue additional generation resources. A number of the Northern California publicly owned utilities have installed CTs and anticipate installing additional CTs to reduce wholesale demand charges if the COTP is not built. The COTP and associated Northwest power purchase arrangements are being pursued to (a) reduce the members' dependence on wholesale power purchases, (b) gain control over the cost of power to serve their systems, and (c) to reduce revenue requirements to the utilities ratepayers as compared to the cost of wholesale power purchases. The objectives and criteria used by the TANC members are similar to those of utilities within the Pacific Northwest, some of which are pursuing new generation resources to reduce their reliance on purchases from BPA. Based on the resource plans of the TANC members, the economic analysis assumed that many of the members would supply their needs by building combustion turbines to meet capacity requirements in the absence of the COTP.

O2 The publicly owned utility Participants in the COTP will pursue other resource options if the COTP is not built. Those options include construction of combustion turbines beyond those already planned or under construction by several of the TANC Members, and purchases from large investor-owned utilities such as PGandE. Based on the resource plans of the TANC Members, the economic analysis assumed that they would supply their needs by building combustion turbines. If TANC perceives a need for new capacity,

L-306 (continued)

O2 (cont.) which may or may not be based on a policy decision to replace purchases from PGandE, these non-investor-owned utilities will probably build that capacity. It may well be true that the state electric generating system, if planned and operated as a single system rather than many separate utility systems, would not need this capacity. Given that some TANC members are presently installing combustion turbines (CTs) to reduce wholesale power purchases, additional CTs are the real alternative to the TANC Members shares of the COTP capacity.

SMUD's share of this potential CT capacity is equal to its share in the line. See the responses to comments L-306 F2, L-306 G2, and L-306 H2 for more discussion of the issue of need for capacity.

P2 CTs are appropriate substitutes for proposed new capacity. For example, cogeneration and QF's are accorded capacity credits corresponding to the capital costs of CT's. This is because the CT, providing the lowest capital costs, acts as the marginal unit addition, forcing alternatives to compete with this low marginal capital cost by offering benefits in the form of lower energy costs.

The experience in the 1980's of reliable gas supplies at acceptable costs, with a reasonable expectation that the situation will continue, is in sharp contrast to the experience of the 1970's. The total capacity additions are as specified by the utilities, to meet the utilities' resource requirement criteria.

L-306 (continued)

Q2 In addition, separate resource plans were not developed to fit the Weak OPEC scenarios. The Final EIR must develop such plans or justify why the Strong OPEC resource plans may be used in the Weak OPEC scenarios.

e. Summary

R2 The EIR's resource plans assume more resource requirements than California's actual needs. The EIR must either use the California Energy Commission's reserve margins, or at least use the published resource plans of the utilities, not the EIR's resource plans.

S2 If TANC desires to perform scenarios, the resource plans must be sensitive to other uncertain variables, such as fuel prices, which TANC's existing resource plans are not, or explain and show evidence why resource plans are not sensitive to these other important variables.

T2 The EIR does not justify the assumption that the northern California municipals will not obtain new capacity from PGandE. The EIR must include an alternative which would assume that the capacity needs of the northern California municipals are met by PGandE, just as in the past and present.

U2 Without the necessary support for the above assumptions, the Final EIR will be inadequate for the CPUC's use.

13. ADEQUACY OF THE EXISTING PACIFIC INTERTIE

V2 Part of the rationale for the COTP is that it will provide additional transfer capability between the Northwest and California. For example, the DEIR states, "During the past three years the Intertie lines have been loaded to capacity during most of the year." (Vol.1, p. 1.2-1) This statement does not take into account upgrades of the existing lines which are planned in the very near future.

a. Planned Upgrades to the Pacific Intertie Will Substantially Increase Its Capability

The existing two 500 kV AC lines are now rated at 2800 MW. According to current operating practice, 800 MW of the AC lines are set aside for loop flow. The AC lines can carry firm capacity and energy or nonfirm energy. The existing 500 kV DC line is rated at 2000 MW, which is firm.

Thus, the Pacific Intertie currently has up to 4000 MW of capability for firm energy and/or capacity (2000 MW of AC [out of 2800] plus 2000 MW of DC capability). Up to 2800 MW of the AC lines may be used for nonfirm energy.

In 1987, the AC lines are to be strengthened by 400 MW, and the utilities contend that the entire 400 MW are firm. The DC

Q2 The "Weak OPEC" case was developed as an alternate fuel-price scenario, in response to a change in the oil markets which occurred during the course of the study. The resource plan evaluations were checked for the medium fuel-price scenario under the Weak OPEC case, and it was determined that the same choice would be made: intermediate-duty, combined-cycle capacity to supply the 5,000 MW of generic capacity.

R2 The only difference in total capacity additions between the utilities' published plans and the plan used in the economic analysis in the Draft EIS/EIR is in the classification of generic "baseload capacity" (the capacity which is designated as combined-cycle additions). The total capacity additions are as specified by the utilities, to meet the utilities' resource requirement criteria.

S2 The resource plan evaluation was performed for all three load forecast scenarios. The utilities supplied three different resource plans, one for each projection of load growth. Unit-by-unit data on the resource plans for the high and low load forecasts is available for review at the offices of the COTP Manager's consultant.

Testing the choice of generic capacity under medium fuel price scenario of the Weak OPEC fuel price scenario yielded no change in the choice of combined cycle as the least-cost option for supplying generic capacity additions. Therefore, no changes to the resource plans in the model were warranted for the different load forecasts.

T2 This comment refers specifically to the northern California municipal and other publicly owned utility participants in the COTP. The Northern California municipal utilities have developed combustion turbine, cogeneration, and geothermal capacity in recent years. The resource plans of such utilities further exhibit the utilities' general intent of constructing or otherwise securing rights to generation capacity rather than purchasing wholesale power from PGandE. These utilities' capacity demands of PGandE have reduced in recent years due to such resource development, with the objective of reducing revenue requirements to the municipal utility customers as compared to what requirements would be if wholesale power purchases were relied upon to meet this demand. The inference in the CPUC staff comment that PGandE meets the entire capacity needs of the Northern California municipal utilities at present is inaccurate. The Northern California municipals and other TANC members meet a significant portion of their capacity needs from power purchases from the Western Area Power Administration, within contractual allocation of such power, and from thermal resources, and have indicated in submittals to the California Energy Commission and elsewhere the intent of continuing to develop new generation resources to reduce, to the extent such resources are expected to be sufficiently lower cost, wholesale power purchases on a lifecycle basis. Completion of the COTP will reduce the generation capacity those utilities would otherwise construct.

L-306 (continued)

U2 The assumptions used in the Draft EIS/EIR are supportable for reasons described in responses to the CPUC staff's individual comments. See responses to L-306 R2 through L-306 T2.

V2 The existing Intertie is being planned for uprating from an initial rating of 3,400 MW (2,000 AC and 1,400 DC) to 6,300 MW (3,200 AC and 3,100 DC). As presently planned this is scheduled to take place by 1989. No further uprating of existing facilities is possible, yet the need for additional transfer capability persists. The COTP will add an additional 1,600 MW to the Pacific Northwest - Pacific Southwest transfer capability bringing the total to 7,900 MW (4,800 MW AC and 3,100 MW DC) in 1991.

L-306 (continued)

Terminal Expansion project is expected to add approximately 1100 MW to the DC line, in 1989. The total capability of the Pacific Intertie by 1989 will be approximately (2800 + 400 + 2000 + 1100 =) 6300 MW, less 800 MW allowance for loop flow, equals approximately 5500 MW. The COTP would add another (estimated) 1600 MW of firm capacity.

b. Institutional Limits on Use of the Intertie for Firm Transfers

W2 BPA states in the Intertie Development and Use Environmental Impact Statement (IDU DEIS) that it will limit firm transfers to 2550 MW over the Intertie, unless the COTP is built. If the COTP is built, the limit would be 3150 MW. Both of these figures are less than the existing 4000 MW available for firm capacity on the existing intertie.

Through its Intertie Access Policy, BPA is already limiting the firm transfers over the Pacific Intertie to 3,150 MW, which is less than the Intertie's rating. So long as BPA continues this policy (which it plans to do), the addition of new transmission capability will not increase the amount of firm capacity which California utilities can buy.

Also, even if BPA does not limit sales to 3150 MW, the Pacific Northwest will not have surplus that exceeds 5410 MW in the years California might need it in the 21st century. (Cf. Comment 10 above.)

c. Summary

X2 The EIR's assumptions do not account for upgrades of the existing lines which are planned in the very near future or BPA's Intertie Access Policy. The Final EIR must spell out the existing and expected future capabilities of the Pacific Intertie without the Combined Projects and show detailed historical usage patterns (i.e., monthly capacity factors) and estimated future usage.

14. FAILURE TO PROPERLY CONSIDER CALIFORNIA ENERGY COMMISSION FORECASTS

Y2 Public Resources Code sections 25500 et seq. requires consideration of the demand forecasts contained in the California Energy Commission's (CEC) biennial Electricity Reports in the siting and certification of new energy facilities. In those cases where the CPUC has siting authority, as in the case of transmission lines, the CPUC also relies on the CEC forecasts and resource plans in its certification proceedings.

a. Peak Demand

Z2 TANC forecasts a 1997 peak demand of 50,141 MW [Vol. 3A, App.B, Table 5-1]. The CEC's Draft Final ER-6 forecasts a 1997 peak demand of 48,214 MW [p. 3-11]. Therefore, TANC's

W2 In analyzing the complete use of the Intertie facilities between the Pacific Northwest and the Pacific Southwest, one must take into account that many operating companies make use of these facilities. The transfer capability of the lines has been previously explained (see the response to L-306 V2). As discussed within the BPA IDU EIS for BPA (the marketing agent for power produced from governmentally owned hydroelectric facilities on the Columbia River), firm transfers over existing facilities will be limited to 2,550 MW. From these same government facilities non-firm transfers created by "wet" years will consume the balance of the capability of the existing transmission facilities. Public utility districts (PUD's), municipalities, and private utilities also market energy over these facilities when and if transmission capacity exists beyond the needs of BPA. With the COTP in service, BPA plans to increase firm transfers to 3,150 MW because it is able to reach markets not previously available. Considering the entire marketing aspects that exist between the Pacific Northwest and the Pacific Southwest, the entire 7,900 MW can be beneficially utilized.

X2 The Draft EIS/EIR explicitly accounts for planned upgrades to the existing Intertie lines. For discussion of potential upgrades to existing lines see responses to L-306 V2, L-306 EE and the Draft EIS/EIR on page 101, Volume 3A Appendix B. The BPA Intertie Access policy has been considered on pages 12 through 15 of the same Appendix. See also response to L-306 H1.

In regard to the evaluation of "historical usage patterns (i.e., monthly capacity factors)," it is not clear what would be added to the Draft EIS/EIR economic analysis or what use could be made of such data. Load/resource situations, interregional contracts and BPA ratemaking are in a state of change. Historical data would not seem to provide significant information about the future. The analyses in the Draft EIS/EIR are based on reasonable assumptions about the future and are appropriate for evaluating the COTP.

With respect to estimated future usage, the existing analyses incorporate multiple scenarios and probabilities. Inclusion of monthly usage for all permutations of the elements affecting usage that were analyzed would not materially add to the usefulness of the Draft EIS/EIR.

L-306 (continued)

Z2 resource plan and peak demand forecast are 1,927 MW higher in 1997 than the current official CEC peak demand forecast.

We realize that ER-6 was not available at the time TANC's economic study was written, but ER-5 was. Comparing ER-5's 1996 and 2004 peak demand forecasts to TANC's medium load forecast, we see that TANC is consistently estimating peak demand 1,500 to 4,300 MW higher than CEC. Thus, considering either ER-5 or ER-6, COTP capacity does not seem to be needed in the 1990's.

Statewide Peak Demand (MW)

Comparison to ER-5 Forecasts

Source Year	ER-5 1996	TANC 1996	Diff.
	47,618	49,116	1,498

Source Year	ER-5 2004	TANC 2004	Diff.
	53,645	57,936	4,291

Comparison to ER-6 Forecasts

Source Year	ER-6 1997	TANC 1997	Diff.
	48,214	50,141	1,927

b. Energy Demand

A3 The DEIR states that "the CFM VI demand forecast adopted by the CEC (ER-6, July 1986) is very similar to the medium case shown in Table 6-2." [Vol. 3A, App.B, p. 48-49] Table A-4 compares TANC's forecasts to the CEC's. The table shows that TANC's medium forecast is significantly different from the CEC's ER 6 forecast. In fact, TANC's medium energy (GWh) forecast is 2.6 percent higher than the CEC's in 1990 and 5.2 percent higher than the CEC's in 1997. TANC's medium forecast growth rate of 2.27 percent is higher than the CEC's forecast of 1.8 percent from 1983-2005. TANC's forecasts are 655 aMW higher than the CEC's for 1990 and 1460 aMW higher for 1997. This over-estimate (compared the CEC's) helps justify COTP's energy of about 350 aMW. It is clear that just a reconciliation of TANC's forecast to the CEC's would eliminate the need for the energy over the COTP.

Y2 Evaluation of the COTP under a broad range of economic, demand forecast and resource scenarios which envelope the demand forecast contained in the CEC's Electricity Report does not preclude the CPUC from considering the CEC forecasts and resource plans in its certification proceedings. Differences between the CEC forecast assumptions and those used in the Draft EIS/EIR are presented in responses to comments L-306 II and L-306 F2 through L-306 U2.

Z2 The COTP Draft EIS/EIR presented results based on a range of load forecasts, in recognition of the difference in opinions regarding future electric loads. The utility forecasts are higher than those developed by the California Energy Commission. For this reason, the Draft EIS/EIR bounded the range of available forecasts with high and low estimates of energy and peak demand. The CEC ER-6 load forecast published July 16, 1986 under Order Number 860709-01 also fell within the identified band, as shown graphically in Figures 1.1.1-2 and 1.1.1-3 in Section 1.1.1 of Volume 1 of this Final EIS/EIR. (In comparing forecasts, the CEC category entitled "Other Planning Areas" should be excluded and an appropriate diversity factor used to estimate statewide peak demand.)

A3 As explained in the above responses, because published opinions differed on future energy requirements, three load scenarios were analyzed. The high and low forecasts used were designed to bound the range of probable outcomes. The Energy Commission forecast fell between the Medium and Low energy projection. The comparison made in the text of the report on page 48 referred only to peak demands.

L-306 (continued)

B3 In sum, TANC's energy demand forecasts are not representative of the CEC's ER-6 forecasts. TANC's high, medium, and low forecasts all have an expected value higher than the CEC's. TANC did not use the CEC demand forecast for any of its scenarios. While the CEC's forecast is included in the wide range studied by TANC, it is clear that the medium TANC forecast substantially exceeds the medium CEC forecast. This makes the COTP appear more economic than use of CEC forecasts indicates.

c. Fuel Prices

The DEIR uses six forecasts of the acquisition cost of gas [Volume 3A, Appendix B, pp. 58, 63]: high, medium and low for the Strong OPEC scenarios, and high, medium, and low for the Weak OPEC scenarios. These are shown in Table A-5.

C3 The Strong OPEC medium case is identical to the Weak OPEC high case, and the Strong OPEC low case is identical to the Weak OPEC medium case. Thus only four different fuel price forecasts are really used. Although these forecasts bracket the CEC forecast adopted in July, 1986, none of them is the CEC forecast. [ER-6, p. 2-11] Therefore, no scenario in the DEIR's analysis shows the implications of the COTP under the CEC forecasts.

Including the CEC's forecasts in wide brackets does not allow understanding of the results using the CEC's forecasts alone. Furthermore, the medium point of the DEIR's ranges is higher than the CEC medium forecast, resulting in an expected value which does not represent the CEC's forecasts.

d. Reserve Margins

The CEC's Draft Final ER-6 adopts reserve margins for the various California planning areas:

Supply Planning Area	Target Reserve Margin - 1997
NoCal (incl. SMUD)	20.04
SCE	17.50
LADWP	22.40
SDG&E	14.23
BGP	22.40
DWR	7.00

D3 The DEIR, on the other hand, assumes a range of statewide reserve margins from a high of 30.4 percent in 1991 to a low of 22.2 percent in 2003 [Vol.3A, App.B, pp. 30-31]. These statewide margins are too high, given that for all planning areas the CEC estimates margins at the low end or

B3 The individual issues mentioned in this summary statement are addressed in the responses to L-306 Y2, L-306 Z2, and L-306 A3.

C3 The Energy Commission forecast of natural gas prices was adopted in July 1986. It is shown in the Draft EIS/EIR for comparison purposes on page 67, Table 6-10. Contrary to the implication of this comment, it is not appropriate or reasonable to include a specific analysis of every possible scenario in the Draft EIS/EIR. The comment is correct that no specific scenario in the Draft EIS/EIR analysis shows the exact results that would be obtained by using the CEC's forecast. The implications of using the CEC's forecast can, however, be evaluated. As noted in the comment, the medium point of the Draft EIS/EIR's range is higher than the CEC's medium forecast. It is reasonable, therefore, that use of a range of forecasts which has a medium point equal to the CEC's medium forecast would show less project benefits, and a higher final cost will show greater project benefits.

It is precisely because reasonable people may have different opinions about the future and none of those opinions may exactly match the actual future that makes use of a range of scenarios appropriate. The range used in the Draft EIS/EIR provides a basis for understanding results that would come from using other scenarios within the range.

D3 The Energy Commission adopted reserve margins were not available at the time the report was prepared. However, the purpose of the analysis was to identify what the state's utilities planned to build with the COTP and without the COTP, not to determine the appropriateness of each utility's reserve margin criteria. The state's utilities may not necessarily agree with the Energy Commission target reserve margins.

See response to L-306 G2.

L-306 (continued)

D3 lower than TANC. The resource plans in the EIR must be changed to use CEC target reserve margins, or reasons for not using CEC estimates explained.

e. Summary

E3 The DEIR and economic analysis do not properly consider CEC projections of fuel prices, demand, and reserve margins. Without a discussion of the CEC forecasts and the EIR's rationale for rejecting those forecasts in favor of its own, decision-makers will not have a basis for evaluating the COTP in light of the CEC's statewide resource planning efforts.

F3 In conclusion, the Final EIR must be amended to show the CEC's demand forecasts and must use the CEC demand forecasts for at least one comprehensive scenario. If the CEC demand forecasts are rejected, the Final EIR must justify why they are rejected.

15. THE DEIR'S PROBABILISTIC ANALYSIS

a. Omission of Conditional Probabilities

G3 Based on the figures and tables in Chapters 4 and 9 of the Economic Analysis, [Vol. 3A, App. B] it appears that the analysis assumes that the probability distributions for future fuel prices, load growth, and the availability of power from the Northwest are independent. This would imply that the likelihood of high fuel prices and high load growth (0.25 x 0.25 = 0.0625 in Table 9-1) is equal to the likelihood of high fuel prices and low load growth (0.25 x 0.25 = 0.0625).

This is a very unreasonable assumption. High fuel prices will imply a significantly lower conditionally-expected load growth. That is, if one assumes that fuel prices will be high, his/her best estimate of the load growth will be different (lower) from what it would be assuming low fuel prices. In this case, conditional probabilities should be used to reflect the correlations between the variables.

H3 Tables 1.5-6 and 1.5-7 summarize the results of the EIR's economic analysis in benefit/cost ratios. Some of the ratios shown are not meaningful because the assumptions (e.g., High Fuel Prices, High Demand Growth) are inconsistent. The tables in the Final EIR should be amended to eliminate benefit/cost ratios like these.

In another part of the analysis, TANC assumes that economy energy prices will be a fixed percentage of California avoided costs. [Ibid., pp. 60-61]. This is equivalent to assuming that economy energy prices will be perfectly correlated with oil/gas prices.

E3 See response to L-306 C3 for a discussion of how to relate the CEC forecast to the scenario analysis in the Draft EIS/EIR.

F3 See responses to comments L-306 G2, L-306 H2, L-306 Y2, and L-306 Z2.

G3 It is true that the distributions for fuel prices (within each OPEC market scenario), load growth, and the availability of energy from the Northwest were assumed to be independent.

Reliable correlations among these variables could not be determined. The strength of these relationships, even if historical data could yield some indication of their directionality, is extremely difficult to quantify.

The correlation, if any, between California loads and Northwest energy availability is even more obscure. Presentation of the benefit/cost results for each scenario in the Draft EIS/EIR (Section 1.5 of Volume 1 and Appendix B of Volume 3A) provides the reviewer the opportunity to make an independent assignment of probabilities of occurrence of each scenario. If reviewers consider some combinations of assumptions unlikely, a lower probability outcome can be applied to that scenario. This reassignment of probabilities is unlikely to change the conclusions, although minor changes to a single weighted average benefit cost/ratio for the COTP may result.

H3 The tables in the Draft EIS/EIR showing the outcomes under all of the combinations of loads and price forecasts are presented in that detail in order to allow others to assign their own probabilities to specific combinations of outcomes. If the CPUC staff wants to see certain combinations eliminated, they need only apply a zero probability to those outcomes.

Economy energy prices, which are normally quite closely correlated with marginal energy prices, are assumed to be perfectly correlated with oil/gas prices, as oil and gas are expected to remain the marginal fuels in California. In this case, there was a clear historical correlation from which to draw conclusions. That is not the case with the relationships among

L-306 (continued)

H3 Thus in one case, the EIR assumes perfect independence between certain variables, and in another case, it assumes perfect correlation. The DEIR does not justify these assumptions. Moreover, the analysis does not recognize intermediate cases, in which uncertain variables, such as fuel prices and load growth are correlated, but are neither perfectly correlated nor independent. When variables are correlated, conditional probabilities must be used to reflect correlations between the probability distributions of the variables.

I3 TANC's analysis fails to properly consider conditional probabilities in the probabilistic analysis. The DEIR does not disclose enough information about the probability analysis to determine the extent of failure to incorporate conditional probabilities.

The EIR should reveal the complete probability trees used in the analysis, along with the probabilities used for uncertain events and the values of outcomes. In addition, the analysis should be redone to include conditional probabilities for correlated variables.

b. Use of Scenarios in Combination with Probabilities.

In its economic analysis, the EIR states:

> "Because the benefits of the line will depend on many factors which cannot be predicted with certainty, the analysis took both a scenario approach and a probabilistic approach. Net benefits and benefit-cost ratios were developed for 108 cases....Those factors which did not vary from case to case were treated probabilistically."
> [Vol 3A, App. B, p. 6]

J3 The problem with the EIR's combination of scenarios and probabilities is that it incorrectly uses both scenario analysis and probability analysis. By treating some variables with scenarios and treating other variables with probabilities, the resulting analysis is methodologically inconsistent.

K3 For example, TANC uses "Weak OPEC" and "Strong OPEC" scenarios, each with three separate fuel price forecasts. This approach implies that somehow whether or not OPEC is strong is qualitatively different from whether or not California electricity demand growth is high, moderate, or low. Both the strength of OPEC (inluencing the level of fuel prices) and demand growth are very important uncertain variables. But TANC has not shown that the strength of OPEC has a greater impact upon the value of the project than demand growth. This is particularly true since the margins between the prices of nonfirm energy and California's decremental cost are mostly held constant at 60%/75%. Thus the strength of OPEC (i.e. the trajectory of oil/gas prices) is considerably reduced. The EIR should explain the reasons

H3 (cont.) fuel prices, California load growth, and Northwest energy availability. Further, as discussed in the responses to L-306 UU through L-306 C1, this assumption leads to results which conservatively estimate COTP benefits.

I3 The probability tree is disclosed in Figure 4-3 of the economic analysis on page 21 of Appendix B to Volume 3A of the Draft EIS/EIR. For clarity, the tree is presented in a well-accepted abbreviated form in which repeating branches are shown only once. Detailed distributions for each unit type, which are different in each year of the study, will be available for review at the offices of the COTP Project Manager's office.

As discussed in the response to Comment L-306 GJ, conditional probabilities are not appropriate to this analysis.

J3 A combination of a scenario analysis with probability analysis is entirely correct where some crucial variables are not amenable to well-founded probability assessment. In particular, the Strong OPEC and Weak OPEC scenarios describe fundamentally different future situations to which, in mid-1986, few forecasters were willing to apply probabilities.

Applying probabilities to situations which are better treated as scenarios tends to hide the influence of a variable behind a possibly spurious probability calculation. Early in the economic analysis, CPUC staff expressed concern that the probability analysis would reduce the results to a single expected outcome, from which the effects of the different variables could not be distinguished. The presentation of results for every scenario is a direct response to that concern.

K3 By presenting results for each load growth and fuel price forecast under each of the scenarios, equal weight is given to the uncertainty in quantifiably probabilistic variables such as load growth and in the overall situation represented by scenarios such as the Weak OPEC or Strong OPEC cases.

L-306 (continued)

K3 for treating the strength of OPEC with scenarios, while treating demand growth with probabilities. Explanations should be given for the treatment selected for all of the variables.

The purpose of using probability analysis is to take uncertainties into account to reach a quantitative answer, i.e., an expected value of the COTP. If a stochastic variable (i.e., strength of OPEC) is highly uncertain, that uncertainty must be reflected in the assigned probabilities and the outcome values. High uncertainty is not a justification for treating a particular variable with a scenario approach instead of

L3 probabilities. To reach a quantitative answer for the expected value of the COTP, the economic analysis must include a probabilistic analysis incorporating the variables that make the most impact on the value.

Scenarios, on the other hand, are a good tool for qualitative decision making. If a broad enough range of scenarios is considered, and one decision is the preferred alternative over a great majority of the scenarios, one may feel reasonably comfortable that the preferred alternative is a good, robust

M3 choice. But a scenario analysis should not be used to place a quantitative value on the alternative decisions.

The results of the EIR analysis are 126 benefit/cost ratios. [Ibid., pp. 3-4] The sheer volume of ratios, a result of the hybrid scenario and probabilistic analysis serves to overwhelm, rather than inform, the reader and the decision maker. The analysis forms neither a coherent scenario analysis nor a coherent probability analysis.

c. Sensitivity Analyses

The purpose of a sensitivity analysis is to determine which uncertain events or outcomes require explicit treatment of their

N3 uncertainty. This selection is both desirable and necessary. If one had to examine all inputs in a model as uncertain, the number of end points in the probability tree would rapidly become unmanageable (e.g., EIR Figure 4-3 appears to have 32,400 end points).

A good sensitivity analysis must be probabilistically consistent. In other words, the range or change in value for each input to the model must be probabilistically consistent. A reasonable range is found by assessing the 10 and 90 percentile points on a cumulative probability curve. This gives a likelihood of 80 percent that the variable will occur within the sensitivity range.

O3 Chapter 4 of Appendix B does not give enough information to determine whether or not the sensitivity ranges used were consistent. The only ranges specified probabilistically were those derived from historical data. In these cases, a range of plus or minus one standard deviation (sigma) was used, giving a likelihood of about 68 percent that the variable would occur

L3 The reason for defining scenarios was not that the values had high uncertainty, i.e., that some situation has a very low or very high probability, but that the quality of the probability assessment would have been very poor, because crucial information was lacking. For example, there is no good knowledge as to the probabilities that OPEC ministers will resolve political impediments to reasserting influence on world markets.

Rather than assigning probabilities which would reflect only the viewpoint of the analyst assigned to preparation of the benefit/cost study, or the COTP Participants, these critical variables were used to define scenarios to which readers and reviewers could apply their own subjective probabilities. See the response to comment L-306 G3, above.

M3 Fourteen expected values for the benefit-cost ratio are presented, one for each of the fourteen oil market/demand charge/capacity credit scenarios. The additional detail, showing outcomes for the branches of the tree relating to the critical probabilistic variables (load growth and fuel prices) was included after discussions with CPUC staff on the proposed analysis. The staff expressed concern that a probabilistic analysis would yield just one expected value number, with no clues as to the driving forces behind that result.

N3 32,000 is an underestimate of the number of final endpoints in the probability tree. The tree as shown in Figure 4-3 in Appendix B of Volume 3A of the Draft EIS/EIR has over one million endpoints. Adding the decision branch (COTP vs No COTP) brings the total number of endpoints to 2,025,000.

The variables selected for sensitivity analysis were selected carefully, and confirmed as significant in preliminary runs of the analysis early in the study. Subsequent developments in the methodology and presentation of the results were designed to highlight the influence of these variables, namely fuel prices and load growth.

O3 The ranges for the sensitivity analysis with respect to loads and fuel prices are given in Section 6.1 of the economic analysis in Appendix B of Volume 3A of the Draft EIS/EIR: "Probabilities for Uncertain Variables", on page 45 of that appendix.

The high and low values were not derived from historical data, but based on forecasts under the different conditions.

L-306 (continued)

O3 within the sensistivity range. No other information about probabilities is given on variables tested with a plus or minus 10 percent range.

P3 The Final EIR must have a complete table of all input variables, both decisions and uncertainties, with the appropriate range and net impact on net present value (NPV). The net impact on NPV is the difference between NPV of the project at the high and low values of the variable, with all other variables held at their mean or mode value. There must also be a tabulation of joint sensitivities among probabilistically dependent variables.

16. USE OF THE FORA MODEL

A class of computer simulation models, called production cost models, are typically used in analysis of large capital additions to electric utility systems. Rather than one of the commonly-used and generally accepted models, such as PROMOD or ELFIN, TANC's consultants use the Fuel Oil Requirement Analysis Model (FORA). [Vol.3, p. 22]

Q3 The Fuel Oil Requirement Analysis Model is not a production costing model and is not suitable for estimating daily, weekly, or even monthly economy energy purchases in detail. The CPUC Staff has indicated several times since November, 1985, that FORA is not an appropriate tool for this analysis, particularly because of the fixed dispatch order. This model focuses too much on gas and oil and too little on other types of resources. FORA does not accurately reflect the range of marginal fuels actually dispatched in California.

R3 Another problem is that the model depends heavily upon exogenous factors, such as the assumed Incremental Heat Rate (IHR). FORA's results are expressed in millions of BTU's (instead of kilowatt-hours) which must by adjusted by the IHR factor to develop California Avoided Costs (CAC). IHRs can vary from 8000 to 13,000. The selection of the IHR can easily change energy benefits by 10 percent.

S3 For the FORA input, load curves have been aggregated to two seasons for the year. Two seasons do not provide enough disaggregation to reasonably simulate the effects of changing California and Northwest loads.

T3 The EIR should include an analysis performed with a suitable production costing model that would accurately represent California's electric utilities.

17. NORTHWEST CAPACITY PRICE ASSUMPTIONS

A key ingredient in the cost-effectiveness analysis is the cost of capacity from the Northwest. The DEIR assumes that the

O3 (cont.) The high and low values were not specified to be one standard deviation from the mean. For the load growth and fuel price forecasts, which were subjected to some sensitivity analysis, the high and low values correspond to 10% and 90% exceedance levels. The meaning of exceedance level and its application in the development of these distributions is discussed in Section 6.1 of Volume 3A of the Draft EIS/EIR, Appendix B.

The sensitivity analysis itself was designed as a traditional type of sensitivity analysis, checking outcomes under several combinations of variables to test the relative influence each has on the robustness of the conclusions. The canonological decision-analysis approach of fixing a variable at its extreme value, re-evaluating the expected value of the outcome and comparing that expected value with the original one (to determine whether that one change swings a decision from "yes" to "no") was not taken in this study. (Note the response to comment L-306 P3: normally, other variables are not fixed at their means in that approach.) It would have required simply too many runs and produced a profusion of largely redundant results.

P3 There are no intermediate decisions which are impacted by the results of the probability analysis. There is only one decision to which the probability analysis applies: to build or not to build on the COTP. This decision occurs if any of the alternatives are preferable to the decision maker. No "table" of decisions is appropriate.

The only detail missing from the input data on the probability analysis presented in the Draft EIS/EIR economic analysis is the actual distributions on availability of California resources. All of the probabilities and values for all of the other variables are explicitly presented. The distributions for the resource-availability variables are a large data set, which will be available for review at the offices of the COTP Manager.

As described above, the sensitivity analysis performed for this study is not represented as a decision-analysis type of re-computation of results with distributions fixed at extreme values.

Q3 The FORA model is not represented as primarily a production-costing model, but as a model which can estimate the energy production required to supply energy demand in California, distinguishing accurately between resources which normally operate as baseload energy supplies and those which are preferentially used to supply peaking energy. It was not the intent of the study to model the day-to-day operation of the transmission system, but to form a reliable estimate of the change in energy consumption with and without additional capacity available for peak-shaving energy transfers from the Pacific Northwest. The FORA model is well suited for this purpose.

This analysis used a probabilistic methodology to address the uncertainty in numerous variables. FORA is a model which is designed to address probabilistic problems--its original application is in the area of predicting utilization of oil and

L-306 (continued)

Q3 (cont.) gas when loads, fuel availability, generating resource availability, and other critical variables are subject to significant uncertainty. The analysis performed by FORA does not focus on oil and gas resource utilization, although the original set of output reports for the program concentrates on those outputs. Rather, the program performs detailed probability-tree enumerations for all resources, and, when applied to oil-use problems, performs additional calculations to determine the allocation of remaining energy demand among oil- and gas-burning units. See response to L-306 R3.

R3 In their original application to oil and gas use forecasting, incremental heat rates are important inputs to the FORA model. In such applications, individual units are modeled specifically, using unit-by-unit specification of heat rate, forced outage rate, and maintenance outage schedules to determine how oil and gas is used and how it is allocated among the units. In this application, incremental heat rates have no effect on the FORA modeling. Post-processing was used to translate FORA's energy utilization results into changes in energy use with and without the COTP and then to net dollar benefits.

As described in Appendix A, page 114, of the economic analysis in Appendix B of Volume 3A of the Draft EIS/EIR, the FORA model was enhanced for application to the COTP study. First, additional output reports were introduced to display the distribution for the energy utilization of each resource and its expected value. All of this information was available from calculations ordinarily performed by FORA but not of interest in a study of oil and gas utilization. An additional modification was made to allow the program to run efficiently, modeling the fifteen-year study period for a given season in a single run of the model. All of the outputs from the revised model show energy production by generation type in gigawatt-hours and maximum capacity use by type in megawatts.

Because the FORA modeling treated only two seasons for the year, and because it does not perform a load-resource convolution in the same way that a production-costing model such as PROMOD would do, it tends to yield a low estimate of the use of combustion-turbine capacity. The heat rates used in the post-processing analysis vary from 9,500 Btu/kWh for combined-cycle capacity to 10,000 Btu/kWh for steam capacity. As the 13,000 Btu/kwhr heat rate for combustion turbines (CTs) is rarely applied (because there is little or no CT utilization), the benefits are not in fact very sensitive to the range of heat rates used. That is, the California utilities avoided costs are primarily based on avoided steam and combined-cycle generation. To be conservative, the analysis in the Draft EIS/EIR assumed that the avoided energy cost will be gas fired steam generation at the 9,500 Btu/kWh heat rate.

S3 The two seasons were selected on the basis of a high degree of similarity in aggregate California load shapes within each of the two periods and a clear distinction between prices and Northwest availability in those time periods. Further disaggregation is not expected to materially modify results.

L-306 (continued)

T3 FORA was chosen as a model with the capability of performing the necessary calculations for multiple scenarios within a reasonable period of time, at a meaningful level of detail, and at a reasonable level of effort. A production costing model using probabilistic analysis would require substantially greater time and resources if performed at a detailed unit-by-unit level for every year of the study and would not produce materially different results. Use of the FORA models allows a substantially greater degree of sensitivity analysis than would the application of a detailed production costing model for a necessarily lesser range of alternative cases.

As discussed in the responses to L-306 Q3, L-306 R3, and L-306 S3, the enhanced FORA model used for the Draft EIS/EIR provides results that are reasonable and tend to conservatively value the benefits of the COTP.

L-306 (continued)

"price of that capacity" ranges "from 50 percent to 75 percent of the cost of new combustion turbine capacity" [Vol.1, p. 1.5-5]

U3 Table A-6 compares TANC's high and low capacity price estimates to BPA's Schedule SP-85 Contract Rate and the Schedule SL-87 proposed rate. The rates under SP-85 are available now and can be a sound basis for estimating the prices the BPA will charge for sales of capacity. BPA substantially controls the market and leads the prices charged via the provisions of the Intertie Access Policy which allow BPA to establish the policy to be compatible with the "Administrator's Power Marketing Program". BPA establishes a cost basis for its surplus firm capacity and BPA believes that sales below that "cost-based" rate are harmful to its Northwest customers. BPA attempts to charge this rate in all cases it can. BPA succeeded in charging this rate for the recent contract with Southern California Edison, for example, which uses the SP-85 contract rate as its foundation.

V3 BPA's proposed SL-85 rate can be another sound basis for estimating the price of Northwest capacity. The proposed SL-87 rate reduces the prices charged for sales over a full year (compared to the SP-85 contract rate), while the rates are increased for the summer season. Again, BPA as the market leader will use the SL-85 rate as the target floor rate for sales to California.

W3 The rate for sales within the Pacific Northwest which must be resold to California when bought under that schedule (proposed Schedule FL-87) allow the Pacific Northwest reseller of the BPA surplus to add a margin before being sold to California. The proposed Schedule FL-87 thus provides a poor basis for estimating the price of capacity for sale to California, since it is eligible to be sold only within the Northwest and Northwest sellers will have no interest in selling the electricity if they sell it for the same price at which they buy it from BPA. Therefore the best estimate is either the SP-85 rate which is now in existence and has formed the basis for at least one contract so far, or the proposed SL-87 rate, which BPA will use for sales for itself as the price floor, and which Northwest sellers will have every motivation to use as a price floor for their sales, to make the best margin they can (especially given the elimination of competition by the Intertie Access Policy).

X3 Therefore, TANC's estimates in the EIR are not compatible with
Y3 the actual market. TANC should use actual market experience and rates to form the basis of its economic analysis to make the EIR accurate for decision-makers.

U3 See Section 6.6 of the economic analysis report in Appendix B to Volume 3A of the Draft EIS/EIR.

The SP-85 rate is not a sound basis for estimating the price of Northwest capacity because it represents more than the cost of California's alternative capacity costs. This can be shown by reviewing Table A-6 in the Draft EIS/EIR. The study's low column is a stream of costs which is equal to 50% of the cost of a combustion turbine (CT) escalating at the rate of inflation. Multiplying this stream by two yields the total per KW-year cost of a CT. If this new stream is compared with the SP-85 rate, it can be seen that the the SP-85 rate is greater than the cost of a CT in every year. It would not be cost-effective for the California utilities to purchase capacity at the SP- 85 rate when the opportunity exists to build cheaper resources. Southern California Edison's contract with BPA is not an indication that Edison is willing to accept this rate over the life of the contract. The Southern California Edison contract is a package that converts to an energy exchange arrangement. Without the energy exchange arrangement it would not be an economical contract.

V3 The SL-85 rates are greater than or approximately equal to the cost of the combustion turbine. See response to L-306 U3.

W3 No contracts have been signed under the firm displacement concept. It is not the basis of assumed prices in the Draft EIS/EIR. See response to L-306 U3.

X3 There is very little market experience to reference at this time. BPA's published prices have not attracted potential buyers. All existing contracts for firm power will expire before the COTP is completed. As noted in the response to L-306 O1, BPA and the utilities in the Northwest are assumed to add new resources to meet energy loads, thus continuing to have capacity available for sale. Since no costs are incurred by BPA for the purpose of making capacity sales to California, it is reasonable to assume that BPA will price capacity based on market considerations. This assumption is especially reasonable in light of PNW needs for firm energy. Capacity/energy exchanges actually reduce required new capacity in the PNW.

Y3 See response to L-306 X3.

L-306 (continued)

FORECASTED NONFIRM ENERGY RATES
[illegible] FORECAST
(Nominal mills/kWh)

(a)	(b)	(c)	(d)	(e)	(f)
Fiscal Year	Forecasted PF Rate 1/	PF @53.6% Load Factor 2/	Forecasted NF Target Rate 1/	NF Standard Rate with Intertie Adder 3/	Edison Rate 4/
1987	22.2	24.0	21.7	23.4	23.4
1988	23.6	25.5	22.9	24.7	25.4
1989	27.0	29.2	25.7	27.7	29.6
1990	27.6	29.8	26.3	28.4	30.9
1991	29.8	32.2	28.3	30.5	34.0
1992	31.8	34.4	30.0	32.4	37.0
1993	33.2	35.9	31.6	34.1	39.4
1994	34.3	37.1	33.3	35.9	41.5
1995	35.3	38.2	34.3	37.0	43.6
1996	37.0	40.0	36.0	38.8	46.6
1997	38.2	41.2	37.3	40.2	49.1
1998	39.2	42.4	38.3	41.3	51.4
1999	40.7	44.0	39.8	42.9	54.4
2000	42.2	45.6	41.3	44.5	57.5
2001	43.9	47.5	43.1	46.5	61.1
2002	45.7	49.4	44.7	48.2	64.8
2003	47.6	51.5	46.1	49.7	68.9
2004	50.7	54.8	49.2	53.1	74.8
2005	53.7	58.1	52.4	56.5	80.8

TABLE A-1

1/ BPA Forecasts of Electricity Consumption in the Pacific Northwest, 1985-2005, August 1985.

2/ 24.0 mills/kWh * PF_n (from column b) ÷ 22.2 mills/kWh, for year n.

3/ 23.4 mills/kWh * NF_n (from column d) ÷ 21.7 mills/kWh, for year n.

4/ Projected rate for nonfirm energy in the proposed Edison contract: $.975 * (1.02)^n * PF_n$ (from column c), where n equals number of years beyond 1987.

Exhibit SC-86-E-BPA-01
Attachment 3
Page 5 of 7
Witness: David J. Armstrong

L-306 (continued)

TABLE A-2

FORECAST OF PNW NONFIRM ENERGY PRICES
COTP DEIR/EIS

(mills per kWh)

LINE NO	YEAR	BPA NF RATE	ADJ TO BPA BASC	ADJ BPA BASC	DEC COST	BPA PRICE	PNW NONFED	COMBINED PNW PRICE
		(1)	(2)	(3)	(4)	(5)	(6)	(7)
1	1988	24.70	0.30	25.00	26.70	24.70	24.70	24.70
2	1989	27.70	0.32	28.02	29.26	27.26	27.26	27.26
3	1990	28.40	0.33	28.73	31.92	29.92	29.92	29.92
4	1991	30.50	0.35	30.85	34.58	31.97	32.58	32.38
5	1992	32.40	0.36	32.76	36.01	33.74	34.01	33.92
6	1993	34.10	0.38	34.48	37.91	35.51	35.91	35.78
7	1994	35.90	0.40	36.30	39.90	37.38	37.90	37.73
8	1995	37.00	0.42	37.42	42.09	38.82	40.09	39.67
9	1996	38.80	0.44	39.24	45.03	40.98	43.03	42.35
10	1997	40.20	0.47	40.67	48.64	43.06	46.64	45.46
11	1998	41.30	0.49	41.79	52.06	44.87	49.36	47.88
12	1999	42.90	0.51	43.41	56.05	47.20	51.93	50.37
13	2000	44.50	0.54	45.04	60.33	51.28	56.41	54.72
14	2001	46.50	0.57	47.07	65.36	55.56	61.11	59.28
15	2002	48.20	0.60	48.80	70.76	60.16	66.18	64.19
16	2003	49.70	0.63	50.33	76.57	65.08	71.59	69.45
17	2004	53.10	0.66	53.76	83.03	70.58	77.63	75.30

NOTES

(1) BPA forecast of NF standard rate with intertie adder, Testimony of B. Armstrong, 1986 BCE Contract Formula Rates Hearings, Exhibit BC-86-E-BPA-01, Attachment 3, page 5 of 7, medium forecast.

(2) Column (1) plus 0.3 mills/kWh to get BASC of 25 mills in 1988; BASC of 25 mills from WP-87-E-BPA-05, page 62 and T16; 25 mills for 10/87-9/89; Adjustment inflates at 5.02% per year, the increase in the forecast NF rate 1987 to 2005 from (1).

(3) Avoided thermal cost, medium case, Most OPEC Scenario from TANC Draft EIR/EIS, November 1986, Volume 3A, page 63.

(4) BPA price is the BPA rate cap. When the rate cap exceeds decremental cost, the BPA rate is decremental cost minus 2.0 mills. The rate cap formula is BASC plus 0.3(oil/gas cost@10000BTU/kwh - BABC); assume decremental cost represents oil/gas at 10000 BTU heat rate. The rate cap lasts 12 years (1988 - 1999). BPA rate 2000 on is 85% of decremental cost.

(5) Nonfederal price is the BPA rate cap times 1.1 or 85% of decremental cost, whichever is greater; if price is greater than the decremental cost, the nonfirm price is decremental cost minus 2.0 mills.

(6) Combined PNW price assumes 33% BPA and 67% nonfederal.

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L-306 (continued)

TABLE A-3 RESERVE MARGIN ANALYSIS OF THE CALIFORNIA OREGON TRANSMISSION PROJECT
USING UTILITY DEMAND FORECAST.

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
-RESERVE MARGIN ANALYSIS WITH COT PROJECT INCLUDED-												
TOTAL GENERATION RESOURCES IN												
MW WITH COT PROJECT (1)	57326	57863	57979	58262	59217	60237	61075	62010	64032	65425	66758	69341	69347	71137
PEAK DEMAND (MW) (2)	47174	47687	48163	48756	48198	49116	50141	51145	52334	53382	54526	55626	56762	57936
RESERVE MARGIN (3) (5)	20.4	20.5	20.7	20.5	22.9	22.6	21.8	21.9	22.4	22.6	22.4	23.8	22.2	22.9
-RESERVE MARGIN ANALYSIS WITHOUT COT PROJECT USING CALIFORNIA ENERGY COMMISSION TARGET RESERVE MARGIN-												
TOTAL GENERATION RESOURCES IN												
MW WITHOUT COT PROJECT	56474	56931	56747	57420	58385	57485	60241	61578	63200	64593	65916	67587	69515	70345
PEAK DEMAND (MW) (2)	47174	47687	48163	48756	48198	49116	50141	51145	52334	53382	54526	55626	56762	57936
RESERVE MARGIN (3) (5)	20.5	19.7	17.9	21.8	21.2	20.9	21.5	21.2	20.8	21.0	20.9	21.5	20.7	21.4
TARGET RESERVE (4) (6)	20.9	18.0	17.6	17.6	17.6	18.8	19.2	17.5	17.9	17.9	17.9	17.9	17.9	17.9
NEED WINDOW (MW) (5)	-1031.	-2267.	-2405.	-1562.	18.8	-1055.	-1022.	-1060.	-1498.	-1655.	-1e31.	-2081.	-1592.	19.2
-RESERVE MARGIN ANALYSIS WITHOUT COT PROJECT USING UTILITY TARGET RESERVE MARGIN												
TOTAL GENERATION RESOURCES IN												
MW WITHOUT COT PROJECT	56474	56931	56747	57420	58385	57485	60241	61578	63200	64593	65916	67587	69515	70345
PEAK DEMAND (MW) (2)	47174	47687	48163	48756	48198	49116	50141	51145	52334	53382	54526	55626	56762	57936
RESERVE MARGIN (3) (5)	20.5	20.7	20.9	21.8	21.2	20.9	21.5	21.2	20.8	21.0	20.9	21.5	20.7	21.4
TARGET RESERVE (4) (6)	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
NEED WINDOW (MW) (5)	-2011.	-1625.	-658.9	-110.3	1e5.05	278.94	90.315	1e3.17	385.81	266.13	331.09	-2.41	450.83	47.24

NOTES:

1). DRAFT EIS/EIR, COTP Technical Appendices, Volume 3A, Table e-1.
2). DRAFT EIS/EIR, COTP Technical Appendices, Volume 3A, Table e-3.
3). Resources/peak.
4). Target Reserve Margin from Final Electricity Report, December 1986.
5). Needed capacity to meet target reserve margin.
6). Isolated system planning criteria used by utilities as reported in CEC Docket 88-EFR-5, November 1994.

L-306 (continued)

TABLE A3 RESERVE MARGIN ANALYSIS OF THE CALIFORNIA OREGON TRANSMISSION PROJECT
USING THE CEC ADOPTED DEMAND FORECAST

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
-RESERVE MARGIN ANALYSIS WITH COT PROJECT INCLUDED-														
TOTAL GENERATION RESOURCES IN														
MW WITHOUT COT PROJECT (1)	56478	56201	56747	57430	58285	59405	60841	61978	63288	64593	65918	67589	68515	70245
PEAK DEMAND (MW) (2)	46745.	45741.	46762.	47695.	48871.	49961.	50981	51904.	52946.	53895.	53854.	54624.	55405.	55749
RESERVE MARGIN (%) (3)	20.7	22.9	21.4	20.4	19.3	18.9	19.4	20.1	20.7	21.7	22.4	23.7	23.7	26.2
TARGET RESERVE (%) (4)	20.9	18.3	17.64	17.6	16.8	19.3	17.5	17.9	17.9	17.9	17.9	17.9	17.9	17.9
NEED WINDOW (MW) (5)	-2277.	-2187.	-1715.	-1298.	-1258.2	194.25	-1055.	-1101.	-1483.	-1913.	-2423.	-3186.	-3391.	-4616.92
-RESERVE MARGIN ANALYSIS WITHOUT COT PROJECT USING UTILITY TARGET RESERVE MARGIN-														
TOTAL GENERATION RESOURCES IN														
MW WITHOUT COT PROJECT	56478	56201	56747	57430	58285	59405	60841	61978	63288	64593	65918	67589	68515	70245
PEAK DEMAND (MW) (2)	44745.	45 [illegible]	46762.	47695.	48871.	49961.	50981	51904.	52946.	53895.	53854.	54624.	55405.	55749
RESERVE MARGIN (%) (3)	26.2	23.9	21.4	20.4	19.3	18.9	19.4	20.1	20.7	21.7	22.4	23.7	23.7	26.2
TARGET RESERVE (%) (6)	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5	21.5
NEED WINDOW (MW) (5)	-2198.	-1851.4	-647.75	-452.97	954.24	1296.4	975.41	725.43	401.12	-82.38	-484.8	-1178.	-1197.	-2189.92

NOTES:

1). DRAFT EIS/EIR. COTP Technical Appendices, Volume 3A, Table 6-3.

2). Adopted CEC Demand Forecast. Draft Final Electricity Report. December 1986.

3). Resources/peak.

4). Target Reserve Margins. Draft Final Electricity Report. December 1986.

5). Needed capacity to meet target reserve margin.

6). Isolated system planning criteria used by utilities as reported in CEC Docket 83-CFM-5, November 1984.

L-306 (continued)

TABLE A-4

COMPARISON OF ENERGY DEMAND FORECASTS

(GWh)

Year	TANC Assump. for the COTP High	Medium	Low	CEC ER-6	Difference Medium TANC minus CEC
1990	241,074	223,048	205,876	217,310	5,738
1997	297,374	262,131	212,985	249,343	12,788
2004	360,949	308,251	218,274	N.A.	N.A.
2005				274,490	N.A.
Growth Rates	3.12%	2.27%	0.43%	1.80%	

L-306 (continued)

TABLE A-5

COMPARISON OF GAS PRICE FORECABTS

A	B	C	D	E	F
	-- TANC Assumptions for the COTP --				CEC
	== Strong OPEC ===				B.Fuels
	High	Medium	Low		Report
		== Weak OPEC ===			Elec.Gen.
		High	Medium	Low	Rate
	Nominal Dollars				Nominal
Year	$/MMBtu	$/MMBtu	$/MMBtu	$/MMBtu	$/MMBtu
1986	2.25	2.25	2.25	2.25	2.56
1987	2.95	2.82	2.53	2.13	3.13
1988	3.60	3.34	2.81	2.66	3.86
1989	4.09	3.78	3.08	2.79	4.65
1990	4.52	4.18	3.36	2.93	5.51
1991	4.97	4.47	3.64	3.06	5.93
1992	5.47	4.79	3.79	3.33	6.36
1993	6.10	5.21	3.99	3.46	6.83
1994	6.88	5.72	4.20	3.72	7.31
1995	7.68	6.22	4.43	3.86	7.92
1996	8.62	6.80	4.74	4.12	8.56
1997	9.69	7.44	5.12	4.26	9.25
1998	10.93	8.18	5.48	4.52	9.98
1999	12.35	9.00	5.90	4.79	10.80
2000	13.95	9.90	6.35	5.05	11.63
2001	15.77	10.90	6.88	5.32	12.53
2002	17.78	11.97	7.45	5.59	13.55
2003	20.07	13.16	8.06	5.99	14.57
2004	22.66	14.47	8.74	6.25	15.69
2005					16.90
Growth Rates					
	13.69%	10.89%	7.83%	5.84%	10.44%

L-306 (continued)

TABLE A-6

PACIFIC NORTHWEST PRICES FOR CAPACITY

(DOLLARS PER KW-YR)

LINE NO	YEAR	TANC ASSUMED LOW	TANC ASSUMED HIGH	BPA SP-85 RATE	PERCENT SP OVER TANC HIGH	BPA SL-87 RATE	PERCENT SL OVER TANC HIGH
		(1)	(2)	(3)	(4)	(5)	(6)
1	1991	38.24	57.36	108.90	89.85	73.38	27.93
2	1992	40.53	60.80	117.17	92.71	79.86	31.35
3	1993	42.97	64.45	126.08	95.62	84.94	31.79
4	1994	45.54	68.32	135.66	98.57	89.48	30.97
5	1995	48.28	72.42	145.97	101.56	93.92	29.69
6	1996	51.17	76.76	157.07	104.62	100.23	30.58
7	1997	54.24	81.37	169.00	107.69	105.49	29.64
8	1998	57.50	86.25	181.85	110.84	110.41	28.01
9	1999	60.95	91.42	195.67	114.03	116.78	27.74
10	2000	64.61	96.91	210.54	117.25	123.37	27.30
11	2001	68.48	102.72	226.54	120.54	130.97	27.50
12	2002	72.59	108.89	243.76	123.86	138.83	27.50
13	2003	76.95	115.42	262.28	127.24	147.51	27.80
14	2004	81.56	122.34	282.21	130.68	159.91	30.71
15	2005	86.45	129.68	303.66	134.16	171.10	31.94
16	2006	91.64	137.46	326.74	137.69	183.08	33.19

NOTES

(1) TANC assumed prices from TANC draft EIR, November 1986, Volume 3A, Table 6-12, page 71.
(2) BPA SP-85 rate in effect.
(3) BPA SL-87 rate proposed in Exhibit WP-87-E-BPA-06, page B40 of

9.CAPPR1

L-306 (continued)

ATTACHMENT B

ADDRESS ALL COMMUNICATIONS TO THE COMMISSION
CALIFORNIA STATE BUILDING
SAN FRANCISCO, CA 94102
TELEPHONE (415) 557-

Public Utilities Commission
STATE OF CALIFORNIA

FILE NO

February 12, 1987

Mr. Andy Niven
Manager, Regulatory Relations Department
Pacific Gas and Electric
77 Beale St.
San Francisco, CA 94106

Dear Andy:

This letter is to request your company's help in preparing the PUC for its evaluation of the California Oregon Transmission Project. We are particularly interested in the role that new or renegotiated contracts with your Municipal customers could play in our evaluation of the COTP and its alternatives.

For about the past two years, the PUC has been evaluating transmission projects in a larger, systemwide context. This approach requires comparing of a range of actions (a "mixed bag", if you will), as well as more traditional alternative projects or technologies against the proposed project. It involves grouping actions together that individually may not provide the same capacity or energy as a proposed transmission line, but collectively may provide the same level of service at a lower economic and/or environmental cost. In the upcoming COTP proceeding, we feel renegotiated contracts have a legitimate role in such an alternative.

To aid in our evaluation of the COTP, we would like your response to the following question:

> Do PGandE's current contracts with municipal utilities compare favorably economically, from the municipalities' perspective, with alternative sources of power, such as the COTP? If not, could such contracts be renegotiated on mutually favorable terms to make PGandE power more attractive to your municipal customers?

In answering this question, please provide as much detail as appropriate regarding the overall feasibility of such contracts, the process for and barriers to their implementation, and the overall number and size of the municipal customers that could be affected by them.

L-306 (continued)

I would appreciate your response to these questions at your earliest convenience. If you have any questions, please direct them to me at (916) 322-1284, or to Mike Burke at (916) 322-7316. Thank you for your help.

Sincerely,

Dave Morse, Chief
Energy Resources Branch

cc: Jan Kerr
Bill Ahern
Ed Texeira
Burt Mattson
Mike Burke
Jim Scarff

L-306 (continued)

ATTACHMENT C

INLAND INTERTIE

NEWSLETTER #1

FEBRUARY, 1997

PACIFIC NORTHWEST-DESERT SOUTHWEST INLAND INTERTIE

INTRODUCTION

Twelve utilities from the Pacific Northwest (PNW) and fifteen utilities from the Desert Southwest (DSW) recently entered into an agreement to conduct a feasibility study to determine whether a high voltage transmission line could be constructed interconnecting these two regions.

NEED FOR REGIONAL INTERTIE

Utilities are continually giving consideration to system interconnections to foster coordination of planning and operations. The construction of the Inland Intertie between the PNW and the DSW could create substantial benefits including: deferral of new generating plants, improved efficiency, enhanced reliability and better system coordination.

Constructing the Intertie will promote a resource partnership which will allow each region to more efficiently use their existing hydro and thermal generating capabilities. Interconnecting the resources of the winter peaking northwest utilities and the the summer peaking southwest utilities allows for seasonal diversity exchanges. Put simply, diversity exchange can occur when one region's peak demand for electricity is seasonally different than that of another region. The PNW requires more electricity during the winter season than during the summer; the opposite is true for the southwest. Therefore, summer surplus which is available in the northwest can be shared with the southwest, and the DSW's winter surplus can be shared with the northwest. Sharing their respective generating capacity thereby enables utilities to defer costly construction of new thermal generating plants required to meet peak demand. These exchanges can result in significant long term benefits to both regions.

In addition to seasonal diversity exchanges, such an interconnection will allow the PNW, during poor hydro conditions, access to surplus off peak energy in the DSW and will enhance the marketing of surplus energy under good hydro

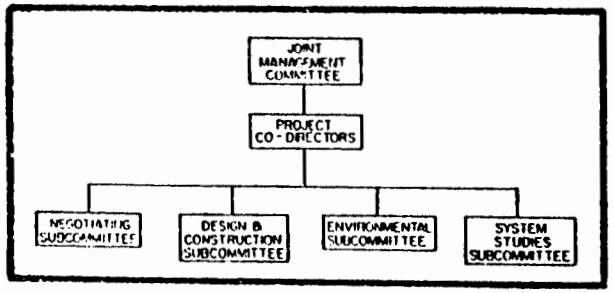
L-306 (continued)

The proposed Inland Intertie project is presently being studied by twenty-seven utilities, including public, investor-owned, and Federal entities located in eight western states.

Pacific Northwest	Desert Southwest
* Bonneville Power Administration	* Arizona Electric Power Coop., Inc.
* Chelan County PUD No. 1	* Arizona Public Service Company
* Grant County PUD No. 2	* City of Azusa
* Idaho Power Company	* California Department of Water Resources
* Montana Power Company	* M-S-R Public Power Agency
* Pacific Power & Light Company	* Nevada Power Company
* Portland General Electric Company	* Pacific Gas & Electric Company
* Puget Sound Power & Light Company	* City of Riverside
* Seattle City Light	* Salt River Project
* Sierra Pacific Power Company	* San Diego Gas & Electric Company
* City of Tacoma	* Southern California Edison Company
* Washington Water Power Company	* Tucson Electric Power Company
	* Utah Associated Municipal Power Systems
	* City of Vernon
	* Western Area Power Administration

FEASIBILITY STUDY DESCRIPTION

The utility participants executed an agreement to conduct a 32-month joint study which started June 1, 1986. The major objective of this Stage-1 study is to determine the preferred configuration for the proposed Intertie. This includes establishing the specific terminal locations, potential corridor locations, the capacity of the Intertie, and whether it should be alternating current (AC) or direct current (DC). These decisions will be based on: technical studies of the operation of various alternatives as part of the western United States interconnected system, economic comparison of alternatives, and environmental/regulatory/right-of-way issues associated with potential corridor locations. This feasibility study will not include any detailed design effort nor is any environmental licensing activity anticipated. To accomplish these objectives an organizational structure has been put in place as shown below:



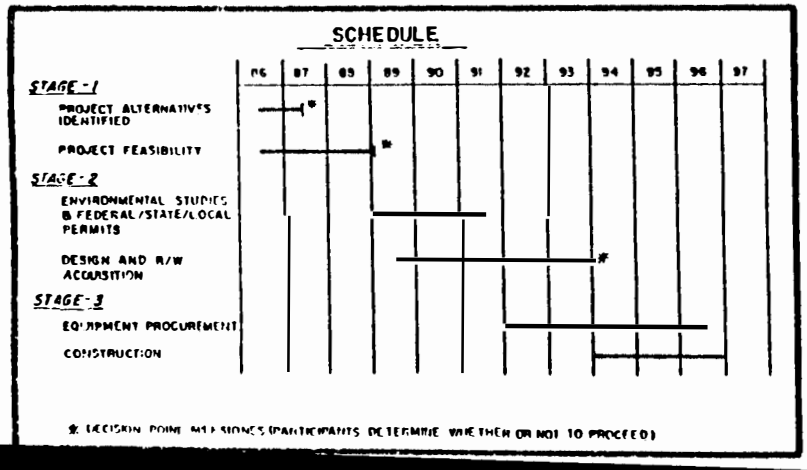
In addition to the joint effort described above, separate groups have been formed in the PNW and the DSW to specify alternate termination points and to identify and evaluate modifications and/or additions to the transmission facilities or systems which may be required in each region to support the Intertie.

L-306 (continued)

The Stage-1 feasibility study will be performed in two phases. The first phase, which is presently underway and is to be completed by September of 1987, will include: 1) preliminary technical and economic analysis aimed at producing 3-6 alternate Intertie configurations (i.e., AC and DC, alternate Intertie termination points), 2) initial contacts with governmental agencies and elected officials and 3) determination of the need for outside consultants necessary for completion of this study. Work to date has seen the separate PSW and PSC groups initiate the activities necessary to identify alternative termination points and develop the associated modifications and/or additions to the existing transmission system in their respective regions. Technical and economic studies of these regional system alternatives are scheduled to begin in February. An initial agency contact plan and schedule has also been developed.

The second phase of the Stage-1 feasibility study will begin in October of 1987 with completion scheduled for January of 1989. This second phase consists of detailed technical and economic comparisons of the alternate Intertie configurations as defined in the first phase. In addition, potential corridors for each alternative will be identified and ranked based on environmental, regulatory and right-of-way issues associated with each. These detailed evaluations will lead to the selection of the preferred configuration. During the course of this effort, agencies may be asked for assistance in providing information and advice suitable to evaluate the various configurations and corridor alternatives.

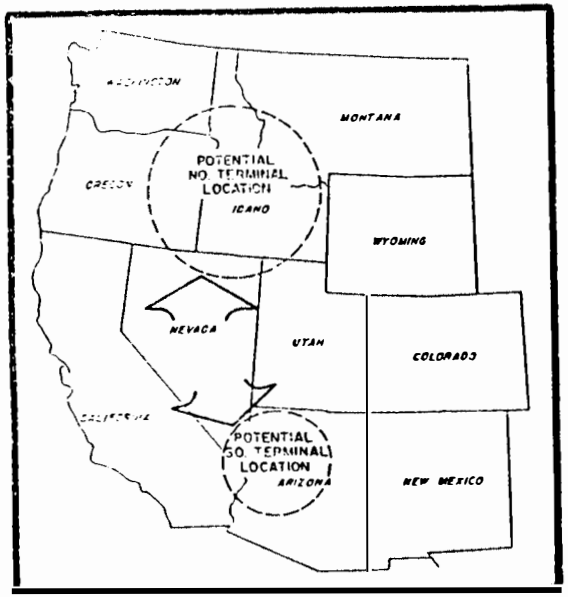
Near the completion of the Stage-1 feasibility study, the project participants will individually determine whether or not to proceed to the next stage. Should sufficient interest remain at that point, Stage-2 consisting of detailed design and environmental studies, would occur between early 1989 and late 1993. Upon completion of these studies, another determination would be made by the participants whether to proceed to Stage-3 construction, which is currently scheduled for completion in 1996. An overall schedule is shown below: (All dates shown are preliminary in nature and will be more firmly defined during the Stage-1 feasibility study).



L-306 (continued)

POTENTIAL PROJECT LOCATION

At this point in the study effort, no specific Intertie termination alternatives have been selected. However, the map shown below indicates the broad area presently under investigation. Several termination sites will be identified by September of 1987 at which time activities will begin to identify corridors to connect the alternate sites and to evaluate and rank these potential corridors from an environmental, regulatory and right-of-way perspective.



FURTHER INFORMATION

Due to the preliminary nature of the present work in progress, the next Newsletter is not scheduled for publication until October of 1987. At that point, specific alternative Intertie configurations will be identified, continuing participation will have been finalized, need for consultants established, and the work scope for the various Subcommittees more clearly defined.

For additional information or clarification contact:

Mr. Dennis F. Beals
PNW Project Director
Arizona Public Service Company
P.O. Box 53999, Sta. 4168
Phoenix, AZ 85072-3999
(602) 250-2327

or

Mr.W. G. Eisinger
PNW Project Director
Idaho Power Company
P.O. Box 70
Boise, ID 83707
(208) 383-2741

L-306 (continued)

 ATTACHMENT D

4.0 Mitigation Programs for High-Voltage Transmissipn Lines

The discussion below pertains to generic mitigation for high-voltage transmission lines throughout the State of California within the jurisdiction of the CPUC. Project-specific mitigation for the Devers-Palo Verde No. 2 transmission line is described in Volume I of this Draft EIR. Ihose measures contain a number of general measures of value to transmissionion line projects elsewhere and a number of measures specific to the locality of the DPV2 project itself.

The final determination of the measures which would be necessary and effective for the DPV2 project will be made in the Final EIR and the CPUC decision on DPV2. The CPUC intends to impose those measures and other measures that may be developed through application of the Environmental Protection Plan (EPP) process described below. The imposition of the EPP process on DPV2 (and other future projects) is a principal tool for administering the environmental protection for an approved project where there was insufficient detailed engineering data available during the certification process itself.

The assessment of mitigating measures is based on a survey of 5 major utilities operating in California, with data on 18 recent transmission line projects 230 KV and above, either already constructed or to be built in this state or in other portions of the western region.

The analysis is also based on CPUC experience with mitigation program development for SCE's Devers-Serrano-Valley 500 KV transmission line project, which included consultants' technical assistance to the CPUC staff in reviewing SCE's pre-construction mitigation development program (PCMDP) and Environmental Protection Plan (EPP), and monitoring of the actual construction of the line.

4.1 Pre-construction surveys based on final design, marking and staking in the field of tower locations and access roads.

Upon certification of a project by the CPUC, the utility shall set a schedule for the preparation of detailed mitigation programs that will allow adequate time for plan preparation and CPUC staff review before construction is scheduled to begin. If the Applicant intends to build the project in several segments phased sequentially in time, each segment may be treated under an independent timetable.

The first step is a pre-construction survey for environmental resources. The survey must be performed with sufficient accuracy to precisely identify the nature of the resource, its location, and its susceptibility to impact from transmission line construction, and any specific mitigation measures which are needed beyond the generic measures outlined above or the overall provisions of the Environmental Protection Plan (EPP) outlined below.

The requirement for accuracy in the pre-construction survey necessitates that all tower sites and access roads be tentatively identified on maps which will allow location in the field. Ideally, engineering and survey crews will have staked tower sites on the ground.

L-306 (continued)

The survey shall be performed by adequately qualified persons representing those disciplines where specific sensitivities have been identified in the CEQA environmental review process. Thus, an area generally characterized as habitat for rare plants must be surveyed by a qualified botanist at the proper times of year so that the resources noted as of concern in the EIR can be precisely identified and located. Local cultural resource features must be identified by a professional archaeologist. Soils or geologic features which dictate localized design modifications or construction practices should be identified and marked by a professional engineering geologist.

The form of the survey can vary according to the scientific requirements of the resource under investigation, but at a minimum it shall contain:

The results of the survey shall be reported in written form, and shall include:

1. A location map showing the portion of the project surveyed.
2. Maps showing the location of each tower and access road surveyed.
3. A list of the resources subject to survey.
4. Names, qualifications and employment of persons conducting the survey.
5. Dates of survey, particularly as in relation to environmental constraints such as the bloom times of rare plants etc.
6. Level of effort in person hours spent in the field.
7. A list of site-specific resources found. And for each:
   a. Detailed site map showing the resource and the nearby project features. This map should be accurate enough to identify the resource boundary on the ground.
   b. Description of the resource stating its susceptibility to damage from construction.
   c. Measures to be undertaken to mitigate potential damage.

Whenever engineering changes are made by the project proponent, the new location shall be indicated on a map of suitable accuracy and the environmental resource shall be resurveyed if necessary. Thus the pre-construction survey must be kept up-to-date continually throughout line engineering. The resurvey can be conducted by the same or different personnel, but it is a central requirement of the CMP that the CPUC have a precise and current map of resource location showing utility construction plans.

4.2 All sensitive resources discovered in the survey to be suitably marked for later protection or avoidance

All resources which are to receive special protection during construction must be suitably marked during the survey phase for future protection.

The marking must be done under the direct supervision of a qualified resource specialist. This person shall be known as the Supervising Resource Specialist (SRS). The marking must be of sufficient visibility and durability that is will be obvious to all personnel throughout construction in the area (see guidelines for field marking, attached). The location of all field marking shall be shown on the resource location map to within 50

L-306 (continued)

feet of its true position, and the name of the SRS overseeing the marking shall be printed on the map.

The Pre-construction meeting at the field site should have the following minimal attendance:

1. The CPUC monitor or designated representative.
2. The supervising resource specialist.
3. The Construction Supervisor for that site.

At that meeting, the Construction Supervisor shall certify that the current construction plan is accurately shown on the EPP resource map and he shall state the construction schedule for the site. The schedule shall include specific dates when construction will be supervised by the SRS. The SRS shall explain the environmental sensitivities, list the applicable construction restrictions, and show the location of the markings on both the ground and on the resource map. The CPUC monitor shall acknowledge the information and all three persons shall affix their names to a dated copy of the resource map.

4.3 Environmental Protection Plan (EPP) and Handbook

The utility shall prepare and have approved in final form by the CPUC staff an Environmental Protection Plan (EPP). The EPP is intended to serve as a practical guide for use by field personnel as to the proper construction procedures that must be followed at every stage of construction. Thus the EPP will contain general and specific provisions. The general provisions shall be the good environmental practices adopted for the project as a whole (eg. prohibition of sidecasting, fire avoidance, etc.). The specific provisions apply to identified portions of the project.

The EPP must be based on a series of maps showing the project and resource protection areas at a suitable scale and accuracy to allow both the construction supervisor and an independent monitor in the field to unambiguously determine whether the environmental protection provisions of the plan are being followed. The maps in the EPP should be the final version of the map presented in the pre-construction survey and it must be up-to-date. The first map will be an index map to the entire route. The map will show schematically the set of more detailed maps of those areas of the route where sensitive resources are located. (See sample schematic). The detailed maps will be at the scale necessary to delineate the resources that must be given special protection. Depending upon the resource in question, the scale of the map will vary from about 1" = 100' (1:1,200) to about 1" = 2000' (1:24,000 = USGS quad scale). Those areas of the route designated as "low sensitivity" will not need detailed maps.

The EPP text shall be keyed to the maps. The text will discuss each resource and location that are subject to special protection, and list the the steps the utility expects to take to minimize the impact on that resource. Steps may include both relocation of facilities outside of the resource area and modification of construction practices for that site. Where the utility finds that relocation or construction modification cannot completely eliminate impact it shall explain the reasons why further reduction is impracticable. Such reasons may be engineering, cost, worker safety, public safety, right-of-way limitations, or operational reliability,

L-306 (continued)

but the applicability to the site under discussion must be specific and quantitative where possible. The final judgment over the practicability of measures shall be left to the CPUC project manager.

In cases where some damage to a resource (eg. rare plant population) is unavoidable, the EPP shall identify what measures will be taken to assure that the resource can be restored after construction, and what steps will be taken to so restore it.

The EPP shall include a handbook for the use of the construction crew, field supervisor and monitor. The handbook should contain the following information:

a) Photographs and descriptions of the sensitive resources. These include rare plants (in flower and out), rodent burrows, raptor nests, cultural resource sites or other features. This will not only assist the field personnel in recognizing these features where they have been marked, but may prevent damage to the same resources should they be discovered at nearby sites that may have been overlooked;

b) Photographs and descriptions of the field markings the crew should pay attention to as they are operating and storing equipment and material along the line;

c) A list of general measures to be followed for construction in all areas and a list of measures that pertain to each specific locality or resource needing special protection;

d) The names, addresses and telephone numbers of those persons responsible for monitoring and enforcement of the mitigation plan. These include (1) the utility's onsite monitor (2) the CPUC-appointed inspector and (3) that person or persons with the authority to issue a stop-work order should violations be discovered.

e) A list of the sanctions to be imposed in the event violations are discovered.

4.4 Monitoring and Supervision

Upon approval of the EPP by the CPUC, the utility may commence construction providing that the monitoring and supervision procedures are followed.

During Construction:

1. When construction commences, the Construction Supervisor (CS) must have on his person the portion of the EPP pertaining to the site, including the resource map and list of construction restrictions. As construction proceeds, the individual named Construction Supervisor may change, but in each case, the CS shall carry the EPP and his name and date of assumed responsibility shall be added to the EPP.
2. During that portion of construction most likely to damage the resource (such as blading an access road or clearing a tower site), a supervising resources specialist (SRS) must be at the site.
3. The location of exclusionary markings or any another construction

restrictions may be changed only by approval of the SRS and CPUC monitor. The resource map must be annotated by the change and the EPP amended with a brief explanation of the reasons for the change and the names of the persons approving the change.
4. When the SRS is not required on-site due to the nature of the construction activities, the Construction Supervisor will be required on-site at any time construction or delivery of materials will occur. During this period, the SRS shall be responsible for maintaining the field markings and for instructing each successive CS as to the restrictions in force at the site. The CPUC monitor will inspect from time-to-time.
5. After all construction is complete, the SRS shall accompany the CPUC monitor on an inspection of the site to remove markings and to assess the level of damage to the resource, if any.

4.5 Enforcement

The CPUC monitor is the primary means of inspecting and documenting the utility's compliance with the Commission's environmental protection requirements. In addition, the CPUC must establish in advance the appropriate chain of authority to enforce sanctions in the event of violations of the EPP. This includes the direct supervisor to whom the monitor reports, and those individuals with authority to suspend construction in the event of breach of the mitigation program.

The monitor's general duties are:

1. Consult with the utility engineering and environmental staff regarding the scope of pre-construction surveys and the formulation of the EPP.
2. Review and acceptance of the EPP.
3. Attendance at required field conferences.
4. Coordination with the Construction Supervisor to expedite the construction schedule.
5. Coordination with the utility's Supervising Resource Specialists regarding simultaneous monitoring of Class A areas.
6. Routine inspection of the line.
7. Maintain a monitoring log with necessary maps and photographs.
8. In the event of unanticipated environmental damage or when the required protocol appears not to be followed, the Monitor will notify the utility and convene meetings with appropriate personnel to correct the deficiency.
9. Review and acceptance of the utility's Restoration Plan.

4.6 Restoration Plan

If the CPUC monitor believes that there is a deficiency in the utility construction process, he will notify the utility and convene a meeting to determine whether a deficiency in fact exists and if so, what the nature and extent of the deficiency is.

Conversely, if the utility supervisory personnel believe that there is a deficiency, they must notify the CPUC monitor, even though the deficiency may have already been corrected. Upon such notice, the Monitor will note the contact in the Monitoring Log and determine whether and further action is needed.

If a deficiency has in fact been determined, the utility shall prepare a Restoration Plan. That plan shall contain:

1. A description of the deficiency, stating how the deficiency occurred.
2. Detailed investigation into the extent of environmental damage, if any that resulted.
3. Steps already taken to minimize environmental damage and to correct the deficiency.
4. Suggested further steps that could be taken to fully compensate or restore the deficiency.
5. Estimates of the cost to the utility for the restoration, including any time spent by utility personnel in administration related to the deficiency.

In general, a deficiency meeting shall be held as rapidly as possible after the notice of apparent deficiency is given. At the deficiency meeting, the utility and the Monitor will set a schedule for submittal of the Restoration Plan. Depending on the nature of the deficiency and the likelihood of further damage, the Monitor will determine the degree of supervision necessary pending approval of the Restoration Plan.

4.7 Sanctions

The utility constructs and operates facilities under the authority of the CPUC. That authority is granted by a Certificate of Public Convenience and Necessity which carries with it certain conditions to be fulfilled by the utility. In the proper administration of its statutory authority, the CPUC will take every step available to ensure that the conditions are carried out exactly.

The following sanctions may be used by the CPUC if it determines that the Certification conditions or the provisions of the Construction Monitoring Program are are not being followed:

The Staff may:

1. Issue immediate stop-work orders affecting some or all of the project construction.
2. Recommend to the Commission that portions of project cost be deemed ineligible for inclusion in the utility rate base.

The Commission may:

1. Suspension of the Authority to Construct on all or a specific portion of the project.
2. Establishment of specific utility costs as ineligible for inclusion in the utility rate base.

4.8 Periodic and final reports on the mitigation/monitoring program

The CPUC should keep a permanent record of the mitigation program as implemented for each transmission line project. The record will be in the form of reports preared by the personnel in the field responsible for carrying out the mitigation program. The interim reports will serve as

L-306 (continued)

milestones to the ongoing success of the program and the degree to which the utility has demonstrated good faith in meeting the objectives of the program and fulfilling its individual measures. The reports should be prepared jointly by the CPUC monitor, the supervising resource specialist or specialists, and the construction supervisor.

The final report should be an overall evaluation of the entire program, from the design and pre-construction phases, through the construction phase. The final report should also reference ongoing mitigation measures that will be subject to monitoring throughout operations.

L-307

Henwood Energy Services, Inc.

March 2, 1987

Environmental Coordinator
California Oregon Transmission Project
1010 Hurley Way
Sacramento, CA 95825

Dear Sir:

Enclosed please find comments on the Draft EIS/EIR for the California-Oregon Transmission Project filed by the Forest Landowners of Shasta and Siskiyou Counties (FLSSC). The Forest Landowners manage approximately 3/4 million acres of forest land in Shasta and Siskiyou Counties, and the group is comprised of five members including Roseburg Forest Products Company, Santa Fe Pacific Timber Company, Hearst Corporation, Champion International Corporation, and Sierra Pacific Industries.

These comments were prepared by Henwood Energy Services, Inc. with the assistance of various FLSSC members. Please contact me if you have any questions concerning this submittal.

Thank you for your assistance.

Sincerely,

Kenneth Henwood

Kenneth Henwood, Ph.D.

enclosure

KH/cv
Fl-307-5

L-307 (continued)

COMMENTS ON THE DRAFT EIR/EIS

FOR THE PROPOSED

CALIFORNIA OREGON TRANSMISSION PROJECT

Prepared for:

The Forest Landowners of
Shasta and Siskiyou Counties

Prepared by:

Renwood Energy Services, Inc.
2555 Third Street, Suite 110
Sacramento, CA 95818

Date: March 2, 1987

L-307 (continued)

I. Introduction

The members of the group comprising the Forest Landowners of Shasta and Siskiyou Counties (FLSSC) own and intensively manage approximately 750,000 acres of land for timber production in the two counties. Lands of the group members are already extensively impacted by numerous transmission corridors and other public rights of way. The FLSSC are concerned about the continued errosion of the timber land base available to support the Northern California lumbering industry and the further direct and indirect negative effects the preferred routing alternative has on that base.

This report was prepared at the request of the FLSSC by Henwood Energy Services, Inc. of Sacramento, California in response to the aforementioned concerns of the Forest Landowners and additional concerns about the overall comprehensiveness of the Draft, particularly with respect to the discussion and development of alternative routes. The economic analysis for the project was also briefly investigated with respect to timberland valuation and for consistency with information being presented in other regulatory forums. Comments on the economic analysis and secondary economic effects will also be filed with the CPUC at the hearings on Certificates for Public Convenience and

L-307 (continued)

Necessity for the participation of SCE, SDG&E, and PGandE in the project.

II. Overview of the Northern Portions of the Project

A The project proposes to construct a third 500 kV A.C. transmission line from Southern Oregon to the Tesla substation near Tracy, California. This will allow the project's public power proponents to purchase excess Northwest energy directly from B.P.A. rather than indirectly through PGandE. To the extent that municipal proponents can avoid the PGandE system (and possibly unload the existing intertie), existing PGandE ratepayers will be disadvantaged due to shrikage in total sales supporting system overhead.

With respect to routing of the line, system reliability criteria mandate that project design minimize the possibility of a three line outage occuring in less than eight hours. In the alternate routes North of Redding the interaction of the possibility of forest fires with the above mentioned reliability criteria appears to require two to five mile separation of proposed routes from the existing intertie.

Additionally the Northern (beginning) substation appears to be required to be located between the existing

A This comment is addressed to Northern California publicly owned utility Participants in the COTP. The plans of the Northern California public power COTP Participants, as exhibited by recent generation project development, are to minimize anticipated lifecycle costs of power supply to minimize revenue requirements to the utilities' ratepayers. If these utilities do not secure their participation in the COTP and the associated Northwest power purchases, other generation resources would be pursued to the extent such resources are expected to result in lower cost power compared to wholesale power purchases. Combustion turbines are expected to deliver peak capacity at a cost substantially lower than the cost of wholesale demand charges from PGandE. Even if wholesale capacity could be purchased at below cost of service rates while PGandE has excess capacity, this does not provide the long-term benefits of the COTP, nor of a combustion turbine which will be available long after the temporary period of excess capacity. Consequently, it is unreasonable to assume that failure to complete the COTP would result in greater municipal utility reliance upon PGandE wholesale purchases. Participation by TANC jointly with PGandE in the COTP enables PGandE ratepayers the long-term benefits of the COTP with likely similar resultant wholesale customer demands on PGandE as would result if the COTP is not built. See the responses to comments L-306 N2 and L-306 O2 for further discussion.

Meridian and Malin substations, and the studied rights of way were forced back into alignment with the existing inter-tie north of Redding near the Round Mountain substation to allow interconnection with that substation. That project option has since been abandoned. South of Redding the line is interconnected with the Olinda substation and down the valley the project principally involves upgrading an existing C.V.P. line to 500 kV.

III. Technical Analysis of the Preferred Alternative Routing

A. Assumption Used to Select the Preferred Alternative

Various assumptions and technical documents have been used to whittle down the numerous proposed alternate routings to the "preferred alternative". In the analysis both engineering and environmental considerstions were used for decision making. Of principal importance in this effort were the following studies, conclusions, and assumptions:

1) Power System Studies Committee - Comparison of North Corridors - April 1986. This report recommended that project routing use new substations, and not involve any crossings of the existing intertie. Its conclusions were synthesized from several other documents which included:

L-307 (continued)

A) The COTP - Preliminary Plan of Service and Power Systems Studies - October, 1985.

B) Corridor Separation for the COTP - October, 1985.

C) 500 kV Transmission Line Crossing - December, 1985.

D) Comparison of Northern Corridors Report - April, 1986.

E) Centerline Separation Reliability Analysis - August, 1986.

2) The conclusion that the Northern substation must be located between the Meridian and Malin substations on the 500 kV line owned by PP&L.

3) The assumption that the route must or should join existing corridors immediately South of the Round Mountain substation and North of Redding.

4) The assumption that the existing intertie could not be crossed near Malin due to the effect of a new 500 KV line on the proposed location of a backscatter radar facility east of the existing intertie.

5) The assumption that all underground crossings of the existing line would be in forested areas and therefore prohibitively expensive.

6) The assumption that 20 years of operations experience

L-307 (continued)

are required before any underground transmission technology can be employed.

B. FLSSC/Technical Analysis of the Preferred Alternative Routing

FLSSC has developed technical comments on the DEIS after review of the above listed documents and meeting with TANC personnel on February 24, 1987. At the meeting, issues which were unclear in the DEIS were discussed and that information is incorporated in the commenta. Technical comments on the alternative route selection criteria include:

B 1) The study committee decision not to use the existing Malin substation appears supported by WSCC criteria as does a substation located on the Malin-Meridian PPL 500 KV line especially in light of the planned reinforcement of the Western Oregon transmission system. We can also agree with the superiority of a design approach to simplify operating criteria.

C 2) No data were presented on the possibility of interconnecting with lines running north from Malin to Grizzly particularly the line that is interconnected with Grizzly but loops east to Midpoint, Idaho at the Summer Lake

B Comment noted.

C See response to L-362 B. The tap on the Meridian-Malin line was the proposed action because of the ability to directly connect to a common access point with the PNW without crossovers. Extending the line north beyond the Meridian-Malin line would result in additional costs and environmental impacts. A crossover would still be required to deliver power to the proposed Olinda Substation. Different facilities might be required to support the PNW system than presently anticipated with the COTP.

L-307 (continued)

C substation. Reliability on that line could have benefits equal to the preferred alternative of interconnection with the Merdian - Malin, PPL line. This alternative should be discussed with respect to locating the project substation northeast of Malin on this line thus avoiding the need for a north end crossover to use a route east of the intertie.

3) The conclusion in the April 1986 Comparison of Northern Corridors System Study Committee Report that the new line must not cross the existing intertie is not supported by the consultant's report (Sargent and Lundy, December, 1985) especially in light of two facts that arose in the February

D 24 meeting with TANC personnel. The stated reasons for rejecting an east side Eastern Corridor were based on excessive costs for the preferred underground type of crossing. For a 5 mile underground crossing required to maintain separation in forested areas costs were estimated at $41 million by the project's consulting engineers and with two required, expense was assumed to be prohibitive. However, the consultant estimated costs at only $7 million for the much shorter 2000 foot underground crossing required in unforested areas.

E At the February 24 meeting with TANC, PLSSC learned first that the backscatter radar facility (which had forced a north end crossing well south of Malin into forested areas) was no longer a factor, and a crossing could be made

D See response to L-307 I.

E Crossings are considered to be unreliable by the COTP planners, and as such are to be avoided. Whether or not the crossings are proposed for forested or non-forested areas does not matter as crossings are avoided in selection of the Project preferred route. See also response to T-69 F.

L-307 (continued)

E in the immediate vicinity of the California-Oregon border where a 2000 foot crossing is possible in agricultural or sagebrush areas. Further, on questioning TANC personnel

F indicated that with the abandonment of an interconnection with the Round Mountain Substation a route well east of the intertie could achieve the project objective of interconnection with the Cottonwood (Olinda) Substation. This route would cross the existing intertie in the Whitmore - Midway - Black Butte foothills, again out of forested areas.

G This exact routing has been suggested on several occasions by FLSSC members (see Attachment 1) and the County of Shasta, and apparently rejected for economic reasons which are not valid as seen above. It would appear that the east side Eastern Corridor option was rejected early in the evaluation process for reasons that have since become invalid. In our opinion, this option is now a very viable alternative as it may have always been if suitable short crossing sites had been diligently explored. To be adequate, FLSSC believes the DEIS must fully evaluate a routing that generally follows the main N-S PGandE 36 inch gas pipeline alignment south from the Mayfield area direct to Olinda. Central to this analysis must be a complete evaluation of the comparitive savings in right of way cost (clearing and otherwise) in moving east onto significantly less productive lands and sharing right of way with the

F See responses to L-307 E and T-69 F.

G The east side of the eastern corridor has been rejected because of reliability concerns. Crossing the existing Intertie is considered unacceptable because of the reliability concerns. The route proposed by the County of Shasta parallels the PGandE pipeline for much of its north/south length. See also responses to L-159 D, L-159 F, and T-69 F.

L-307 (continued)

G existing gas pipeline which is already cleared (100') with six (6) feet of soil cover over the pipe. This evaluation is also required by FLPMA as has been pointed out to TANC by FLSSC members in the past (see Attachment 2).

H With respect to reliability concerns expressed by TANC personnel regarding an underground crossing, their consultants, Sargent and Lundy, addressed these concerns by planning an extra phase at each crossing. To have twenty

I years of operation experience prior to implementing new environmentally superior technology as suggested by COTP personnel at the February 24, 1987 meeing is patently ridiculous. This argument is heard repeatedly in opposition to Best Available Control Technology air pollution regulation, Best Management Practice in forestry and water pollution control, etc., and if persuasive would have prevented implementation of most of the environmental safeguards in use today.

J Additionally, the reliability of underground crossing points only effects the single (new) line, and existing design considerations for all corridors provide for a single line outage without compromise of WSCC reliability criteria. Consequently, underground reliability should not be an issue regarding the feasibility of an eastern route.

H An extra phase was suggested as an attempt to create additional reliability. However, even with the additional phase, the system would still be considered to be unreliable.

I Apparently, during the February 24, 1987 meeting, it was interpreted by the commentor that without 20 years experience, a new technology could not be used. We agree that this is not reasonable. Underground installations of 500 kV exist in very few areas in the world. All of these facilities are very short runs, with the exception of submarine applications. These installations have been in commercial operation for only a few years. With the present state of the art for 500 kV underground transmission, cross country underground 500 kV projects are not yet feasible. Experience throughout the world indicates that with current technologies associated with manufacture and installation of underground 500 kV cable, damages to the underground installation have demonstrated a much worse performance record than for underground installations of lower voltages. This is attributable to the fact that high voltage cables face much higher electrical and mechanical stresses. Also, the time required for repairs and replacement on an overhead line is of a much shorter duration. Outages for underground lines may extend to several weeks or longer. In short, technology is not yet available that could provide the required level of reliability for the operation of a 500 kV underground cable for the COTP.

COTP contacted the three existing system users of 500 kV underground, and have been advised that one system was merely an experimental installation of 1,500 feet and not to be determined as a proven technology; the second system was going to be permanently paralleled with an overhead system because of reliability and concerns for failure of the second system that replaced the original system which violently failed; the third is a submarine installation which is performing satisfactorily, but was installed at a cost considerably more expensive than originally anticipated.

Additionally, environmental impacts associated with the construction of underground transmission lines are normally more severe than for overhead transmission lines due to the required construction of one or more trenches for the entire line length which will disturb far more soil than for the construction of overhead lines. The installation of shunt reactor stations to compensate for the losses associated with underground cable will

I (cont.) be required at regular intervals. These areas must be cleared of vegetation and occupy several acres of land for the installation of pumps, compressors, oil storage tanks, heat exchangers, etc., along the route. Access, construction, and maintenance road requirements will be more numerous than for an overhead line. Adverse effects to vegetation could result from changes in thermal and/or moisture balance in the soil caused by cable heat dissipation and result in moisture migration. Additionally, the right-of-way must be kept permanently free of trees to prevent the migration of roots into the cable system.

For these reasons, the use of 500 kV underground cable for the COTP is not considered feasible.

J See response to L-307 I.

L-307 (continued)

IV. Environmental Comments

A. Alternative Route Selection

K Starting early in the route selection and evaluation process, FLSSC members have been active in offering information, alternative routes, and suggestions to TANC. As the route study and selection process has moved forward the members' concerns about the methods being used might best be summarized by the comments of Harold R. Walt, Chairman, California Board of Forestry in his February 28, 1986 letter to Mr. Larry Klein, the COTP Project Director. In that letter (Attachment 3) Mr. Walt stated that ". . . we do not understand why new land, including timberland, needs to be diverted to the transmission project when there are existing cleared rights-of-way both powerline and natural gas." Mr. Walt went on further in the next paragraph to state the recommendation of the State Board of Forestry as follows:

> "The Board suggests that you approach the selection of the final route from a different persepctive than now seems in use. Instead of beginning with the most direct routes and attempting to mitigate any impacts observed, it would appear more logical to search for areas that would be affected the least by the Project and

K Routes for the COTP that are east of the Intertie are not feasible because of the reduced reliability of the western U. S. electric transmission system resulting from crossing of the Intertie. Once that condition was established, further evaluations of crossing locations were suspended. See also response to L-179 D.

K

then attempt to locate a route utilizing those areas."

In the ensuing year project proponents have certainly not taken the advice of the Board, and as stated above have refused to reconsider an east side Eastern Corridor route that has been suggested by FLSSC members and others including the State Board of Forestry (see Attachments 1 and 4). The lack of consideration of this route, a version of which was described in detail to COTP by Mr. Richards of Walker Forest (Attachment 1 letter of December 16, 1985), makes the entire DEIS inadequate as an environmental document under NEPA or CEQA. This inadequacy becomes acute, glaring, and indefensible in light of the February 24, 1987 comments by Mr. Abbot of COTP stating that the original reasons for long undercrossings in forected areas have been invalid since the radar facility moved and the Round Mountain interconnection was dropped.

B. Analytical and Procedural Deficiencies

In addition to the obvious deficiency in the DEIS due to the inadequate evaluation of an eastern corridor similar to that described by Mr. Richards, the DEIS fails the adequacy test in several other areas. The initial review of the document indicates problems in the following areas some of which have been previously called to TANC's attention by

L-307 (continued)

FLSSC members.

L

1) The discussion of cumulative effects on the timberland resource base that supports the entire lumber economy in Shasta and Siskiyou counties is deficient in at least two areas. First, on a macroscopic scale for a project of this size the DEIS does not adequately assess the existing timberland base and its rate of shrinkage. The DEIS simplistically assumes direct physical disruption is the prime mechanism by which these lands are lost and the cumulative impacts and productivity sections (4.4 and 4.5) deal only with other transmission projects.

A most cursory analysis shows that governmental actions have had much greater significance in the last 15 years in reducing the resource base than direct losses. These actions must be included in the analysis of evolving impacts on the existing forest resource environment prior to assessment of the project's effect on that environment.

Examples of governmental actions effecting these resources are the Clean Water Act, the California Forest Practice Act, the National Forest Management Act, the Endangered Species Act, and the Califiornia Wilderness Act. These actions have resulted in alterations, reductions or outright bans on resource management and/or harvest due to,

L

The intent of the discussion of cumulative impacts in the Draft EIS/EIR Volume 1, Sections 4.4 and 4.5 is to address the cumulative impacts of other projects with the COTP. The Draft EIS/EIR covers timber issues in further detail than "direct physical disruption". Refer to Volume 1, Section 4.1.6 (Land Use) and Section 4.1.8 (Socioeconomics). Also refer to Volume 2A, Phase III Report, Sections 3.6 and 3.8 for further analysis of these issues.

Government actions are addressed in the Draft EIS/EIR, Volume 1, Section 6.0 (Compliance with Laws and Regulations). It is not the purpose of a Draft EIS/EIR of a particular project to address the impacts of several legislative acts on the environment, but rather to address environmental impacts of the project, alternatives to the project, mitigation measures, and other topics required by NEPA and CEQA. The compliance section identifies statutes and regulations for which the COTP must be in compliance. These requirements were considered when analyzing impacts of the COTP and proposing mitigation measures.

L-307 (continued)

L

for example, spotted owl, eagle, etc. habitat reservations, wilderness withdrawls, watershed management requirements, habitat diversity requirements, etc.

M

Second, on a microscopic scale the DEIS proposes to analyze and compensate for lost timberland values on the basis of acres directly effected (Section 3.6, Volume 2A). This method demonstrates a remarkable lack of sophistication in the real world factors that effect timber resource management. The California Forest Practice Act requires timber harvest plans (THP) prior to harvest. In a recent court case, E.P.I.C. versus Johnson, et al. cumulative assessment of watershed effects was required prior to timber harvest plan approval by the California Department of Forestry (see Attachment 5). The USFS has been implementing a similar procedure for several years as a result of a Management Agency Agreement with the SWRCB to develop a methodology for evaluation and control of cumulative off-site watershed effects (see Attachment 6).

The USFS also has diversity criteria that effect harvest and which are applied on a management area basis. These criteria are described in the Timber Sale Preparation Handbook and represent goals for helping to maintain habitat diversity over time. The criteria place restrictions on the size, spacing, and timing of management practices and clearcuts in particular.

M

Because of the diversity and size of the COTP study area, we analyzed the direct impact on timber resources, rather than using a broader watershed impact approach. Each alternative was then compared on a consistent basis. We recognize that the cumulative watershed approach would be informative, but the additional data would not have affected the comparison of alternatives.

L-307 (continued)

M

In these types of evaluation and management procedures a cleared forestland right-of-way (such as is produced by a transmission corridor that is not allowed to revegatate with trees) must be treated for management and abstement proposes as permanent clear cut or roaded area, producing more restrictive management requirements on the remainder of the watershed or management area. To be adequate in assessment of local environmental effects the DEIS must on a watershed by watershed(and management area basis for USFS diversity criteria) basis assess each route segment for its cumulative effect on forest management by the other landowners in the drainage or the USFS in the case of diversity criteria.

Such analyses will produce a land disturbance multiplier effect in each drainage and management area that must then be used to assess macroscopic cumulative effects as well as the adequate and fair compensation of on and off-site forest landowners. To do otherwise will have an inverse condemnation effect on these landowners.

N

2) A preliminary check of the DEIS by PLSSC has indicated serious errors in the resource mapping effort and some of these were presented to TANC at a public hearing in Yreka (see Attachment 7). These errors and the unsupported rejection of an analysis of the east side Eastern Corridor

N Attachment 7 to the comment does not provide specific information as to where errors may exist on the resource maps. It does indicate that a geologic fault is omitted north of the Kluntuchi Butte (near route segment N-6W). In the Draft EIS/EIR, Volume 1, Figure 3.0-2, a fault line is shown 6 miles to the north of Kluntuchi Butte, but this may or may not be the one referred to in the comment. Route segment N-6W is not part of the preferred route. See also response to T-81 C.

L-307 (continued)

N

create uncertainty that the COTP has made a bona-fide effort to produce an adequate DEIS.

If such resource identification errors are pervasive when combined with the above mentioned deficient analysis of watershed forest resource effects the entire alternative selection process becomes suspect and inadequate for both the routes that were studied as well as those that were improperly rejected.

O

3) Environmental concerns raised repeatedly by forest landowners have been brushed aside by TANC contractors especially with respect to land entry issues (see Attachment 7).

P

4) Another obvious deficiency in the California-Oregon Transmission Project Environmental Impact Statement/ Environmental Impact Report is the failure to meet the requirements of the Federal Land Policy and Managment Act of 1976 (FLPMA) (P.L. 94-579, 90 Stat. 2743) which covers use of public domain and national forest land for rights-of-way purposes.

Section 503 of the above act provides that the Secretary of the Interior or the Secretary of Agriculture, as the case may be, must determine if a proposed right-of-way may be

O See response to T-81 F.

P A discussion of the relationship of FLPMA to the COTP is presented here and has been added to Section 1.1.6 of Volume 1 of this Final Document.

Sections 503 and 510 of the Federal Land Policy and Management Act (FLPMA) of 1976 require that rights-of-way in common shall be used to the extent practical. Title V, Section 503 of FLPMA is entitled "Right-of-Way Corridors" and reads as follows:

> In order to minimize adverse environmental impacts and the proliferation of separate rights-of-way, the utilization of rights-of-way in common shall be required to the extent practical and each right-of-way or permit shall reserve to the Secretary concerned the right to grant additional rights-of-way or permits for compatible uses on or adjacent to rights-of-way granted pursuant to this Act. In designating right-of-way corridors and in determining whether to require that rights-of-way be confined to them, the Secretary concerned shall take into consideration national and state land use policies, environmental quality, economic efficiency, national security, safety, and good engineering and technological practices. The Secretary concerned shall issue regulations containing the criteria and procedures he will use in designating such corridors. Any existing transportation and utility corridors may be designated as transportation and utility corridors pursuant to this subsection without further review.

L-307 (continued)

P

used in common with other rights-of-way in order to avoid adverse environmental impacts and the prolifieration of separate rights-of-way. It requires that rights-of-way shall be used in common to the extent possible.

Section 510 of FLPMA provides that no rights-of-way for power transmission purposes shall be granted on public domain or national forest lands except under and subject to the provisions, limitations and conditions of the act. The conditions that must be met are stated in Section 505 and agency regulations which cover a very broad spectrum of concerns.

Until the assessment called for in the Act has been made, the Secretary involved may not issue a right-of-way. The assessment and conditions are also subject to public review and comment. Authority under FLPMA is subject to the provisions of the National Environmental Policy Act of 1969.

The potential impact of the proposed project upon the environment clearly requires that the assessment required by FLPMA be carried out by way of an environmental impact statement. We do not find such as assessment within the draft EIS/EIR presented by TANC. The common use of other transmission corridors or rights-of-say, both power transmission and other, have not been considered adequately.

P (cont.)

The separation of the proposed COTP 500 kV line from the existing two 500 kV lines is not in conflict with FLPMA. Impacts resulting from the separation of the COTP from the existing 500 kV transmission lines on land use policies and environmental quality are documented in this Final EIS/EIR. FLPMA states that the Secretary shall take into consideration national security and good engineering practices when determining whether to require that rights-of-way be confined to designated corridors. Because of the problems which would occur if all three of the 500 kV lines (or even if the proposed line and one of the two existing lines) were to become de-energized within a two-to-eight hour time period, siting the new line within a minimum distance of 2,000 feet from the existing lines would not be good engineering and technological practice, nor would it be in the interest of national security. The lead agencies have conducted both systems studies and reliability analyses which document the need for extraordinary measures to prevent a major system collapse in the event of a simultaneous outage of the COTP and one or both of the existing 500 kV Intertie lines (see discussion on System Planning in Appendix A, Volume 3A of the Draft EIS/EIR). We have held extensive discussions with the Forest Service regarding this issue, and they are in agreement with the lead agencies that separating the corridor for the new line from that of the existing lines is not necessarily in conflict with FLPMA. The Forest Service will make their final determination concerning whether the routing of the COTP is in compliance with FLPMA in their Record of Decision, which will be based on this Final EIS/EIR.

L-307 (continued)

P

Transmission corridors are in common use and provide a means of reducing impacts on other values. As seen above the gas pipeline route east of the existing intertie presents such an opportunity.

Clearly the California-Oregon Transmission Project draft EIS/EIR does not provide the assessment required by PLPMA. An assessment is required before rights-of-way may be issued to cross public domain or national forest lands. Equally clear is the fact that such as assessment must meet the requirements of NEPA and be supported by an adequate EIS.

V. Comments on Project Economic Information

The DEIS is inadequate and in error in its economic analysis at both the local and statewide levels. In both cases we note a pervasive trend to consistently understate project costs and overstate project benefits.

A. Comments on Local and Regional Economic Analysis

Q

At the local level the analysis does not consider the external costs of the proposed right-of-way acquisition on third parties (particularly timber producers), and as a result seriously understates the societal costs to Shasta and Siskiyou Counties. Simultaneously this process

Q

Timber companies (producers) across whose land the COTP may be routed would not be third parties. Where they are directly impacted landowners, the easement acquisition process will compensate them for the loss of their productive capacity, both directly on the easement and off the easement. This compensation is the financial equivalent of the timber resource that is lost, and can be invested at the discretion of the timber companies in furthering timber production in other parts of their lands or elsewhere.

L-307 (continued)

Q underestimates the real costs of the line since some of those costs are borne by uncompensated third parties to the benefit of project proponents.

The following specific comments deal with local or regional effects:

R 1) For the reasons described in Section IV B above the calculations of Fair Market Value and Net Present Value do not accurately represent the respective land or forest productivity values effected by a give project route. Specifically the lack of an adequate cumulative impact analysis does not show the rapidly increasing scarcity value of prime forestland. Additionally the lack of adequate watershed by watershed analysis on the forestland management and harvest effects of the cleared right-of-way make the simplistic Net Present Value analysis in Volume 2A, Section 3.6 hopelessly flawed. For an example of a methodology to make the basin by basin impact assessment the reader is again referred to the proposed USFS Cumulative Off-Site Watershed Effects Analysis procedure (see Attachment 6).

S 2) The inaquate analysis of forest value losses carry forward through the DEIS to the overall assessment of socio-economic effects (Volume 2A, Section 3.8). Tables in Section 3.8 must be corrected after the cumulative effect on

R The additional analysis suggested by the comment would not significantly increase the quality of the route comparisons presented in the Draft EIS/EIR. See also response to L-307 Q.

S See response to L-307 R. Although the tables presented in Volume 2A of the Draft EIS/EIR display information on a route segment basis, the significance of impacts was considered on a county by county basis.

L-307 (continued)

S

forest production is determined on land, tax, and labor parameters. Additionally the finding of no significant impact by route segment is inconsistent with the proposed standard (Section 3.8.8) for significance to be judged on a county basis.

B. Comments on Statewide Economic Analysis

T

On an overall Statewide basis the project must be justified economically on the spread between what energy costs to acquire and transmit from the Northwest versus what energy can be produced or bought for in California. As such, assumptions about economics and energy availability are critical. The DEIS appears to have consistantly and systematically chosen assumptions that justify the project even though in some cases they are unsupported, in error, or in conflict with statement by BPA. The following specific comments deal with overall project economics and Statewide effects.

U

1) The DEIS contains data about the amount of firm capacity that is available for sale in the Northwest (with transmission capacity) that is inconsistant with testimony by BPA in BPA's ongoing rate case.

V

2) The DEIS data on non-firm energy available for delivery are significantly higher than BPA's which are contained in

T See responses to comments L-306 UU through L-306 Y3 for an explanation of the basis for and reasonableness of the analysis of the net benefits of the COTP.

U The differences between the assumptions of BPA in its IDU Draft EIS and those used in the COTP Draft EIS/EIR regarding Pacific Northwest capacity availability are addressed in responses to comments L-306 D1 through L-306 L1.

The Draft EIS/EIR assumes firm capacity is available from more sources than BPA and from more sources than those located with the Northwest region as defined by BPA. BPA's rate case testimony deals with the situation as it exists in the very near term, the anticipated term of the proposed rates, whereas the economic analysis in the Draft EIS/EIR is a long term analysis.

V The Draft EIS/EIR assumed a broader source of non-firm energy than BPA's IDU Draft EIS. See responses to L-306 R1 through L-306 B2 for additional discussion of potential sources of non-firm energy and differences between the analyses.

L-307 (continued)

V BPA's Development and Use EIS.

W 3) The DEIS estimates of Northwest prices for available energy are too low. BPA has stated in its most recent rate case that it will charge 75% of the decremental cost of the lowest California utility.

X 4) The DEIS value for avoided capacity and energy are erroneous in both the capital cost of combustion turbines and the heat rate of these type of turbine. The CEC and the PUC are using significantly lower capital costs while the CEC uses 11,000 Btu/kWh for heat rate (ER VI) versus the 13,000 used in the DEIS.

Y 5) The fuel values used in the DEIS have been readjusted once and obviously should be readjusted again. Recent estimates (DRI) of world oil prices are running lower than the low price, weak OPEC scenario up through 1994 and then move up to prices between the low and mid price weak OPEC scenario. Since project early year electricity prices based on fuel prices in these ranges do not justify the project, prudence would indicate a closer look at the project's basic economic justification.

Z 6) The CEC has identified in ER VI an in-State over capacity situation that makes TANC's pursuit of the COTP a

W The statement attributed to BPA is not necessarily inconsistent with the Draft EIS/EIR assumption. The Draft EIS/EIR assumes California will pay 60% of marginal cost of gas in the Spring and 75% at other times. This may be more than 75% of the lowest decremental cost for a California utility. Especially after completion of the DC Upgrades and COTP there may be California utilities whose decremental cost is based on less expensive generation than marginal gas cost.

From the information provided it is not clear that the comment is relevant to the period during which COTP will operate nor that any inconsistency exists. See responses to comments L-306 UU through L-306 A1.

X The capital cost for combustion turbines is representative of the range of costs estimated by the COTP Participants based on differences between the utilities' location and associated emission restrictions, siting conditions, and unit size. The avoided fuel cost as a result of the model analysis is based on gas fired steam generation at an assumed heat rate of 9,500 BTU/kWh due to little or no dispatching of the combustion turbine. Therefore, the study results are considered quite conservative.

See the responses to comments L-306 R3 for more discussion of the influence of heat rates on the economic analysis and L-309 II for a discussion of combustion turbine capital costs.

Y Fuel values used reflect the range of expert forecasts available at the time the study was prepared. (1st Half of 1986). They are consistent with the resource plan assumptions which would have to be reviewed for possible revision if fuel price assumptions were to be revised. The range of the scenarios in the Draft EIS/EIR analysis provides a basis for evaluation of potential revised assumptions. Short run deviations from long-term forecasts do not invalidate the long-term forecast. Figure 1.1.1-4, presented in Section 1.1.1 in Volume 1 of this Final EIS/EIR, compares the medium scenario range of gas price forecasts with the CEC's forecast adopted in 1986, showing the range to be representative of the CEC forecast.

Z This comment infers there will be a loss to PGandE ratepayers when the COTP is operational because TANC utilities will purchase power from the Northwest rather than PGandE. The study results presented in the Draft EIS/EIR assume that TANC members will build combustion turbines if the COTP does not go forward. These assumptions reflect the plans provided by TANC representatives which are validated by recent development of combustion turbines for the purpose of reducing revenue requirements. Wholesale revenues to PGandE will be similar with or without the COTP; therefore, the COTP participation by TANC is not expected to

L-307 (continued)

Z disbenefit to the State as a whole. To the extent that TANC's municipal members use the COTP to avoid wholesale purchases from PGandE, PGandE's other ratepayers suffer increased costs. This effect is especially perverse in light of BPA testimony that deliveries to California a re market, not transmission constrained and deliveries down the project line may only serve to unload an equal amount of power off of the existing two interties. The DEIS must address this issue.

AA 7) The DEIS completely neglects to analyze the alternative to purchase an equivalent amount of capacity and energy from instate alternative producers under the PUC bid scheme for capacity under oversupply conditions. This option would potentially have significant reliability benefits as well.

BB These obvious examples of errors and overestimates of project benefits are illustrative of the much greater and pervasive bias in the DEIS supporting economic documentation. To achieve status as an adequate document and one on which a prudent decision to invest $.5 billion can be made, the entire Evaluation of COTP Economic Benefits must be redone with:

1) Supply assumption in agreement with BPA.

2) Real numbera for avoided capacity and energy costs.

Z (cont.) displace significantly more sales by PGandE than would other resources pursued by TANC members in the absence of the COTP.

See the response to comment L-307 A for further discussion of this issue.

AA See response to L-309 LL for a discussion of the inclusion of qualifying facility power production assumed to be available in addition to the resources to be delivered over the COTP.

BB 1) Supply assumptions differ from those of BPA for two reasons. First the Draft EIS/EIR looks at a larger region for potential sources of power; and second the Draft EIS/EIR uses a model that does not reduce the availability of power based on a predetermined assessment of California's willingness to pay. See the response to L-306 R1 regarding the assumptions on the amount of surplus energy available. See the responses to L-306 D1 through L-306 L1 regarding assumptions on the amount of capacity available from the Pacific Northwest.

As one of the largest energy producers in the Northwest, BPA may have an incentive to underestimate the amount of energy and capacity available for export. It is in BPA's interest to encourage California utilities to sign up now for long-term contracts. If California utilities believe power will be plentiful in the future, they may hold off signing such long-term contracts. If the California utilities believe supply is limited and competition exists, they may be more willing to sign contracts under terms more favorable to BPA.

2) Assuming that the comment regarding "real numbers" refers to numbers associated with comments L-307 X through L-307 AA, see the responses to those comments. The responses demonstrate that the values for avoided capacity and energy costs used in the Draft EIS/EIR are reasonable.

L-307 (continued)

BB

3) Realistic prices for Northwest power.

4) A PSW fuel price scenario that reflects the likelihood of continued disarray in OPEC until the mid 1990's.

5) Updated estimates of the QF resources available in the PSW.

6) An analysis of transfer vs real benefits of the project.

BB (cont.)

3) Referring to the response to comment L-307 W, BPA rate case testimony appears to be related to California's decremental cost. The Draft EIS/EIR values are a function of the acquisition cost of gas. Seventy-five percent of the marginal cost of gas-fired units should produce a higher percentage of decremental or incremental costs. See responses referenced in L-307 W for a further discussion of the basis for the PNW energy pricing assumptions used in the Draft EIS/EIR.

4) "Disarray in OPEC" appears to mean the same as "weak OPEC." Such scenarios are provided. See responses to L-307 Y and L-306 C3.

5) See the response to L-309 LL. The estimates used in the Draft EIS/EIR are reasonable.

6) Because the analysis combined all the utilities in the state into one large system, energy competitive with PNW energy was utilized first within the state before external purchases were considered. That is to say energy was distributed as if California operated as a perfect pool and dispatched on an economic basis. There were only two exceptions to this rule. Qualifying Facilities were dispatched before Northwest purchases regardless of price and minimum operating segments of gas-fired units were dispatched as required for utility area control operation.

Capacity benefits of the project in the near term rest on the assumption that without the COTP, the municipal utilities will build combustion turbines, despite any excess capacity that may be available for sale from PGandE. Given past history and projected future conditions, this action is economic from the perspective of municipal ratepayers. PGandE wholesale revenues will likely be similar with or without the COTP. See responses to comments L-307 A and L-307 Z.

L-307 (continued)

VI. Conclusions

CC The DEIS as written has numerous deficiencies technically, environmentally, and economically, and does not meet the adequacy requirements of CEQA or NEPA. Even more fundamentally, however, the DESI does not appear to economically justify the project as a whole and particularly the route selection north of Olinda.

DD With respect to the latter, it appears an environmentally preferable route was initially rejected due to reasons which later became invalid. Then, rather than include the route for analysis as urged by many parties, COTP consultants used the initial reasons for rejection to continue to justify rejection even though they were no longer valid. As a result, at this late date the DEIS cannot be considered complete until the apparently most logical and least environmentally costly east side Eastern corridor has been adequately evaluated.

EE In considering the former fundamental economic and need issues, the DEIS is even weaker. The project must be paid for by the difference in price between what energy and capacity can be acquired for from the PNW and the cost of providing or purchasing the same resources in the PSW. In the economic analysis the DEIS has systematically and

CC The technical, environmental, and economic issues as required by CEQA and NEPA have been addressed in the Draft EIS/EIR and in responses presented above and below. We believe that the Draft EIS/EIR, in conjunction with the Supplement to the Draft EIS/EIR and Volume 1 and the responses to comments in this Final EIS/EIR, meet the requirements for adequacy provided for by NEPA and CEQA.

DD See responses to L-307 K, L-179 D, and SL-121 F.

EE The comment indicates that the COTP must be compared by determining the difference between the price of resources in the Pacific Northwest and the price of the same resources in the Pacific Southwest. The appropriate analysis, as referenced in the Draft EIS/EIR and supporting studies, is to determine the price of capacity and energy from the resources available in the Pacific Northwest and compare the resultant cost of the combined capacity of energy available and deliverable to California to the cost of capacity and energy associated with alternative resources available to California utilities which would otherwise be constructed and separated or otherwise procured by the California utilities. The assumptions and the sensitivity analysis method used to perform this analysis is reasonable and well founded. The responses to the individual comments to this comment letter L-307, to letter L-306 and the other responses referenced herein provide further explanation of assumptions and methods used to determine Pacific Northwest capacity and energy availability and price, and the value of such capacity and energy to the COTP Participants.

L-307 (continued)

EE pervasively overstated project benefits and understated project costs to the point where the project's economic projections are not creditable.

FF Additionally, a very serious shortcoming is the lack of consideration of the total cost of the project to all Californians. Assuming for the moment that there is enough inexpensive energy and capacity available in the PNW to make the line an economic investment, a second question arises as to whether there is an equitable sharing of these benefits of the project among the participants and ultimatley their customers. The answer to this question is unclear since to the extent that the project's public participants can use the project to secure capacity and energy (that may be cheaper than purchases from the existing excess capacity of the in-State investor owned utilities) the public participants will benefit to the detriment of the IOU customers.

From the perspective of the IOU's, the answer seems clear. With the California Energy Commission forecasting sufficient existing capacity to meet demand well through the early years of the project, the construction of a project that amounts to an addition to existing excess capacity is unwise. A further negative effect will occur since the project provides a class of existing customers with the

FF See response to L-307 BB part 6.

L-307 (continued)

FF

ability to avoid purchases from the existing installed capacity and interties thus driving up costs to the IOU's remaining customers. Last, in light of testimony by BPA about the energy available for sale to the PSW, deliveries over the project line may for much of the year be directly at the expense of transmission on the existing intertie.

GG

Thus, looking at the Project from the societal perspective, it appears unjustified since it simply transfers benefits from a larger group of customers to a smaller group due to distortions in the overall economic system. An indication of these oddities are shown in the DEIS in Section 3.8 of Volume 2A with the statement that the public participants in the Project will not be paying property taxes on their share of the line. This builds in an automatic inequity in allocating costs for power delivered over the project between the customers of the public and private proponents.

HH

To allow this large scale public policy decision to be made on rational grounds, the DEIS must analyze the portion of the benefits of the line that accrue to the public proponents soley as a result of property and income tax avoidance, preferential costs of capital, etc. that they are now paying for deliveries through a system that does not have these benefits. To build a project that is justified

GG See response to L-307 BB part 6.

HH The Draft EIS/EIR analysis takes into account the costs and benefits on a statewide basis. The COTP benefit to cost ratios determined in that analysis are based on the costs that will be paid by both publicly-owned and investor-owned utilities. Property and income taxes are set by state and federal statutes. It is not appropriate for the Draft EIS/EIR to address the public policy issue of whether it is appropriate for governmental entities to pay taxes.

The Draft EIS/EIR assigns costs to the COTP on the same basis as any other capital investment made by the utilities involved in the Project. The same basis was used for computing costs of alternatives to the Project. The benefits are computed as savings as a result of the Project being less expensive than alternatives. Alternatives developed by the COTP Participants would be subject to the same tax structure as is assumed in computing costs for the COTP. The Project is therefore justified based on costs and benefits which are computed on the same tax basis as would be applied to any alternatives the Participants might otherwise pursue. Transfer payments and taxes are treated

L-307(continued)

HH

through transfer payments from other sectors of the economy rather than need is both bad economics and bad policy.

KH/cv
P1-287-11

HH (cont.)

consistently in the benefits and costs and do not influence the economic benefits of the COTP as compared to alternatives to the Project.

ATTACHMENT 1

L-307 (continued)

WALKER FOREST
P. O. DRAWER 487
ANDERSON, CALIFORNIA 96007
916/365-2771

December 16, 1985

Ms. Cheryl L. Shields
California Oregon
Transmission Project
P.O. Box 660970
Sacramento, CA 95866

RE: R/W LOCATION

Dear Ms. Shields:

We appreciate receiving your letter of December 12, 1985 requesting our ideas on an alternate route. We are presently conferring with those who would be affected by our proposal and will have a detailed proposal in time for the January Board of Forestry meeting. But in order for you folks to be aware of our thinking, the following are our ideas.

1. Use your most easily proposed route from the Malin Substation as a beginning.

2. Where this line intersects the existing PGE pipeline, near the Wiley Ranch, turn south and follow this pipeline to near Di Hill, Shasta County, close to the community of Inwood.

3. Leave the pipeline and head westerly towards the Cottonwood substation using the Bear Creek drainage as a general location.

The advantages are quite obvious:

1. Ownership
2. R/W cleared and access already in place.
3. Minimum impact on resources.
4. Potential cost reductions.
5. Would satisfy your major objective of reliability.

Mr. Richards' letter suggests the PGandE pipeline as a route. This would require that the COTP cross the Intertie. See responses to T-69 F and L-307 K.

L-307 (continued)

We are aware that this proposal is not entirely free from complications, but based on information from your public meeting we feel these can be met and solved.

Very truly yours,

WALKER FOREST

Roy H. Richards, Jr.
Chief Forester

nl
cc: Fred Landenberger - California Forest Protective Association
Dean Cromwell - Board of Forestry, Sacramento
Gaylord Briggs - Roseburg Lumber
Gary Adams - U.S.F.S. Shasta-Trinity National Forest

L-307 (continued)

CALIFORNIA OREGON TRANSMISSION PROJECT

P.O. Box 660970, Sacramento, CA 95866 (916) 924-3995

PAUL BUNYAN LUMBER

DEC 1 3 1985

December 12, 1985

Walker, Forest
Mr. Roy H. Richards, Jr., Chief Forester
P. O. Drawer 487
Anderson, CA 96007

JJ

Dear Mr. Richards:

We received your letter sent to the California State Board of Forestry on November 21, 1985. I appreciate your concern the California-Oregon Transmission Project could potentially have on the timber resources of the State of California.

Much of the northern section of the Project study area involves federally owned timber lands. The U. S. Forest Service is a responsible agency on this Project. We are coordinating with them and incorporating their concerns into the environmental analysis process. The Forest Service has been very helpful in helping us to key in on timber-related concerns.

We are currently in the process of identifying and refining our preliminary alternate routes to be analyzed in the draft environmental document. In your letter, you stated you believe there are better routes to be considered. We would appreciate any specific substantive information you may have concerning better alternative route locations. I would appreciate it if you could forward that information to me as soon as possible so we can effectively incorporate your concerns as early in the environmental process as possible.

I will look forward to hearing from you within the near future.

Sincerely,

Cheryl L. Shields by Lee

Cheryl L. Shields

JJ See responses to T-69 F and L-307 K.

L-307 (continued)

CALIFORNIA OREGON TRANSMISSION PROJECT

P.O. Box 660970, Sacramento, CA 95866 (916) 924-3995

January 7, 1986

PAUL BUNYAN LUMBER
JAN 8 1986
RECEIVED

Mr. Roy H. Richards, Forester
Walker Forest
P. O. Drawer 487
Anderson, CA 96007

KK

Dear Mr. Richards:

Thank you for your letter of December 16, 1985, detailing your preferred route for the California-Oregon Transmission Project. I appreciate the time you took to provide us your information. We did receive a suggestion from Shasta County Planning Staff that was, in fact, very similar in location to your suggestion. I want to assure you that we are looking at an alternative, on a preliminary basis, in the area you suggest.

We have been requested by the Board of Forestry to give a presentation at the regular Board meeting in February, 1986. I will be available to answer any question concerning the Project at that time. In order for us to respond to your questions or comments in as efficient and expeditious manner as possible, you should contact the Project directly rather than through our Environmental Contractor. If you should require additional information in the interim, please let us know.

Thank you again for your input. I'll look forward to meeting you in February.

Sincerely,

Cheryl L. Shields

KK See responses to T-69 F and L-307 K.

L-307 (continued)

Champion
Champion International Corporation

The California-Oregon Transmission Project
P.O. Box 660970
Sacramento, Calif. 95866

May 23,1986

Gentlemen:

LL Enclosed you will find maps of the proposed powerline rights of way plotted on 15 minute quads.

Along the routes I have transferred our site productivity indices wherever the routes cross Champion property. Attached to the maps you will also find a brief explanation of how we arrived at these productivity classes.

In transferring the routes onto our ownership maps I was distressed to learn that worst case scenario (from Champions view point) would mean that 15 lineal miles of our property would be taken out of production forever.

I have written letters, given oral testimony, conducted field tours as well as participated in local fact finding groups and I still fail to grasp your criteria for route selection and rejection. I might add that the local groups are more than a little dismayed to learn that the Easternmost route, which closely followed unproductive lava flows, was withdrawn from your study. The unexpected withdrawal of this route has disaopointed many of us who had hoped to see the route chosen as one of those for final consideration.

We are unsure exactly why the route was withdrawn as it appeared to impact people, timber, agriculture and wildlife the least of all the others considered. I certainly hope you do not fall back on the well worn reliability issue again as your reasoning for the removal of this route.

As I have stated on many occasions, we live in a world with ever increasing population pressures on a declining resource base which must be used efficiently to fulfill the legitimate needs of the people.

To needlessly impact farmers, ranches and timber growers on the assumption that some nebulous reliability index can be better served is unreasonable to say the least.

LL The enclosures to Mr. Berryman's letter were utilized by the COTP resource specialists.

L-307 (continued)

LL

You may rest assured that your analysis of land impacts will be closely scrutinized to ensure that land productivity and potential has been accurately assessed.

Sincerely,

Ron

Ron Berryman
Area Forester

rma

cc: Calvin Van Zee
Stan Hulett
Susan Hart
Santa Fe Pacific Timber Co.
Fruit Growers Supply Co.
Calif. State Board of Forestry

L-307 (continued)

P.O. Drawer D
McCloud, California 96057
916 964-2121

LL

Champion
Champion International Corporation

Site Measurements

Champion International Corporation maintains an ongoing forest inventory of all our ownership around the world.

One of the uses of this inventory information is for predicting available timber by species, size class and volume for pulp and milling uses. Other uses include long term projections of timber growth and yield.

Site productivity, termed "site" by many, is an expression of the potential of the land to produce predictable volumes of timber within given time frames. Site is determined by measuring the age of the tree, then measuring the total height. This age-height relationship is then located on the site curves to determine which of many curves best approximate the age-height relationship measured in the field.

On the McCloud District we use 50 year Duncan-Dunning site curves based on the height trees may attain at 50 years of age in soils of differing productivity. Thus a stand with a site index of 86 will grow the dominant trees to 86 feet in height at age 50. Obviously the higher sites will produce taller trees and better growth resulting in higher volumes available for use. The attached sheet from our local inventory represents a portion of the information available on very specific units of land.

To illustrate how important site is, the following comparison between 2 stands of timber of different site indexes is used:

Ponderosa Pine

	Site Index 40	Site Index 80
	Avg. Diameter 8.4"	13.0
Volume/acre at age 50	1709 ft^3/acre	7603 ft^3/acre

The above relationship (from yields of unthinned Ponderosa pine in Northern California by Oliver and Powers, 1978) shows that for trees planted 10 feet apart, site 80 land after 50 years, will produce 4.4 times as much volume as a site 40 stand.

The point of this illustration is to show that doubling the site index does not mean the productivity will be doubled as well. In most cases, doubling the site index can mean more than quadrupling the expected yield of timber.

High site lands in forestry operations are coveted by foresters every bit as much as highly productive farmlands are valuedby farmers. I sincerely hope you closely analyze these productivity values in arriving at your final

L-307 (continued)

LL

Site Measurements
Page 2

decision regarding which lands are to be taken out of production for powerline use.

Sincerely,

Ron Berryman
Area Forester

rma

L-307 (continued)

LL

ONGOING FOREST INVENTORY - STAND SUMMARY — REPORT - JM78 PAGE - 2

CHAMPION INTERNATIONAL CORPORATION - CHAMPION TIMBERLANDS
WEST COAST OPERATION

REGION - CALIFORN
DISTRICT - MC MCCLOUD
FMU - M47
STAND NO. - 3005

STATE - CA CALIFORNIA
LAST ACTIVITY - 0/ 0
PREV ACTIVITY - 0/ 0
COMMENTS -

MERIDIAN - D
TOWNSHIP - 39N
RANGE - 02E
TYPE - 2

REPORT DATE - 12/17/89
CRUISE - 11/84
NET ACRES - 199.93
PROJECTED 1 YEARS

SQUARE FOOT BASAL AREA PER ACRE — WHITE FIR	SGR PINE	INCENSE CEDAR	TOTAL	DBH	NUMBER OF STEMS PER ACRE — WHITE FIR	SGR PINE	INCENSE CEDAR	TOT.
9.71	0.0	0.0	9.71	4	126.65	0.0	0.0	12
7.12	0.0	0.0	7.12	6	43.48	0.0	0.0	4
9.01	1.61	1.50	12.12	8	26.85	4.30	3.99	3
8.21	0.0	0.0	8.21	10	14.65	0.0	0.0	1
11.53	2.10	0.0	13.63	12	14.78	2.87	0.0	1
9.90	0.0	0.0	9.90	14	9.14	0.0	0.0	
18.57	4.15	0.0	22.72	16	13.38	3.26	0.0	1
17.04	0.0	0.0	17.04	18	9.84	0.0	0.0	
10.43	0.0	0.0	10.43	20	4.98	0.0	0.0	
7.19	2.05	0.0	9.24	22	2.76	0.79	0.0	
5.09	0.0	0.0	5.09	24	1.65	0.0	0.0	
0.0	0.0	0.0	0.0	26	0.0	0.0	0.0	C
0.0	0.0	0.0	0.0	28	0.0	0.0	0.0	C
1.52	0.0	0.0	1.52	30+	0.30	0.0	0.0	C
115.32	9.91	1.50	126.74	TOT	268.47	11.18	3.99	283
			0.0	NON-COM				C

NET CF VOLUMES PER ACRE TO A 6 INCH TOP — WHITE FIR	SGR PINE	INCENSE CEDAR	TOTAL	DBH	NET BF VOLUMES PER ACRE TO A 6 INCH TOP — WHITE FIR	SGR PINE	INCENSE CEDAR	TOTA
44.21	0.0	0.0	44.21	4	0.93	0.0	0.0	0
126.40	41.09	18.93	186.41	6	228.87	99.18	36.94	364
168.52	0.0	0.0	168.52	10	499.79	0.0	0.0	499
379.50	61.67	0.0	441.17	12	1685.45	293.58	0.0	1938
344.53	0.0	0.0	344.53	14	1464.00	0.0	0.0	1464
585.97	128.90	0.0	714.87	16	2954.62	623.19	0.0	3577
573.36	0.0	0.0	573.36	18	3004.42	0.0	0.0	3004
367.26	0.0	0.0	367.26	20	2001.70	0.0	0.0	2001
273.60	66.16	0.0	339.77	22	1617.21	357.29	0.0	1974
211.12	0.0	0.0	211.12	24	1256.78	0.0	0.0	1256
0.0	0.0	0.0	0.0	26	0.0	0.0	0.0	0
0.0	0.0	0.0	0.0	28	0.0	0.0	0.0	0
62.51	0.0	0.0	62.51	30+	383.22	0.0	0.0	383
3158.98	297.81	18.93	3475.72	TOT	15297.04	1332.10	36.94	16666

MERCH.FACTOR - 0.960

GRADE (% BY VOLUME)

-1-	-2-	-3-	-4-
0.0	0.0	24.983	1.596

ONGOING FOREST INVENTORY - STAND SUMMARY — REPORT - JM7841 PAGE - 3

CHAMPION INTERNATIONAL CORPORATION - CHAMPION TIMBERLANDS
WEST COAST OPERATION

REGION - CALIFORN
DISTRICT - MC MCCLOUD
FMU - M47
STAND NO. - 3005

STATE - CA CALIFORNIA
LAST ACTIVITY - 0/ 0
PREV ACTIVITY - 0/ 0
COMMENTS -

MERIDIAN - D
TOWNSHIP - 39N
RANGE - 02E
TYPE - 2

REPORT DATE - 12/17/89
CRUISE - 11/84
NET ACRES - 199.93
PROJECTED 1 YEARS

PERIODIC ANNUAL GROWTH

GYMNOSPERMS SPECIES	VOLUME/ACRE CF	VOLUME/ACRE BF	BA /ACRE	ANGIOSPERMS SPECIES	VOLUME/ACRE CF	VOLUME/ACRE BF	BA /ACRE
SP SGR PINE	13.89	76.43	0.41				
MF WHITE FIR	131.09	687.53	5.33				
IC IN CEDAR	0.00	0.00	0.00				
TOTAL	144.98	763.95	5.74	TOTAL	0.0	0.0	0.0

MEAN SITE INDEX - 78. MEAN STAND AGE - 0. MEAN STAND ELEVATION - 4450. AVE. % SLOPE - 15.

NET ACRES BY:

SITE INDEX	-59	60	70	80	90	100	110	120	130	140	150+
ACRES	0.0	39.98	39.99	39.99	39.99	39.99	39.99	0.0	0.0	0.0	0.0

ASPECT	NORTH	NORTH EAST	EAST	SOUTH EAST	SOUTH	SOUTH WEST	WEST	NORTH WEST	FLAT
ACRES	99.94	39.99	39.99	0.0	0.0	0.0	19.99	0.0	0.0

SLOPE	0%	01-05%	06-10%	11-15%	16-20%	21-25%	26-30%	31-35%	36-40%	41-45%	46-50%
ACRES	0.0	0.0	59.98	59.98	59.98	19.99	0.0	0.0	0.0	0.0	0.0

	51-55%	56-60%	61-65%	66-70%	71-75%	76-80%	81-85%	86-90%	91-95%	96-99%
ACRES	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

L-307 (continued)

ATTACHMENT 2

L-307 (continued)

Champion
Champion International Corporation

January 7, 1987

Environmental Coordinator
Calif.-Oregon Transmission Project
P. O. Box 66097
Sacramento, California 95866

MM Good afternoon ladies and gentlemen. I am Tom Lackey and the Manager of Real Property for Champion International Corporation on the West Coast. My office is P. O. Box 849, Eugene, Oregon 97440.

I have two main concerns with the EIS for the California-Oregon Transmission Project DOE/EIS 012: SCH #85040914, dated November 1986.

First is the location of the preferred route and the alternative routes studied. I would like to refer to the Forest Land Policy and Management Act of 1976, known as FLPMA 76, which is Public Law 94.579. Title V Section 503 is entitled "Right-of-Way Corridors" and reads as follows:

> Sec. 503. In order to minimize adverse environmental impacts and the proliferation of separate rights-of-way, the utilization of rights-of-way in common shall be required to the extent practical and each right-of-way or permit shall reserve to the Secretary concerned the right to grant additional rights-of-way or permits for compatible uses on or adjacent to rights-of-way granted pursuant to this Act. In designating right-of-way corridors and in determining whether to require that rights-of-way be confined to them, the Secretary concerned shall take into consideration national and State land use policies, environmental quality, economic efficiency, national security, safety, and good engineering and technological practices. The Secretary concerned shall issue regulations containing the criteria and procedures he will use in designating such corridors. Any existing transportation and utility corridors may be designated as transportation and utility corridors pursuant to this subsection without further review.

This Act was directed to the Secretary of Interior and the Secretary of Agriculture for the Forest Service. The regulations for the Bureau of Land Management are in 43 CFR Subpart 2806 and the Forest Service regulations are in 36 CFR Part 219. These regulations contain the same criteria in selecting right-of-way corridors as contained in FLPMA 76.

The criteria contained in the EIS for this proposed project in selecting the routes to study were mainly reliability and costs. The EIS states

MM Mr. Lackey's letter was presented orally at the Redding public hearing. See responses to T-103 and T-113.

L-307 (continued)

Champion International Corporation

MM

that "a minimum separation where possible of 5 miles between the existing AC intertie lines and a new 500 KV line North of Redding". This is in direct conflict with the congressional mandate of FLPMA 76. There is no way that any of the routes studied in the EIS could comply with the congressional intent minimizing the proliferation of separate rights-of-way. If the Forest Plans allow any one of these routes to be utilized then the Forest Plans should be appealed.

I would suggest that the Transmission Agency look at routes adjacent to existing corridors, in particular the route at the existing DC line.

My second concern is with the economics of the Project. The Lewis County PUD #1 of Chehalis, Washington, which is between Portland and Olympia, has applied to the Federal Energy Regulatory Commission for a license to construct and operate a hydroelectric facility on the Cowlitz River near Morton, Washington. In their EIS they state that Bonneville will be unable to supply their needs for power beyond 1992. This leaves me confused. If BPA cannot meet the needs of its customers in the Pacific Northwest, how will there be surplus power to ship to the Pacific Southwest? Maybe I'm not too smart but someone should explain to me where all the surplus power is coming from that will utilize this proposed transmission project.

Thank you for the opportunity to make these few comments.

Sincerely,

Thomas D. Lackey
Manager, Real Property

m

L-307 (continued)

ATTACHMENT 3

L-307 (continued)

State of California
Board of Forestry
1416 Ninth Street
SACRAMENTO, CALIFORNIA 95814

February 28, 1986

Mr. Larry Klein
Project Director
California-Oregon
Transmission Project
P. O. Box 660970
Sacramento, CA 95866

Dear Mr. Klein:

NN The Board of Forestry has become very concerned about the adverse impact the California-Oregon Transmission Project may have on California timberland. Professional foresters in areas affected by the Project have expressed frustration to the Board with the apparent lack of consideration given to the impact by your process on timberland. We now understand that your staff is looking at the impact on timberland.

Two points in particular bother us. First, we do not understand why new land, including timberland, needs to be diverted to the transmission project when there are existing, cleared rights-of-way, both powerline and natural gas. Second, it was with some surprise that we discovered you have not yet determined the criteria by which the final route will be chosen. Absent these criteria, we do not know how you can possibly weigh the importance of different factors in the final decision.

The Board suggests that you approach the selection of the final route from a different perspective than now seems in use. Instead of beginning with the most direct routes and attempting to mitigate any impacts observed, it would appear more logical to search for areas that would be affected the least by the Project and then attempt to locate a route utilizing those areas.

NN The Board of Forestry directly submitted comments on the Draft EIS/EIR. See responses to L-321.

L-307 (continued)

NN

The Board believes as a matter of principle that the route should avoid timberland if at all possible. We especially believe it should avoid private timberland. The primary justification for the new line is the benefit to be received by the general population of the western United States. It would therefore seem incongruous to select a route that affects an individual private landowner if land within public ownership is available. The Board believes that in many locations proposed this is the case and that this criteria should be ranked above those pertaining to cost and convenience.

The Board also believes that if timberland must be taken, then prime timberland should be avoided if at all possible. A powerline project essentially removes the land beneath the right-of-way from the production of timber. The substitution of specialized products such as Christmas trees would only utilize a small portion of the total area that would be taken by the right-of-way. Agricultural land, however, can in most instances continue to be used for crop production with minimal impact as a result of the powerline.

The Board, through its regulations, exempts rights-of-way for 300-500 Kv powerlines up to 200 feet wide from the timberland conversion process. However, all other regulations regarding timber harvesting and fire protection must be met. This includes the requirement to file a timber harvesting plan with the subsequent multi-agency and public environmental review. Fire safe practices must also be followed.

The Board opposes any unnecessary loss of timberland and requests that you keep us informed of any actions you take. The Board is available to assist you in your task of final route solution. If we can be of any assistance in your determination of just what is timberland, and its location, please feel free to contact the Board's Executive Officer, Dean Cromwell, at (916) 445-2921.

Sincerely yours,

Harold R. Walt

Harold R. Walt
Chairman

L-307 (continued)

ATTACHMENT 4

L-307 (continued)

RESOURCES AGENCY

GEORGE DEUKMEJIAN
GOVERNOR

State of California
Board of Forestry
1416 NINTH STREET
SACRAMENTO, CALIFORNIA 95814

New address:
P. O. Box 944246
Sacramento, CA 94244-2460
(916) 445-2921

June 9, 1986

Mr. Robert A. Olson
Project Managing Director
California-Oregon Transmission
Project
P. O. Box 660970
Sacramento, CA 95866

Dear Mr. Olson:

OO The Board of Forestry appreciates the continued cooperation of the Project in supplying updated information on the progress of route selection.

The Board understands that you have changed the project and are no longer actively considering the suggestion to utilize an existing PGandE right-of-way. This alternative appears to be the least detrimental to the forest resources of California, including both commodity and noncommodity values. It would also appear to have had the least addition to the cumulative effect of the loss of forestland statewide. Since by law the Board of Forestry is charged with protecting this resource, we are especially interested in your reasons for dropping the alternative and the assessment made of the effects of this action.

Thank you for your consideration of the Board's concern. We would appreciate a reply in time for our next meeting scheduled to be held in Eureka on July 2, 1986.

Sincerely yours,

Harold R. Walt

Harold R. Walt
Chairman

OO The Board of Forestry directly submitted comments on the Draft EIS/EIR. See responses to L-321. Regarding the PGandE prospective route, see response to L-159 F.

ATTACHMENT 5

L-307 (continued)

STATE OF CALIFORNIA—THE RESOURCES AGENCY GEORGE DEUKMEJIAN, Governor

DEPARTMENT OF FORESTRY
1416 NINTH STREET
SACRAMENTO, CA 95814 Mailing Address: P.O. Box 944246 Sacramento, CA 94244-2460
(916) 322-0173

R 5

PP February 26, 1986

TO: ALL INTERESTED PERSONS

FROM: JERRY PARTAIN, DIRECTOR OF FORESTRY

SUBJECT: CUMULATIVE IMPACTS

The California First District Court of Appeals has ruled in P.P.I.C. vs. Johnson, et al, that the Department of Forestry must carefully address the Cumulative Impacts of proposed timber harvesting when approving THPs. The Board of Forestry subsequently requested the CDF to appoint a Task Force to examine what must be done to comply with the Court's ruling. That Task Force, comprised of Mr. Ted Cobb (Legal Advisor for the Department of Forestry), Mr. Rob Rivett (an attorney with the Pacific Legal Foundation), Mr. Bob Rappleye, RPF, (a member of the Mendocino County Planning Commission), and Mr. Fred Landenberger, RPF, (California Forest Protective Association), made a careful study of all the court decisions available on the subject. They contacted every professional person with experience in this field that they could locate. The Task Force then made four recommendations, summarized as follows:

1. CDF Forest Practice Staff should use resources available from county planning staffs to evaluate cumulative impacts.

2. The Board of Forestry and the CDF should conduct a study to determine the appropriate geographic and time limits for cumulative impact assessment.

3. The Review Team should use a checklist to assist its evaluation of cumulative impacts. (The Task Force offered a suggested checklist.)

4. The Director should add one question to the THP concerning cumulative impacts.

PP The Department of Forestry directly submitted comments on the Draft EIS/EIR. See responses to L-362.

L-307 (continued)

PP

The Board of Forestry reviewed the Task Force Recommendations and urged their implementation by the CDF, with a few suggested modifications. The Board especially emphasized the need for RPFs who prepare THPs to make use of the Cumulative Impact checklist. A checklist adapted from the one suggested by the Task Force is attached for your information and use. It is not a form to be filled out, but it or one like it should be used as a guide for preparation and review of future THPs.

We emphasize that it is a guide only. Much professional judgement must be exercised by all parties. The checklist must not be thought of as limiting consideration to the items listed but rather as the starting point for professional assessment and consideration.

Coupled with the checklist, a new question will be added to the THP form when the next batch is printed. In the interim, beginning immediately, the following question must be addressed in an addendum:

> "Are there any other existing or planned land use Activities, including but not limited to other THPs, in the area of the proposed THP which may combine with the effects of your timber harvest to cause significant adverse cumulative environmental effects? If so, please describe the other land use(s) and the likely effect(s) as well as any mitigation(s) which would reduce the adverse effects."

If combined effects are not expected to result in significant negative environmental effects, please say so. The issue may not be ignored. This question and its answer will be considered during THP review, and if answers are not provided, the Department will request an answer. Development of an answer does not require an exhaustive search for information about other uses. Neither may persons responsible for preparation and review of THPs rely solely upon what they are already personally aware of. A reasonable effort to obtain information from readily available sources is all that is required. No precise way exists to measure cumulative impacts. Best professional judgment is the criterion to be applied.

It has been suggested that the ten-year span of time before and after the start of the proposed operation, as suggested in the checklist, is too long. It would be unwise to shorten the span, however, because the ten-year span is derived from decisions of the courts. To reduce it would place the process in legal jeopardy. Another suggestion was that the area of assessment be limited, at least for smaller operations. We do not know enough

L-307 (continued)

PP

at this time, however, to place any arbitrary size limit around any size THP. To do so would again place the process in legal jeopardy. It is a subject to be given further careful study as recommended by the task force.

A number of CEQA related terms are used in this process. Definitions of these terms, drawn from the CEQA Guidelines in Division 6 of Title 14 of the California Administrative Code, are appended for guidance.

If you have questions, please take them up with your local Forest Practice Officer, or with Mr. Ed Martin at the above address. Ed's phone number is (916) 322-0173.

mo

Attachments

PP

Forest Practice Cumulative Impacts Checklist

Persons who prepare and review Timber Harvesting Plans must consider the possible cumulative impacts of proposed timber operations. Cumulative impacts may result from interaction of proposed operations with other land use activities on the same or nearby areas. Cumulative impacts include more than water quality impacts. Land use activities to be considered are those occurring near enough in time and location to the proposed operation to produce significant interaction. They are not limited to timber operations. They are usually located in the same watershed. They rarely have occurred more than ten years ago. They should include those which may reasonably be expected to occur within the next ten years. Proximity is relative to the size and intensity of the proposed timber operation.

Persons who prepare and review plans must also consider measures not already contained in the rules needed to mitigate any significant adverse cumulative impacts which may reasonably be expected to occur. The CDF will use the following checklist for this purpose. RPFs preparing plans should use the same or a similar process. The checklist is not a form and it need not be attached to the THP.

Consider the following question for each of the twelve items below: Are significant adverse cumulative impacts reasonably expected to occur in any of the following items?

1. In surface soil erosion, from (a) harvest, or (b) roads?
2. In mass soil movement, from (a) harvest, or (b) roads?
3. In soil compaction, from harvest.
4. In chemical or biological properties of soil?
5. In water quality, from (a) harvest, or (b) roads?
6. In water temperature?
7. In suspended sediment?
8. To fish or wildlife or their habitat?
9. To recreation?
10. To aesthetics?
11. To rare, threatened, or endangered species of plants or animals or to their habitats?
12. To archeological resources?

If significant adverse cumulative impacts are expected in any of these items, identify the item(s) and describe additional measures needed to mitigate the impacts.

L-307 (continued)

PP

DEFINITIONS

Div. 6, Title 14, California Administrative Code

15355. CUMULATIVE IMPACTS. "Cumulative impacts" refer to two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.

(a) The individual effects may be changes resulting from a single project or a number of separate projects.

(b) The cumulative impact from several projects is the change in the environment which results from the incremental impact of the project when added to other closely related past, present,

and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time.

15358. EFFECTS. "Effects" and "impacts" as used in these guidelines are synonymous.

(a) Effects include:

(1) Direct or primary effects which are caused by the project and occur at the same time and place.

(2) Indirect or secondary effects which are caused by the project and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect or secondary effects may include growth-inducing effects and other effects related to induced changes in the pattern of land use, population density, or growth rate, and related effects on air and water and other natural systems, including ecosystems.

(b) Effects analyzed under CEQA must be related to a physical change.

15382. SIGNIFICANT EFFECT ON THE ENVIRONMENT.

"Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affectd by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change relatd to a physical change may be considered in determining whether the physical change is significant.

ATTACHMENT 6

L-307 (continued)

2.737

QQ

SOIL AND WATER CONSERVATION HANDBOOK

CHAPTER 20 - CUMULATIVE OFF-SITE WATERSHED EFFECTS ANALYSIS

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DRAFT

USFS Regional Office
Draft Proposal
Prepared by:
John Chatoian, Hydrologist

QQ See response to L-307 R. Due to space limitations, the remainder of this subcomment is not reproduced here, but is available for review at the offices of the lead agencies.

ATTACHMENT 7

L-307 (continued)

Environmental Coordinator
Calif.- Oregon Transmission Project
P.O. Box 66097
Sacramento, CA 95866

January 6,1987

RR After receiving the draft EIS/EIR for this project, my first comment is that the sheer volume of material nearly caused me to reconsider whether or not I wanted to wade through the documents at all.

After putting off this task for some time I finally tackled the project to find my worst fears were certainly confirmed. I definitely feel that readability, which is the basis of written communication, is lacking here. A summary volume of perhaps 40 pages or less which directs the reader to specific volumes for more detailed information would be desirable. To be forced into trudging through a 17 pound stack of written material is a task few people relish, especially during the Christmas holidays.

Any document this size is bound to have errors but most of the problems I found were errors of omission. The mapping sections at first glance are beautifully reproduced and easy to read but in field checking them several glaring errors became apparent.

The mapping process was to delineate 40 acre minimums. This means any designated feature of at least 40 acres in size must be shown on the map. In checking their map against field information I found several instances where features in the 200 acre range were overlooked. In one instance in volume 4A a North - South trending lava flow which is

RR This is the same as the oral and written presentation by Ron Berryman at the Yreka public hearing on January 6, 1987. See responses to T-81.

L-307 (continued)

unproductive land that could be appropriately used for powerline purposes is mapped as mixed conifer forest. The only "forest" there is a scrubby collection of 300 year old Bonzai trees that have little or no commercial value and certainly no long term potential as timber land. Another instance omits the geologic fault North of Kluntuchi Butte that appeared abruptly in August of 1980. This event was the result of a 4.5 earthquake that involved massive ground rupturing and earth shaking so strong that the tops of trees less than 80 feet tall were snapped off. Top heavy metal towers I'm sure would perform poorly along this heavily studied fault but there is no indication of it on the maps.

I could go on at length about the myriad of details that fail to appear in the mapping but I'd like to spend a minute or so on a subject that has deeply disturbed me. Earlier in 1986 I was asked by TANC subcontractors for permission to enter Champions property for the purposes of surveying and placing aerial photo targets. At that time our feeling was that TANC was like a steamroller with a life of its own. We felt our requests to consider productive timberland as a valuable commodity were falling on deaf ears so we denied their permission to enter based on the assumption that perhaps our denial would initiate some further interest in our concerns. Our denial was in written form and stated specifically that they were not welcome on our property for surveying or any other purposes. Within 2 weeks I had found 2 separate instances of trespass and found several more through the course of the summer. I immediately called the TANC representative to complain and received their sincere apologies along

with their assurance this would not happen again. In the same conversation TANC offered to return to the area and remove all of their aerial photo panels. I denied their permission by phone, telling them I wanted to keep my denial to enter in effect and that I would remove them myself. Upon returning to the area a few days later I found the photo panels removed against my instructions.

This, by the way, is not an isolated instance. Nearly every major timber owner I have contacted in Northern California experienced the same trespass problems I encountered last year.

The reason I bring up a problem apparently unrelated to the EIS at this time is because of the explanation they used to excuse their actions. According to the TANC people there were breakdowns in communications at several levels. I can only speculate on how these breakdowns will affect crews working near environmentally sensitive areas. Will the mitigating measures concerning equipment exclusions near streams and highly erosive soils be mis-communicated or will it be in areas of sensitive cultural resources such as Indian sacred areas or burial grounds? My original analogy of TANC as steamroller with a life of its own takes on new meaning in encounters such as these.

The last point I'd like to consider involves the need for this project. TANC has gone to great lengths in their document to show why California needs to cut a swath through our counties to provide power for Southern California. Again the errors of omission surface upon

L-307 (continued)

further research. In volume 1 they state that "The Northwest region is likely to have substantial surplus capacity and energy until the mid 1990's or beyond". In reading through Bonneville Power Administrations EIS, the BPA states "from now through around 1992 BPA and Pacific Northwest Utilities will have a substantial but declining surplus of power. By 1997 it is anticipated that the firm surplus will have disappeared". What this means is that 6 years after the proposed project goes on line, the supplier will run out of power to sell them.

One only has to examine how power rates are determined to find out why utilities would consider an obviously bad investment such as a power line with a 40 year projected life that runs out of power in 6 years. The investor owned utilities are guarantged by the P.U.C. to charge a rate which accounts for a normal return on investment. Most "normal returns" have been averaging 15 - 16%. With this guarantee in place, a power company can invest huge sums of money in a short lived project and be guaranteed success by charging rate payers for their short-sightedness.

In the 1970's the Washington Public Power Service, appropriately named WHOOPS pulled this same stunt and left Bond holders holding an empty bag. Lets be sure that California learns from their mistake and cancels this project before the steamroller crushes us all.

Sincerely,

Ron

Ron Berryman
Area Forester
Champion International Corp.

L-307 (continued)

P.O. Box 6034
Redding, California 96099
916 222-2311

Robert B. (Bob) Bellamy
Manager—California Area Operations
Timberlands

Champion
Champion International Corporation

July 10, 1986

Mr. Robert L. Gray
Land Agent
Transmission Agency of Northern California
P. O. Box 2355
Redding, California 96099

Dear Mr. Gray:

SS I refer to your request for permission to enter Champion International Corporation lands for placement of aerial photo panels and to perform incidental survey work related to the proposed 500 KV transmission line.

Champion International denies your request partly because of the following reasons:

1) As we have stated on many occasions, any land conversion for powerline right-of-way should appropriately be chosen from lands of low productivity. The land you have requested access to certainly does not meet this criteria.

2) The easternmost corridor was recently eliminated from consideration largely due to the engineering problems encountered when powerlines cross one another. My feeling is that the engineering problems are certainly not as great as the problems created by destroying productive forest lands to create an easement for powerline placement. The easternmost route closely follows unproductive lava flows which are of minimal value for long term timber growing, ranching or farming.

3) Since the intent of the transmission project is to provide electric power for the public good, it only seems reasonable to locate the project over public lands when possible. The route you request entry upon is predominantly private land whereas the easternmost route is comprised of a great deal of public land.

SS See responses to T-81 and T-69 F.

L-307 (continued)

SS

Champion International Corporation

Mr. Robert L. Gray
Transmission Agency of Northern California

July 10, 1986
Page 2

In view of the above, I respectfully request that the eastern route be re-examined for its suitability as a powerline route.

Very truly yours,

R. Bellamy

Robert B. Bellamy
Manager, California Area Operations

m

cc: Dave Marshall
Eugene Chappie - U.S. House of Representatives
California Board of Forestry - Sacramento
Stan Hulett - California Public Utilities Commission - Sacramento
Siskiyou County Board of Supervisors - Yreka
Shasta County Board of Supervisors - Redding
Gaylord Briggs - Roseburg Lumber Company - Anderson
Don Beaty - W. M. Beaty & Associates - Redding
Siskiyou Resource Awareness Council - Mt. Shasta
Robert Rice - Klamath National Forest - Yreka
Robert Tyrrel - Shasta-Trinity National Forest - Redding
Transmission Agency of Northern California - Sacramento
Santa Fe Pacific Company - Redding
Fruit Growers Supply Company - Hilt

P.O. Drawer D
McCloud, California 96057
916 964-2121

L-307 (continued)

Champion
Champion International Corporation

Mr. Bob Gray
Land Agent
Transmission Agency of Northern Calif.
P.O. Box 2355
Redding, Calif. 96099

August 4,1986

Dear Bob:

TT In Travelling over our property last week we noticed a few aerial photo panels placed on roads that we cooperatively maintain with the U.S.F.S..

As you know, we have denied your crews access to our property for photo panel placement as well as the incidental surveying that is necessary to place the panels. In the road coop agreement the language states the road is to be used "for road purposes only" which would not include the type of work your company has been doing.

We request you no longer use our property or any cooperatively maintained road property on our land for surveying work or panel placement.

If you have any questions please call.

Ron

Ron Berryman
Area Forester

rma

Bob: I tried to send this letter to you earlier and it was returned by the Post office.

I found several more photo panels, some of which were well off the road right of ways. I am disturbed by this discovery In light of our denial to your request to enter our property. Please see this practice does not continue

TT See response to T-81 F.

L-307 (continued)

ROSEBURG
RESOURCES CO.
ANDERSON DIVISION

August 11, 1986

Robert Olson
Project Director
California-Oregon Transmission Project
P.O. Box 66097D
Sacramento, Ca. 95866

RE: Route Selection through Siskiyou-Shasta Counties

UU Dear Mr. Olson:

The study routes shown for your project impact several miles of Roseburg Resource Co. timberlands. Our lands in the Pondosa and Big Bend areas are among the most productive in the state.

I must go on record as opposing any route selection that removes highly productive timberland and our lands in particular. I would insist that where timberlands must be involved, that it be confined as much as possible to public lands.

I have two other conerns to address to you. (1) I would like to see the latest updated economic justification for the project. Because of all of the on-line, permitted and proposed alternative energy projects, small hydro, co-generation and wood-fired power plants, in this area, I question the real need for your project. (2) After receiving a written denial from me, for the placement of aerial targets on our property, I've discovered several targets on our lands. I notified your project people of this situation. I would appreciate it if your people could respect our request for no trespass.

I appreciate your consideration to these matters.

Celerity yours,

Gaylord Briggs
Chief Forester - California

UU Mr. Briggs gave testimony at the Redding public hearing. See responses to T-109.

L-307 (continued)

cc: Mike Burke - P.U.C. Sacramento
Jim Nile - Santa Fe Pacific Timber Co. - Redding
Ron Berryman - Champion Timberlands, McCloud
Dave Dealy - F.G.S.
Don Beaty - W.M. Beaty & Associates
Steve Whitehorn - Walker Forest
Gene Chappie - House of Representatives
California Board of Forestry
Stan Hulett - Calif. P.U.C.
Siskiyou County Board of Supervisors
Shasta County Board of Supervisors
Siskiyou Resources Awareness Council
Robert Rice - Supervisor - Klamath N.F.
Robert Tyrrel - Supervisor - Shasta-Trinity N.F.

L-308

THE ALLEN RANCH

February 20, 1987

Environmental Coordinator
California - Oregon Transmission Project
P. O. Box 660970
Sacramento, CA 95866

Dear Sirs:

The purpose of this letter is to add supplemental information to a letter written to Greg Parker of P.G. & E. which was entered into the public record January 14 at the public hearing held in Coalinga. That letter highlighted the many environmental and economic problems the present preferred route; Route 9, generates for The Allen Ranch and surrounding lands. Our preferred alternative route is West 10. It's benefits of reduced damage for all parties were described and P.G. & E. was able to express their concerns in regards to Route 10.

A

Based on conservations with TANC/Western and P.G. & E. personnel on January 14 we would welcome discussion of a highbred Route 10 South and Route 9 North for our area. We understand the problems faced by the project in the North 10 area and our problems with the South 9 which include our croplands. We wish to minimize the damage to our production lands and those of our neighbors.

A Route 10 South line would cross Allen properties where presently there is no crop production. This would reduce our loss of crop land and the associated increased production costs and increased pesticide load on the surrounding environment. Route 10 South would cross grazing lands and oil transportation facilities rather than oil production or crop production land yet still have adequate access without further environmental damage. Once North of the crop land the route could return to the preferred Route 9 bypassing the oil production lands of Union, Chevron, etc. and again cross only cattle grazing land.

B

Post Office Box 925 Coalinga, California 92310 · Telephone (209) 935 0843

A Your preference for the West 10 route is noted.

B PGandE has evaluated the hybrid Route 10 South that has been proposed. Environmental factors for the two routes are similar. After assessing the environmental and economic affects associated with Route 9 West and hybrid Route 10 South, Route 9 West was chosen as the preferred route. A hybrid Route 10 South crosses no cultivated land and is located farthest west from Gates Substation. Its 12.1 miles of length carries a substantial economic penalty, however, because it adds 1.6 miles to the length of a 500 kV transmission line compared with West 9. This penalty cannot be justified when compared to the additional costs a transmission line imposes on 1.2 miles of agricultural land. These costs will be compensated to the landowner.

Mr. Allen gave testimony at the Coalinga public hearing on these concerns. See also responses to T-175 H and T-175 I.

L-308 (continued)

B

We believe that a compromise route along these lines would be in the best interest of the local environment as well as for P.G. & E. The Allen family has farmed in this area for 50 years and we feel very much the caretakers of these productive and non-productive lands.

Enclosed you will find a map copy on which our compromise route is highlighted. This map is intended for the record and further discussion as well.

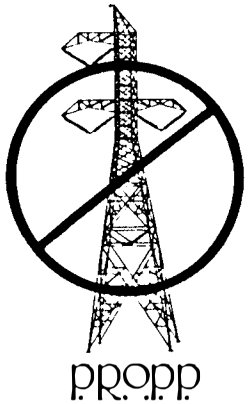
We look forward to working with you to select a route that would both satisfy the needs and concerns of The Allen Ranch and of the California - Oregon Transmission Project.

Sincerely,

James. S. Allen

JSA/wh
Enc

L-309



Positive Resolution of Powerline Problems

Comments on Draft EIS/EIR

for the
California - Oregon Transmission Project
and the
Los Banos - Gates Transmission Project

February, 1987

L-309 (continued)

Positive Resolution of Powerline Problems

P.R.O.P.P.

Comments on Draft EIS/EIR
for the
California-Oregon Transmission Project
and the
Los Banos-Gates Transmission Project

February 1987

L-309 (continued)

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L-309 (continued)

Positive Resolution of Powerline Problems PROPP

P.O.BOX 339 · BETHEL ISLAND, CALIFORNIA 94511 · 415-684-3362/684-2110

February 28, 1987

Transmission Agency of Northern California
U.S. Department of Energy, Western Area Power Administration
California Public Utilities Commission

Dear Sirs:

We appreciate this opportunity to comment on the Draft EIS/EIR for the California-Oregon Transmission Project and the Los Banos-Gates Transmission Project (DOE/EIS - 01228, SCH # 85040914).

Our organization's steering committee represents a diversity of interests and municipalities located in what the Draft EIS/EIR refers to as the "Southern Section." The committee, chaired by Constance Brady, is comprised of the following members:

Reclamation District 799 - Bob Gromm
Reclamation District 2065 - John Mass, Jr.
Bethel Island Municipal Improvement District - Jasper Sipes
City of Brentwood - Art Gonzales
Byron School District - Mary Beth Wolford
Discovery Bay Builders and DB Design and Environmental Review Committee - Roberta Fuss
Byron Chamber of Commerce - Ann Templeton
Bethel Island Chamber of Commerce - Ardith Wallace
Bethel Island Golf Course - Coreen Hornbeak
Byron Sanitary District - Earl Wetzel
Bethel Island Area Association - Daniel C. Miller
Knightsen Community Council - Christine Jenneiahn
Calliente Isle Yacht Club - Charles Cline
Jersey Island Company - Cynthia Hummel
Large Landowners & Ranchers - Bob Dal Porto, Ted & Helen Halsey, Sheldon G. Moore, Barbara deFremery, Leo Mantelli
Small Ranchers & Farmers - Roger Cottle, Aaron B. Carpoff

The Draft EIS/EIR's designated Southern Section is crossed by alternative routes A, B, and C as well as an existing right-of-way carrying two 500 kV lines and a 230 kV line. We refer to our area in our comments as the eastern Contra Costa Delta area.

L-309 (continued)

Our area is a unique recreational and agricultural community. It is considered the gateway to the California Sacramento-San Joaquin Delta where visitors from all over the state come to enjoy water skiing, house boating, power boating, fishing, windsurfing, and hunting in the Delta's 1200 miles of waterways. The California Environmental Quality Act has designated the Sacramento-San Joaquin Delta as an area of "critical environmental sensitivity" in Section 15206 where it speaks of projects of statewide, regional, or areawide significance.

We expect that our comments will assist you in correcting the Draft EIS/EIR so that it achieves the test of adequacy. The lack of early public input and public involvement in scoping sessions and route planning for our area has resulted in deficiencies in the Draft EIS/EIR. (See Appendices - PROPP letter to TANC, December 31, 1986.) A new transmission line route through our area would have many serious adverse impacts and pose a threat to our continued vitality. Because the eastern Contra Costa Delta area has special environmental resources, wildlife, and recreational values, it should be preserved for future generations.

Contrary to the intent of California and federal environmental laws, the Draft EIS/EIR was badly organized, internally inconsistent, and lacking in footnotes and citations. This makes it hard for the average citizen to understand the project and its consequences. The geographic scope of the analysis extending from Oregon to Los Banos, dealing with such a variety of landscapes, habitats, and populations led the preparers to make sweeping generalizations. This approach does not allow for intensive study and a meaningful evaluation of the project's effects on sensitive environments such as the Sacramento-San Joaquin Delta. Having failed to consider the Delta as a region, the report was hasty in dismissing drier, upland routes as preferred alternatives.

We would like to request that a separate report, specifically addressing impacts on the Sacramento-San Joaquin Delta be prepared and circulated in draft form for review and comments prior to the certification of the Final EIS/EIR. We make this request for the above general reasons and for the specific reasons detailed in our comments which follow.

Constance Brady
Chair

A See response to T-152 B.

B Comment noted.

C The required information and analysis of impacts for three separate projects (COTP, Los Banos-Gates, and PNW Reinforcement) makes it unavoidable that the Draft EIS/EIR is a sizable and multi-volume document. Consequently, a number of items were included to make the document more readable: a table of contents for all volumes was presented in Volume 1; a separate "Reader's Guide" was provided; a separate section presenting a glossary and a list of abbreviations was included in Volume 1; a reference section containing over 1,200 citations was included in Volume 1; and an index containing references to specific text items was prepared to assist the reader.

D See responses to L-203 B and L-306 V.

E Routes to the west of the Tracy substation were eliminated from consideration because of the separation and Intertie crossing issues. See responses to T-69 F and L-179 D. The COTP determined that, from a reliability perspective, it was not desirable for the COTP line to cross both of the Intertie lines at the same location. Two route segments that linked the routes west of the substations to the Tracy Substation, S-9B and S-9C, crossed the existing Intertie lines. After these routes were eliminated from further consideration due to the reliability issues, the remaining alternatives were those which were east of the 500 kV line, on Delta land.

F The Draft EIS/EIR contains numerous analyses of specific impacts in the Delta region. For example, see the discussions presented in Volume 2A, Phase III Report, of the Draft EIS/EIR. Based on comments on the Draft EIS/EIR and on COTP staff work, the Supplement to the Draft EIS/EIR was issued in June 1987 with two new route options to the preferred route in the Southern Section.

L-309 (continued)

ROUTING GUIDELINES

Reference: Attachment B, Route Identification Guidelines, Volume 2A

G Proposed Routes A, B, and C in the Southern Section - Contra Costa County Delta area -- especially preferred route B -- are in conflict with at least 18 of the Route Identification Guidelines calling for avoidance or minimization. (See appendices - Draft Analysis of Routing Problems...in eastern Contra Costa County, California, prepared by Transmission Line Subcommittee of the BIAA)

Routes A, B, and C in the eastern Contra Costa County Delta area are in conflict with the Route Identification Guidelines in the following areas:

H ENGINEERING - The guidelines call for minimizing routes over unstable ground. The Delta area is unstable. In addition, the guidelines call for
I avoidance of areas paralleling within miles of two or more 500-kV Intertie lines. The preferred Delta route parallels two existing 500-kV lines with a separation of only approximately 2000 feet. High wind areas are to be minimized according to the guidelines, and yet winds of up to 100 miles per hour have been recorded in the Delta route area.

J GEOLOGY, SOILS AND MINERALS - The guidelines stipulate that liquefaction areas are to be avoided. There is high potential for liquefaction in the entire Delta route.

K WATER RESOURCES - Proximate parallelling of streams (sloughs in the Delta) is to be avoided, according to the guidelines. The proposed routes A, B, and C run parallel to, or in close proximity to, or
L cross Taylor Slough, Dutch Slough, Sandmound Slough, Dredger Cut, Indian Slough, and Old River. In addition, the guidelines advise minimizing crossing of floodplains and rivers. All of the tracts and islands crossed by the proposed east Contra Costa routes are designated by the Federal Emergency Management Agency as floodplains. Further, the guidelines call for
M minimizing areas with domestic water supplies. Hundreds of wells (individual and small mutual water companies) are the sole source of domestic water supplies in the Contra Costa Delta area, there are no municipal water systems in the entire area of the proposed Delta

G See responses to your specific comments below.

H All route alternatives that would take the transmission line into the Tracy Substation would cross at least part of the Delta. Much of the Delta is highly saturated soil, some of which could be classified as unstable. Foundation design for the towers will mitigate any potential impacts to the towers in these unstable soil areas. See also response to L-309 J.

I Experience with the existing 500 kV towers in this area indicates that foundation design can mitigate any impacts from recorded high winds. Separation of 2,000 feet in the Delta is acceptable. See response to L-309 YY.

J The COTP recognizes that there is a high potential for liquefaction in the Delta area. Standard engineering practices include reconnaissance of the soil types to assess the potential for poor soil-bearing capacity in order to either avoid placing towers in unsuitable areas, or design the proper foundation types.

K Paralleling of streams is to be avoided where possible due to the increased potential for erosion and subsequent sedimentation of streams, and due to the potential for herbicide run-off. Because ground slopes are quite low in the Delta, and most tower footings are actually below river levels, there is a low potential for sedimentation and herbicide run-off to result in significant impacts.

L The environmental impacts of river crossings in the Delta area are considered less than significant for water resources due to the implementation of mitigation measures for control of erosion and herbicide runoff. In addition, no new stream crossing roads are required in the Delta, further reducing the potential for impacts to water resources. The transmission line will be designed to withstand the potential flooding of any of the Delta islands it crosses.

M Mitigation measures adopted for reducing impacts to water quality (such as erosion control, access road limitations, and herbicide restrictions) will reduce impacts to wells to less than significant levels.

L-309 (continued)

M

routes. Route B crosses over Rock Slough, which is the major supply source for water districts serving over 100,000 central Contra Costa County water customers (Oakley, Pittsburg, Concord).

N

BIOLOGICAL RESOURCES - The guidelines call for minimization of routes crossing riparian zones, wetlands and floodplains, as well as crossing of major flyways. The Delta routes are all in the Pacific Flyway, the major migratory route used annually by west coast waterfowl and other birds. This is an area of high waterfowl collision potential. Riparian habitats of biological complexity which attract a great diversity of wildlife species, and the marsh habitats which occur on the islands and tracts are important food sources and shelters for waterfowl. The proposed east Contra Costa Delta routes will cross over these important habitats.

O

ELECTRICAL/MAGNETIC EFFECTS - The guidelines specify that residential area crossings should be minimized, but the routes A, B, and C cross areas of urban density.

P

SOCIOECONOMICS - Crossings over or near commercial activity areas are to be minimized, according to the guidelines. The proposed routes in the Delta area would severly impact established commercial recreation businesses in Bethel Island, Hotchkiss Tract, Veal Tract, and Orwood Tract. These businesses are major contributors to Contra Costa County's economy.

Q

LAND USE - Designated recreation sites are to be avoided, according to the guidelines. The areas crossed by routes A, B, and C are designated by Contra Costa County as recreation communities and recognized as valuable recreation sites. Furthermore, the guidelines

R

call for minimization of lines in areas of future planned urban areas, mineral resource extraction sites, recreation sites, and developed recreation areas. Several planned urban areas would be nearby or in the path of the new routes for the proposed lines. The proposed lines also cross the Dutch Slough Gas Fields which are a rich potential source for gas extraction.

S

VISUAL RESOURCES - The flat Delta lands have low visual absorption capability. Foreground and middle ground sensitive viewing locations include homes and recreation sites. No rolling hills or other natural visual buffers are available in the Delta area to conceal the proposed transmission lines from view. The

N

The Draft EIS/EIR identifies these resources and the COTP impacts on them. They have been avoided to the extent possible. See Section 3.5 in the Phase III Report of Volume 2A of the Draft EIS/EIR. See also response to L-117 C.

O

During route selection crossings of residential areas were minimized but total avoidance of such areas was not always possible.

P

Comment noted. These areas were avoided to the extent possible. The preferred route does not cross Bethel Island for this and other reasons. A new route option has been analyzed that may avoid the impacts addressed in this comment. This route is presented and analyzed in the Supplement to the Draft EIS/EIR. See also Section 4.1 of the Supplement.

Q

Bethel Island is the only area designated as a recreation community by Contra Costa County. This was one reason why Alternative C, which crosses the island, was not selected as the preferred route.

R

Alternative B was chosen as the preferred route partially because it minimized impacts to developed and planned land uses to the extent possible. Furthermore, during the selection of the preferred route, the crossing of Bethel Island was deemed to have more environmental impact than crossing other areas, including the Dutch Slough Gas Fields, and thus was an important reason to select Alternative B as the preferred route. See response to L-203 H for a detailed explanation of the preferred route selection process. An option to some areas south of Bethel Island was considered in the Supplement to the Draft Section 4.1.

S

The analysis of visual impacts in the Draft EIS/EIR acknowledges that transmission lines in flat and largely treeless areas such as the Delta would exhibit relatively high visibility and visual incompatibility with these landscapes, which is equivalent to low "visual absorption capability". However, the relative extent of these visual impacts would vary among the alternatives. In the Southern Section of the COTP, Alternative B (the Project preferred route) would impose the least adverse visual impacts on an overall basis, as noted in the response to comment L-15 E.

L-309 (continued)

S

proposed routes would also intrude on the residents' and recreators' views of Mt. Diablo, a visual treasure in Contra Costa County.

T

Routing alternatives in the area of the Antioch PG&E plant (S-7E and S-7F), west of the Contra Costa Delta routes, were eliminated early (1985) in the route selection process. It appears that these Antioch routes were eliminated prior to a thorough evaluation of the Delta routes. If the routing guidelines are followed and evaluated considering both the Antioch routes and the Contra Costa Delta routes, the Antioch routes are superior.

The Antioch routes have many positive aspects when considered in light of the routing guidelines, and conversely present only minimimal conflicts with the criteria. The right-of-way for PG&E's existing line provides a parallel route opportunity, and the routes cross drier, more stable soils than those found in the Delta area. Also, the Antioch routes cross industrial areas and grazing land, not highly productive agricultural land. These are areas to emphasize according to the guidelines. The existing urban area is already bisected by PG&E's 230 kV right-of-way as is the undeveloped planned urbanization area to the south. The existing river crossing provides a parallel route opportunity, and the nearness to the elevated Antioch Bridge presents an opportunity for visual absorption. Further visual absorption capabilities are provided by the rolling hills in the area along the route. The Antioch routes would ensure system reliability as they would comply with North American Electric Reliability Council (NERC) and the Western System Coordinating Council (WSCC) guidelines which call for routing at a "considerable distance from existing 500 kV transmission lines."

According to the DEIS/EIR (Volume 2A, page 2.4-3) the Antioch routes were eliminated because of proximity to the Antioch Dunes National Wildlife Refuge, because PG&E's right-of-way was narrow as it passed through a populated area, and because an apartment complex was planned for an area in the southwest. These minor problems could easily be overcome by shifting the route slightly east of the PG&E plant where there is an adequate open area in this industrial setting, and by obtaining a wider right-of-way easement. The wildlife refuge is located to the west more than 2000 feet away from the PG&E plant and is protected from viewing by the natural topography.

T

The Antioch routes were eliminated early in the routing process because of a number of problems associated with it, including the proximity to the Antioch Dunes National Wildlife Refuge, the narrow width of the PGandE right-of-way, and because of proximity to an apartment complex. In addition, the routes west of the existing Intertie have been eliminated because of the requirement to connect the COTP to the Tracy Substation. See response to L-309 VV. Because of these concerns, the Antioch routes do not meet the needs of the COTP and have been eliminated from further consideration for the preferred route. Further comparison between the Antioch routes and the Contra Costa Delta routes is therefore unnecessary.

L-309 (continued)

T

1. Why were the Antioch routes eliminated early in the process?

2. Before certification that the EIS/EIR is complete, a new comparison study must be done, weighing all factors and evaluating and comparing the environmental impacts for both the Antioch routes and the Contra Costa Delta routes.

U

3. Please also directly compare alternative routes along Interstate 5 and opportunities east of the Sierra.

V

4. All domestic water supply wells located in the proposed rights-of-way for lines in the Contra Costa Delta area must be identified before a routing decision can be made.

U

Several individuals have suggested a route along Interstate 5 to avoid or minimize impacts to prime farmland and the Delta. This route would parallel Interstate 5 from approximately the Sacramento area through the Stockton area and south to Tracy and then proceed north from the Tracy area to the Tracy Substation. The corridor was considered during the early environmental studies on the COTP (see Phase 1 Report of the Draft EIS/EIR, Volume 2A). It is also discussed in the Phase II Report, Volume 2A, page 2.4-1. Opportunities east of the Sierra are addressed also in Volume 2A, Phase II Report, on pages 2.4-4 and 2.4-5. See also response to T-69 F.

V

Locations of currently producing groundwater wells will be considered during the final route adjustments and avoided wherever possible. Landowners will be compensated for any wells which are rendered unusable because of the construction and operation of the COTP. Please refer to mitigation measure III.E, Section 1.1.5 of Volume 1 of the Final EIS/EIR.

L-309 (continued)

ANALYSIS OF THE TANC DRAFT EIS DISCUSSION

OF THE NEED FOR AND ECONOMICS OF

THE CALIFORNIA-OREGON TRANSMISSION PROJECT

Prepared for

Positive Resolution of Powerline Problems (PROPP)

by

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311 D Street
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March 2, 1987

L-309 (continued)

EXECUTIVE SUMMARY
OF ANALYSIS OF THE TANC DRAFT EIS DISCUSSION
OF THE NEED FOR AND ECONOMICS OF
THE CALIFORNIA-OREGON TRANSMISSION PROJECT

W TANC's draft EIS is deficient in its analysis of the need and economics of the Third AC line for several reasons. Virtually all of its analysis overstates the benefits of the line.

1. TANC's base case oil price forecasts are well above those currently recognized as consensus forecasts. Its base case ranges from $36 per barrel in 1991 to $81 per barrel in 2000. Even its "Strong OPEC" low case starts at $30 per barrel in 1991. TANC's "Weak OPEC" analysis, which receives short shrift in the discussion in the Draft EIS, is the most reasonable forecast to use.

2. TANC's estimates of Northwest power prices of 60 to 75% of California decremental costs, with a possibility of even lower fixed prices, have been superceded by BPA's statements in its current rate case that it will charge 75% of decremental cost of the lowest cost California utility.

3. TANC's estimates of the amount of nonfirm energy that will be delivered over the line are 60 to 140% higher than those of the Bonneville Power Administration's Intertie Development and Use EIS, and this difference is unexplained.

4. TANC ignores BPA's recent analysis that shows that were the Third AC line in place in 1988-89, it would never be used to carry nonfirm energy unless the price of that energy fell to 10 mills per kWh or less. The Third AC line would not be needed to displace more expensive oil or gas.

5. TANC's assumptions as to the amount of capacity that would be available for sale over the Third AC line and that could not be delivered over existing lines are at variance with BPA statements in a number of places, and the discrepancies are unexplained.

6. TANC's assumptions as to when California private utilities would need capacity do not consider their ability to bring in the amounts of capacity cited by TANC over existing transmission lines and contain incorrect estimates for the timing of capacity needs.

7. TANC's assumptions as to TANC's own need for capacity ignore the fact that under current capacity surplus conditions, new TANC capacity provides no benefits to

W 1) The Draft EIS analysis uses a range of oil price forecasts adequate to provide a basis for evaluating the COTP. See response to L-306 C3.

2) The estimate of Northwest power prices used in the Draft EIS/EIR are equal to 60 to 75 percent of the marginal cost of gas, not California's decremental cost as stated in the comment. BPA statements in current rate cases were not available to use at the time the data was prepared. Furthermore, BPA rate proceedings focus on near-term rather than long-term rates. The COTP will not be in operation before 1991. Near-term rates are not relevant to COTP economics. See responses to the comments of the CPUC regarding Northwest power prices: L-306 UU through L-306 ZZ.

3) The amount of the non-firm energy over the line differs from BPA's estimates for two reasons: a different forecasting model was used and different input assumptions were used which are described in response to L-306 R1.

4) A reference to the specific BPA analysis was not supplied in the comment; however, the dates shown, 1988 to 1989, precede the COTP on-line date and thus are not relevant to the economic analysis. See responses to L-306 UU, L-306 XX, and L-306 YY.

5) The differences in assumptions regarding Northwest capacity available for sale to California between the Draft EIS/EIR and the BPA IDU Draft EIS are discussed in responses to L-306 D1 through L-306 P1.

6) The Draft EIS/EIR identifies the capacity that would be delivered over the AC line as identified by the individual utility participants. (See Appendix C to Appendix B of Volume 3A.) For further discussion of timing, see responses to L-306 I1 and L-306 I2 through L-306 R2.

To the extent that such capacity could be delivered over the existing Intertie lines (after upgrades), it would be at the expense of other uses of the existing and upgraded Intertie, i.e., non-firm energy opportunities. Because BPA will protect its ability to market non-firm surpluses, it is highly likely that the Intertie will remain a multiple-use transmission system. Thus, to have adequate transmission capacity for all potential and beneficial uses, the planned upgrades must be supplemented by the COTP. For further discussion of multiple uses and line sizing, see responses to L-306 F1 through L-306 J1.

7) This comment infers there will be a loss to PGandE ratepayers when the COTP is operational because TANC utilities will purchase power from the Northwest rather than PGandE. Study results presented in the Draft EIR assume that TANC members will build combustion turbines if the COTP does not go forward. These assumptions are based on plans provided by TANC representatives

L-309 (continued)

W

the State of California as a whole. When TANC builds or buys capacity, its ratepayers benefit, but an equal and offsetting cost is incurred by PG&E's other retail ratepayers. This transfer of costs from TANC municipal ratepayers to PG&E retail ratepayers must be quantified and the socioeconomic effects of this loss to other PG&E ratepayers must be addressed.

8. TANC overstates the cost of alternative California generating resources and understates their energy efficiency, thereby overstating the value of the project.

9. TANC ignores cheaper short-term alternatives to obtain peaking capacity than combustion turbines including (a) return to service of mothballed generation units; (b) new Edison peaking hydro plants; and (c) purchases of short-term firm power by other California utilities from PG&E's surplus capacity.

10. TANC completely misrepresents the alternative of purchasing power from cogeneration and small power production and, because of this misrepresentation, does not address the real option: offering to pay cogenerators and small power producers a price based on the capital cost of the line and all associated energy and capacity costs. TANC has been aware of this option for several months prior to the publication of the Draft EIS but has never addressed it.

11. TANC underestimates the costs of the project by failing to include appropriate costs of environmental mitigation and appropriate levels of land acquisition costs in forested areas.

X

In sum, the entire discussion of the need for the project and its economics in the Draft EIS is riddled with inaccuracies which tend to overstate its value to California ratepayers. Using figures presented in the EIS itself, and correcting only a few of the many errors, the project does not appear cost-effective. We obtain a benefit-cost ratio of 0.71 to 0.94 depending upon how many of TANC's errors we correct.

Y

As a result of these problems, reasoned analysis of the No Project alternative is impossible based on the information presented in the Draft EIS. The EIS will be deficient unless the entire need and economics section is completely redone.

W (cont.)

which are validated by recent development of combustion turbines for the purpose of reducing revenue requirements. Wholesale revenues to PGandE will be similar with or without the COTP; therefore, the COTP participation by TANC is not expected to displace significantly more sales by PGandE than would other resources pursued by TANC members in the absence of the COTP.

8) The energy efficiency and costs of alternative resources were obtained directly from utility resource plans.

9) The Draft EIS/EIR does not ignore less expensive short term alternatives. A large number of refurbished units were included in the statewide resource plans. Southern California Edison's Balsam Meadows peaking hydroelectric facility and the company's Big Creek Hydroelectric Project expansion plan are accounted for on the analysis presented in the Draft EIS/EIR. As explained further in response to comments L-306 II, L-306 H2, and L-306 O2, several members of TANC anticipate installing combustion turbines rather than purchasing wholesale capacity from the California investor owned utilities.

10) See response to L-309 LL for a discussion of the "bidding process" for Qualifying Facility development in lieu of the COTP.

11) The COTP cost estimates include an allowance for the cost of mitigation measures. Mitigation measures and associated costs are included in the preliminary design criteria established for project planning.

X

The study was purposely undertaken under a scenario approach using alternative sets of assumptions to test the economic benefit under a wide range of economic and power availability conditions. That the author of this comment may not agree with the assumptions of some of the scenarios does not diminish the reasonableness of the analysis or the conclusions.

Y

The economic analysis for the COTP provides a proper basis for evaluating the No Action Alternative. For further explanation of the basis for evaluating the consequences of the No Action Alternative, see the responses to L-306 II, L-306 JJ, and L-306 KK.

L-309 (continued)

ANALYSIS OF THE TANC DRAFT EIS DISCUSSION
OF THE NEED FOR AND ECONOMICS OF
CALIFORNIA-OREGON TRANSMISSION PROJECT

JBS Energy, Inc. was asked to review the Draft EIS on the California-Oregon Transmission Project and provide comments on the analysis conducted by the Transmission Agency of Northern California (TANC) and its consultants on need for the project, project economics, and electric generation alternatives to the project. Our review concentrated on Appendix B in Volume 3A, since this appendix contains the bulk of the economic justification for the project.

TANC's analysis of the benefits of the Third AC Intertie is based on benefits to California alone. Two different types of benefits are analyzed:

1. Nonfirm energy deliveries that could not have occurred absent the transmission line.

2. Firm capacity benefits (i.e., deferral of new resources) that could not have occurred absent the transmission line.

Z While TANC correctly focuses on benefits to California ratepayers rather than society as a whole, TANC and its consultants have overstated these benefits at every turn.

AA Furthermore, TANC's results are entirely inconsistent with a Bonneville Power Administration EIS on Intertie Development and Use (henceforth IDU EIS) released in October, 1986, and therefore available to TANC prior to the release of its own report. 1/ Because TANC has made these significant

1. TANC was well aware of the discrepancies between its analysis and BPA's but chose not to report them in its EIS. Instead, TANC ostensibly summarized the BPA Intertie Development and Use EIS in Appendix D to the EIS, but completely ignored any points where BPA's analysis disagreed with TANC's analysis in Appendix D.

While the IDU EIS appears to show a net benefit to California and the Northwest combined from the Third AC line (including both nonfirm energy and capacity), the analysis is different in many respects, and shows much smaller benefits than does TANC. The IDU EIS also has a number of significant flaws, including use of the overly high Fall 1985 DRI oil price forecast, an overly low 9% discount rate, assuming that off-peak energy in California is only 60% as costly as on-peak energy and will remain this cheap indefinitely, and most importantly, failure to divide the benefits and costs between California and the Northwest. The IDU EIS shall not be analyzed in detail here. However, unexplained differences between TANC and the IDU EIS will be pointed out elsewhere in this analysis.

Z This comment makes broad statements regarding the treatment of benefits in the Draft EIS/EIR economic analysis. The Draft EIS/EIR provides substantiation for the assumptions and methods in Section 1.5 of Volume 1 and in Appendix B of Volume 3A. For example, of the basis for the analyses and responses to specific comments on this issue, see responses to L-306 UU, L-306 VV, L-306 WW, and L-306 XX.

AA The BPA and the COTP economic analyses use assumptions considered to be reasonable by both BPA and the Project Manager. While there are differences between the analyses of the COTP by BPA and that provided in the Draft EIS/EIR, the fact that similar conclusions are met supports the conclusion that the COTP is expected to provide substantial economic benefit. See the responses to California Public Utilities Commission staff comments L-306 R1, L-306 U1, L-306 V1, and L-306 W1 on the subject of differences in Northwest energy availability between the Draft EIS/EIR and the BPA IDU Draft EIS.

L-309 (continued)

AA overestimates and concealed the results of studies which disagree with those overestimates, its EIS is deficient, inasmuch as its analysis of the "No Project" alternative is therefore incorrect, misleading, and inadequate.

BB 1. All of TANC's Oil Forecasts Are Too High

While TANC has done a probabilistic analysis of future oil prices, which would appear on thesurface to cover all eventualities, a reasonable probabilistic study must begin with a likely set of scenarios. TANC has not done that with its oil forecasts.

TANC's most likely case of analysis (base case Strong OPEC scenario with 50% probability, high case Weak OPEC scenario with 25% probability) assumes oil prices of about $36 per barrel in 1991 and $80 in the year 2000 (assuming gas acquisition prices of 75% of the cost of oil equivalent). 2/ Even TANC's Weak OPEC scenario base case has $30 per barrel oil in 1990 and $52 per barrel oil in the year 2000. As a result, TANC wildly overstates the value of power benefits from the Third AC line compared to most economic forecasts (e.g., Wharton, DRI, etc.), particularly in the early years most sensitive to a net present value analysis. BPA's IDU analysis used the Fall 1985 DRI scenario for analysis, but explicitly pointed out that the results were likely now to be much higher than indicated by current oil market prices. (IDU EIS, p. 4.8-4)

Table 1 compares the TANC gas price forecasts with the Fall 1986 DRI forecast for gas acquisition based on 75% of DRI's projected cost of 0.5% sulfur oil. As Table 1 shows, the DRI gas acquisition cost is less than the low case Weak OPEC scenario through 1994, less than the mid case Weak OPEC scenario through 1996, and 25% less than the mid case strong OPEC scenario over the remaining period of TANC's forecast.

---

2. TANC never in its report indicated how the acquisition cost of gas is related to the cost of oil in its analysis. This is a significant deficiency, because it makes it impossible to replicate TANC's results exactly. We have used the 75% figure because it is consistent with incremental gas prices relative to oil both in times of shortage (1982 California Gas Report) and of surplus (Compare current spot gas prices of $1.70 to $1.90 per million Btu with oil prices of $2.30 to $2.80), except for early 1986 when oil prices were falling rapidly and gas prices could not keep up.

BB The weak OPEC scenario did not use 75 percent of the marginal cost of gas; rather it used 82 percent as the marginal cost of gas as the price for Pacific Northwest Energy. The acquisition cost of gas forecast was arrived at by identifying the escalation rates shown in published oil price forecasts. Those escalation rates were applied to the current 1986 values of the acquisition cost of gas. The study did not attempt to determine a percentage relationship between gas and oil, instead it assumed the two would move in the same direction and at the same rate. Several gas price forecasts were analyzed in an attempt to bound the range of expert opinion. Two of these fall below the figures calculated by the PROPP consultant, JBS Energy, Inc. The range of oil price and gas price forecasts is adequate to provide a basis for evaluating the COTP. See responses to L-307 Y and L-306 C3.

L-309 (continued)

TABLE 1

	TANC GAS ACQUISITION COSTS (DOLLARS PER MMBTU)				DRI GAS ACQUISITION (75% OF 0.5%
STRONG OPEC SCENARIO:	HIGH	MEDIUM	LOW	N/A	SULFUR
WEAK OPEC SCENARIO:	N/A	HIGH	MEDIUM	LOW	FUEL OIL FORECAST)
YEAR					FALL 1986
1986	2.25	2.25	2.25	2.25	2.02
1987	2.95	2.82	2.53	2.13	1.94
1988	3.60	3.34	2.81	2.66	2.10
1989	4.09	3.78	3.08	2.79	2.26
1990	4.52	4.18	3.36	2.93	2.43
1991	4.97	4.47	3.64	3.06	2.68
1992	5.47	4.79	3.79	3.33	2.93
1993	6.10	5.21	3.99	3.46	3.17
1994	6.88	5.72	4.20	3.72	3.53
1995	7.68	6.22	4.43	3.86	3.95
1996	8.62	6.80	4.74	4.12	4.44
1997	9.69	7.44	5.12	4.26	5.05
1998	10.93	8.18	5.48	4.52	5.78
1999	12.35	9.00	5.90	4.79	6.63
2000	13.95	9.90	6.35	5.05	7.61
2001	15.77	10.90	6.88	5.32	8.52
2002	17.78	11.97	7.45	5.59	9.56
2003	20.07	13.16	8.06	5.99	10.53
2004	22.66	14.47	8.74	6.25	11.69

L-309 (continued)

TABLE 1
CONTINUED

STRONG OPEC SCENARIO:	TANC OIL ACQUISITION COSTS (DOLLARS PER BARREL) HIGH	MEDIUM	LOW	N/A	DRI OIL ACQUISITION (0.5% SULFUR FUEL OIL
WEAK OPEC SCENARIO:	N/A	HIGH	MEDIUM	LOW	FORECAST) FALL 1986
YEAR					
1986	18.42	18.42	18.42	18.42	16.52
1987	24.15	23.09	20.71	17.44	15.84
1988	29.47	27.34	23.00	21.78	17.19
1989	33.48	30.95	25.21	22.84	18.48
1990	37.00	34.22	27.51	23.99	19.89
1991	40.69	36.59	29.80	25.05	21.92
1992	44.78	39.21	31.03	27.26	23.95
1993	49.94	42.65	32.66	28.33	25.91
1994	56.32	46.83	34.38	30.45	28.92
1995	62.87	50.92	36.27	31.60	32.36
1996	70.57	55.67	38.80	33.73	36.35
1997	79.33	60.91	41.92	34.80	41.32
1998	89.48	66.97	44.86	37.00	47.28
1999	101.11	73.68	48.30	39.21	54.28
2000	114.20	81.05	51.99	41.34	62.26
2001	129.10	89.23	56.32	43.55	69.75
2002	145.56	97.99	60.99	45.76	78.22
2003	164.31	107.74	65.98	49.04	86.21
2004	185.51	118.46	71.55	51.17	95.66

L-309 (continued)

CC

2. TANC Also Understates the Price which Northwest Utilities Would Charge for Nonfirm Energy, thus Again Overstating the Benefits of the Line.

The value of nonfirm energy to California depends on BPA's proposals for marketing that energy. BPA has indicated that it will sell energy to California at 75% of the decremental cost of the lowest cost California utility. (1987 BPA Rate Case, Exhibit WP-87-E-BPA-24, p. 15, lines 21-26) Therefore, TANC's analysis based on 60% in the spring period (App. B., p. 61) is overly optimistic, and 75 percent of decremental cost must be used consistently. Furthermore, this 75 percent figure does not include any allowance for line losses; if those losses were considered, the 75% figure is in actuality closer to 80%.

TANC's low-case Northwest energy price was based on BPA's much lower published rates because "it does represent a statement by a principal party and cannot be dismissed." (Id., p. 60) In fact, the "principal party" has repudiated its own statement, stating that it will charge California 75% of decremental cost, so it is now outdated and can be ignored. Furthermore, BPA has testified that its average cost of all nonfirm energy is 23 mills per kWh, (1987 BPA Rate Case Exhibit WP-87-E-BPA-06, Table 10). The California Energy Commission has estimated that given very low priced sales to Northwest utilities when the intertie is full, the average cost that BPA would want to recover from California today, absent current market forces (low gas prices, etc.) that keep the price lower, is 32.8 mills per kWh. (1987 BPA Rate Case, Exhibit WP-87-E-CC-01) Until the average price to California would exceed this 32.8 mills per kWh (in 1988-89; higher in future years) BPA would act to maximize revenue from California through the 75% of decremental cost rule.

BPA has proposed a "rate cap" based on its average system cost (25.0 mills during the 1987-89 rate period) plus 30% of the difference between this average system cost and the cost of oil (from Platt's Oilgram), converted to a gas price using 6.15 MMBtu/barrel and a heat rate of 10,000 Btu/kWh. (BPA Rate Case Exhibit WP-87-E-BPA-25) This cap does not affect our analysis. Even given the Strong OPEC forecasts made by TANC of very high oil prices, the cap would only be reached in the period of 1999-2002. With a lower oil price forecast, it would never come into play. Since BPA proposed to leave the cap in place for a 12-year period (through 1999), it is thus, virtually meaningless, and the 75% figure should be used for all analysis. This would significantly cut benefits to California ratepayers from those assumed by TANC.

CC

This comment confuses the concept of California's decremental cost with the marginal cost of gas. The decremental cost includes the costs of gas, nuclear, geothermal, and perhaps coal and other purchases at the margin. The marginal cost of gas is the incremental cost of only gas-fired units. See Figure 1.1.1-1 in Volume 1, which shows that the California Energy Commission's forecast of Pacific Northwest Energy improves to the range of prices used in the COTP Draft EIS/EIR economic analysis.

See response to L-307 W for a discussion of the reasonableness of the basis for pricing non-firm energy. The allowance for the energy costs includes losses, since only the delivered cost of energy can be compared to the cost of energy alternatively available to the California utilities' systems.

L-309 (continued)

DD

3. TANC Makes Unexplained Predictions of Much Higher Nonfirm Energy Availability than BPA's Forecasts.

TANC predicts that there will be 60 to 140% more energy delivered over the Third AC line and 65% to 180% more displacement of oil and gas with Third AC energy than does the Bonneville Power Administration's IDU EIS, as shown in Table 2 below.

Table 2

Comparison of TANC and BPA Estimates of Energy Deliveries Over the Third AC Line 3/

	TANC Estimate	BPA Estimate	TANC as % of BPA
1992			
Total energy delivered	3358 GWh	1402 GWh	239.5%
Oil/gas displacement	1985 GWh	710 GWh	279.6%
1997			
Total energy delivered	3330 GWh	1612 GWh	206.6%
Oil/gas displacement	2837 GWh	1025 GWh	276.8%
2002			
Total energy delivered	2538 GWh	1559 GWh	162.8%
Oil/gas displacement	2442 GWh	1472 GWh	165.9%

TANC's failure to explain why its results are wildly at variance with BPA's render its analysis incomplete and deficient, as we cannot therefore intelligently understand the real costs and benefits of the project relative to the "no project" alternative.

3. Source of Table: TANC Estimate from Appendix B, p. 90; BPA Estimate from the IDU EIS, Table 4.2-19, page 4.2-20, converted from average MW to GWh, incremental effect of the Third AC line calculated by subtracting the amount with the DC Terminal Expansion from the amount with Maximum transmission development.

DD

The greater oil and gas displacement shown in the analysis is due to higher levels of energy assumed available from the Pacific Northwest. See the responses to California Public Utilities Commission staff comments L-306 R1, L-306 U1, L-306 V1, and L-306 W1 on the subject of differences in Northwest energy availability between the Draft EIS/EIR and the BPA IDU Draft EIS.

L-309 (continued)

M3 4. **Intertie Capacity Is Not the Current Constraining Factor on the California Market for BPA Nonfirm Energy; As a Result, the Third AC Line May Have Very Little Impact on Nonfirm Energy Sales.**

In its most recent rate hearing, BPA testified that transmission availability is no longer the constraining factor on BPA's ability to sell power at prices equal to its fully allocated cost.

> [T]he capability of the Southern Intertie is no longer the principal factor in determining the quantity of surplus firm power and nonfirm energy that could be marketed in the PSW. (1987 BPA Rate Case, Exhibit WP-87-E-BPA-23, p. 3)

If lack of transmission is not the constraining factor, we do not see how more transmission would help the problem. BPA quantified this statement in its Nonfirm Revenue Analysis Program (NFRAP). This program contains as one of its steps, a demand curve by California for Northwest power at varying prices. The results of BPA's NFRAP program show that in no month of the 1988-89 time frame can California use more than the 6300 MW capacity of the existing AC line plus the DC line after the Terminal Upgrade unless the price for nonfirm energy were to fall below 9-10 mills per kWh. (BPA 1987 Rate Case, Exhibit WP-87-E-BPA-06A, pp. 49-50 included as Table 3) Even then, the maximum use figure in any single month (assuming a price to California of 7 mills per kWh) is only 208 average MW more than existing line capacity, only one-eighth of the capacity of the new line.

Our analysis of several months of representative NFRAP data suggests that BPA would maximize its revenues by selling power at a standard rate of 19-20 mills per kWh. BPA claims that its "cost" of this power is about 23 mills per kWh. Therefore, dropping the price to levels that would cause the Third AC line to even be used at all (much less to provide significant benefits to California) appears unlikely.

EE 5. **Summary of Nonfirm Energy Benefits.**

In sum, TANC (Appendix B, p. 78) and BPA (IDU EIS, p. 4.8-4) produce extremely divergent estimates:

TANC gross nonfirm energy benefits to <u>California Alone</u>

Strong OPEC Expected Value	$774 million
Weak OPEC Expected Value	$489 million

BPA gross nonfirm energy benefits to <u>California and Northwest Combined</u>

1985 Fall DRI Oil Forecast	$427 million

M3 These comments are in contrast to historical data showing the Intertie loaded to full capacity in 1983 through 1985. Detailed nomograms showing energy purchases over the Intertie are available for review at the offices of the Project Manager's consultant.

EE The economic study presented in the Draft EIS/EIR includes both firm and non-firm Pacific Northwest energy. The comparison stated in this comment infers that the energy benefits stated in the Draft EIS/EIR are for non-firm energy benefits only.

L-309 (continued)

Table 3

Division of Rates PLFE
Date: DEC 22, 1986
Time: 17:51

Nonfirm Revenue Analysis Program
Forecasted PSH Nonfirm Market
Average Megawatts
Fiscal Year 1988

	A Oct-87	B Nov-87	C Dec-87	D Jan-88	E Feb-88	F Mar-88	G Apr-88	H May-88	I Jun-88	J Jul-88	K Aug-88	L Sep-88	M aMW-88
1 PSH Market at 40.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
2 PSH Market at 39.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
3 PSH Market at 38.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
4 PSH Market at 37.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
5 PSH Market at 36.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
6 PSH Market at 35.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
7 PSH Market at 34.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
8 PSH Market at 33.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
9 PSH Market at 32.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
10 PSH Market at 31.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
11 PSH Market at 30.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
12 PSH Market at 29.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
13 PSH Market at 28.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
14 PSH Market at 27.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
15 PSH Market at 26.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
16 PSH Market at 25.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
17 PSH Market at 24.0 Mills/kWh	0	0	0	0	0	0	0	0	0	0	0	0	0
18 PSH Market at 23.0 Mills/kWh	0	0	0	1647	1901	1858	0	0	0	0	2798	2429	879
19 PSH Market at 22.0 Mills/kWh	0	0	2383	1818	1991	2151	0	0	0	2529	3549	3582	1503
20 PSH Market at 21.0 Mills/kWh	2920	2881	2660	2312	2320	2534	2178	2887	2295	3552	3665	3660	2808
21 PSH Market at 20.0 Mills/kWh	4055	3558	2732	2458	2880	3250	3447	3896	3516	3626	3737	3870	3420
22 PSH Market at 19.0 Mills/kWh	4162	3753	2750	3011	3055	3437	3663	3908	3520	3626	3737	3898	3544
23 PSH Market at 18.0 Mills/kWh	4200	3733	2809	3061	3127	3458	3665	3908	3520	3626	3737	3898	3562
24 PSH Market at 17.0 Mills/kWh	4200	3733	2857	3061	3123	3458	3665	3908	3520	3626	3737	3898	3566
25 PSH Market at 16.0 Mills/kWh	4237	3830	2998	3159	3225	3479	3675	3942	3575	3667	3893	4121	3652
26 PSH Market at 15.0 Mills/kWh	4364	3985	3307	3392	3660	3654	3789	4123	3745	3923	4448	4269	3888
27 PSH Market at 14.0 Mills/kWh	4906	4629	3492	3691	3928	4073	4176	4557	4173	4303	4600	4764	4275
28 PSH Market at 13.0 Mills/kWh	5076	4802	3666	3873	4106	4355	4409	4824	4509	4596	4774	4905	4493
29 PSH Market at 12.0 Mills/kWh	5414	5194	4085	4297	4410	4695	4653	5187	4805	4872	5052	5095	4815
30 PSH Market at 11.0 Mills/kWh	5446	5284	4561	4664	4755	4956	4835	5251	5020	5125	5216	5251	5032
31 PSH Market at 10.0 Mills/kWh	5458	5445	4867	5038	5243	5173	5171	5412	5205	5253	5372	5419	5254
32 PSH Market at 9.0 Mills/kWh	5458	5445	5107	5125	5274	5375	5380	5412	5234	5257	5372	5419	5321
33 PSH Market at 8.0 Mills/kWh	5458	5458	5355	5445	5458	5458	5458	5458	5392	5428	5458	5458	5440
34 PSH Market at 7.0 Mills/kWh	5458	5458	5355	5445	5458	5458	5458	5458	5392	5428	5458	5458	5440
35 Adjustments to PSH Market													
36 Contractual Surplus Energy	260	211	170	170	188	204	270	260	351	340	340	351	260
37 Nonfederal Contracts PSH	765	684	608	596	414	391	391	184	210	469	785	742	528
38 IS Firm Wheeling Contracts	90	65	43	52	58	60	64	75	94	116	136	104	80
39 Constraint of PSH Market													
40 Intertie Available	3748	4164	4143	4487	4783	4357	4392	4493	4420	4300	4086	4230	4296

L-309 (continued)

Table 3
(continued)

Division of Rates PLEE
Date: DEC 22, 1986
Time: 17:52

Nonfirm Revenue Analysis Program
Forecasted PSW Nonfirm Market
Average Megawatts
Fiscal Year 1989

		A Oct-88	B Nov-88	C Dec-88	D Jan-89	E Feb-89	F Mar-89	G Apr-89	H May-89	I Jun-89	J Jul-89	K Aug-89	L Sep-89	M aMW-89
1	PSW Market at 40.0 Mills/kWh....	0	0	0	0	0	0	0	0	0	0	0	0	0
2	PSW Market at 39.0 Mills/kWh....	0	0	0	0	0	0	0	0	0	0	0	0	0
3	PSW Market at 38.0 Mills/kWh....	0	0	0	0	0	0	0	0	0	0	0	0	0
4	PSW Market at 37.0 Mills/kWh....	0	0	0	0	0	0	0	0	0	0	0	0	0
5	PSW Market at 36.0 Mills/kWh....	0	0	0	0	0	0	0	0	0	0	0	0	0
6	PSW Market at 35.0 Mills/kWh....	0	0	0	0	0	0	0	0	0	0	0	0	0
7	PSW Market at 34.0 Mills/kWh....	0	0	0	0	0	0	0	0	0	0	0	0	0
8	PSW Market at 33.0 Mills/kWh....	0	0	0	0	0	0	0	0	0	0	0	0	0
9	PSW Market at 32.0 Mills/kWh....	0	0	0	0	0	0	0	0	0	0	0	0	0
10	PSW Market at 31.0 Mills/kWh....	0	0	0	0	0	0	0	0	0	0	0	0	0
11	PSW Market at 30.0 Mills/kWh....	0	0	0	0	0	0	0	0	0	0	0	0	0
12	PSW Market at 29.0 Mills/kWh....	0	0	0	0	0	0	0	0	0	0	0	0	0
13	PSW Market at 28.0 Mills/kWh....	0	0	0	0	0	0	0	0	0	0	2908	2798	477
14	PSW Market at 27.0 Mills/kWh....	0	0	0	0	0	0	0	0	678	2462	3902	4057	910
15	PSW Market at 26.0 Mills/kWh....	0	0	0	1372	1564	1487	1371	2411	1920	3502	4045	4096	1799
16	PSW Market at 25.0 Mills/kWh....	0	973	1618	1475	1701	1615	1676	2466	2224	3465	4093	4165	2108
17	PSW Market at 24.0 Mills/kWh....	2339	1870	1459	1523	1694	1712	1702	2524	2333	3633	4093	4204	2412
18	PSW Market at 23.0 Mills/kWh....	3432	1905	1551	1547	1753	1815	1780	2474	2373	3705	4093	4206	2559
19	PSW Market at 22.0 Mills/kWh....	3547	2216	1711	1733	1845	2022	1933	2625	2751	3848	4140	4240	2726
20	PSW Market at 21.0 Mills/kWh....	3721	2550	1753	2132	2140	2502	2405	3446	3297	4110	4250	4289	3059
21	PSW Market at 20.0 Mills/kWh....	4064	3239	1889	2522	2930	3258	3435	4204	3774	4248	4410	4516	3544
22	PSW Market at 19.0 Mills/kWh....	4067	3586	1850	3059	2994	3412	3500	4267	3935	4269	4488	4866	3694
23	PSW Market at 18.0 Mills/kWh....	4067	3587	1939	3108	2924	3432	3501	4283	3810	4269	4727	4884	3715
24	PSW Market at 17.0 Mills/kWh....	4072	3588	2004	3110	2908	3427	3556	4334	3801	4269	4749	5210	3756
25	PSW Market at 16.0 Mills/kWh....	4343	3641	2066	3198	3089	3584	3645	4420	3988	4325	4914	5271	3877
26	PSW Market at 15.0 Mills/kWh....	4594	3796	2675	3396	3475	3924	3822	4776	4148	4805	5243	5455	4180
27	PSW Market at 14.0 Mills/kWh....	4844	4082	3238	3658	4161	4379	4447	4925	4505	5071	5381	5717	4556
28	PSW Market at 13.0 Mills/kWh....	5109	4345	3393	3863	4607	4614	4896	5074	4729	5329	5572	5741	4774
29	PSW Market at 12.0 Mills/kWh....	5341	4733	3775	4232	4885	4883	5202	5303	5251	5724	5920	5936	5099
30	PSW Market at 11.0 Mills/kWh....	5407	5005	4066	4599	5440	5350	5467	5714	5600	6019	6209	6112	5414
31	PSW Market at 10.0 Mills/kWh....	5458	5189	4680	4984	5770	5904	5893	6002	5880	6037	6325	6447	5712
32	PSW Market at 9.0 Mills/kWh....	5458	5392	4716	5099	5788	5962	5972	6239	6003	6130	6327	6447	5793
33	PSW Market at 8.0 Mills/kWh....	5458	5458	5045	5417	6279	6391	6289	6484	6261	6389	6485	6508	6034
34	PSW Market at 7.0 Mills/kWh....	5458	5458	5255	5417	6472	6391	6402	6464	6282	6415	6496	6508	6081
35	Adjustments to PSW Market													
36	Contractual Surplus Energy.....	260	211	170	170	188	204	270	260	351	340	340	351	260
37	Nonfederal Contracts PSW.....	723	643	647	554	373	350	350	342	168	428	743	742	490
38	15 Firm Wheeling Contracts....	90	65	43	52	58	60	64	75	94	116	136	104	80
39	Constraint of PSW Market													
40	Infeetie Available.....	3790	4205	4184	4529	5893	5447	5502	5604	5531	5410	5197	5299	5043

L-309 (continued)

EE

In fact BPA found that if only nonfirm energy were delivered over the Third AC Line, there would be a net loss to ratepayers in both regions combined of $249 million, even using an unreasonably low 9% discount rate which does not reflect the cost of money to the mix of municipal and investor-owned utilities participating in the project, and the overly optimistic Fall 1985 DRI oil forecast. (IDU EIS, p. 4.8-4, net present value loss of $145 million with maximum expansion compared to benefit of $104 million with DC Terminal Upgrade only).

TANC on the other hand, finds that California alone would gain $58 million under the Strong OPEC scenario and lose $227 million under the Weak OPEC scenario.

With a scenario containing anywhere from 60 to 130% more energy availability than BPA's scenario, a base case oil price rising from $36 to $81 over the decade of the 1990s, and forecasts of BPA rates which do not correspond to their current marketing practices and cost estimates and are thus far too low, we are not surprised at this discrepancy. However, the difference between the project proponents and the principal seller of power to the project proponents must be explained in much more detail to show why the No Project alternative is not preferable. It also shows the importance of evaluating capacity benefits correctly, since TANC is likely to be wrong on nonfirm energy. However, TANC's estimates of capacity benefits are equally flawed.

FF

6. **TANC Estimates that Far More Capacity Will Be Available over the Third AC Line than Does BPA.**

TANC analyzes three cases on capacity availability: 600 MW over the life of the line; 1300 MW from 1991-2010 and 600 MW thereafter; 1430 to 1490 MW of capacity credit representing total amount of deferrable peaking generation. (App. B., p. 85) TANC calls these the "Limited", "Moderate", and "Full" scenarios, as if the "Moderate" scenario is the most reasonable. (App. B, p. 92) In fact, it is not the most reasonable, since TANC's analysis is inconsistent with BPA's analysis of the amount of capacity available over the line. BPA states that the Third AC line would allow only an additional 600 MW of firm capacity contracts that could not be carried on existing lines. (IDU EIS, p. 4.8-3)

BPA has specifically responded to a data request in a California PUC proceeding that its "loads, resources, and marketing analyses do not indicate that BPA would make long-term capacity sales exceeding 2000 MW." (BPA response to Data Request No. 12 of the Independent Energy Producers Association, CPUC App. 82-04-044 et. al.) Capacity sales of 2000 MW could be easily carried over existing transmission lines and do not require the construction of the Third AC line.

FF

For a discussion of the differences in sources of capacity and institutional constraints on additional firm transactions see response to L-306 D1, L-306 E1, L-306 I1, and L-306 J1. The Draft EIS/EIR assumes broader sources of potential firm capacity than just BPA. Thus, the BPA institutional limit is not a moderate scenario.

Firm capacity transactions are not the only transactions assumed to occur on the COTP. Both firm capacity and non-firm energy will use the COTP simultaneously. Neither should be expected to fill the line capability by itself.

The Draft EIS/EIR analyses does not dwell on problems of return of energy at night because BPA is not the only potential source of firm capacity. The potential for limits on night time return of energy was a factor in selecting the 600 MW scenario for the Draft EIS/EIR.

L-309 (continued)

FF BPA has also indicated on several occasions that it is limited in the amount of capacity which it can sell with energy return at night because of its own minimum generation conditions. (BPA Response to IEP Data Request No. 13, CPUC App. 82-04-044 et al.) TANC has not considered this factor.

The differences between TANC and BPA must again be spelled out, explained and discussed in far more detail in order to inform the reader as to why the No Project Option was not selected.

GG 7. TANC's Discussion of When Capacity Is Needed by the California Private Utilities Is Not Correct.

TANC's discussion of when capacity would be needed that the project can displace (Appendix C to Appendix B), is also incorrect. We can examine the issue utility by utility.

SDG&E is forecast to take 60 MW of capacity immediately. If this were in fact true, SDG&E could take the capacity without the Project, since it will have more than 60 MW available on its existing transmission allocation. SDG&E does not need the project to take 60 more MW of Northwest capacity.

The entire PG&E planning area, taken as a whole, does not need capacity until 1994 to 1999, even in the absence of the Third AC line, depending on the choice of the PG&E between the CEC demand forecasts and whether approximately 1500 MW of new resources (not counting the Third AC line) will be built between 1990 and 1998. PG&E has testified before the California PUC that the value of capacity to it in 1990 (before the project) is 77 cents per kilowatt-per year. (PG&E, Fifth Amendment to CPUC App. 82-04-044 et al., Appendix D, Table IIIC-1 [following page 59]). Furthermore, PG&E could easily fill its existing allocation with capacity (since it is not completely filled now) and would not require the new line to bring in more capacity. Its capacity need for the Third AC line is also therefore zero.

Edison is the only utility which is likely to be able to use some capacity from the project in the mid 1990s, but even Edison would use the capacity later than projected by TANC. Edison would fall below a 16% reserve margin (the lowest acceptable range given its current target of 18% plus or minus 2%) in 1995 in the absence of the Third AC line and other new resources, assuming use of the CEC's demand forecast. However, Edison is also planning an expansion of its Big Creek hydro project in 1992-94. This 505 MW expansion would leave Edison with acceptable reliability through 1996. Under Edison's own demand forecast, capacity would be needed by 1995 with Big Creek. Even then, it would not need the capacity in a single 500 MW lump but would have needs spread out over two or three years. Similar to PG&E, Edison pro-

GG With regard to San Diego, the comment ignores use of the Intertie for economy energy purchases. Regarding PGandE, the comment does not recognize the differences between PGandE and TANC. See the response to L-309 HH for a discussion of TANC member plans for capacity additions without the COTP. In its analysis, PGandE does not include capacity from the Northwest until the year 1996. See Appendix C to Appendix B of Volume 3A of the Draft EIS/EIR.

The comment refers to minor differences in assumed need for capacity of individual Participants in the COTP. The COTP is a project with a useful life of over 40 years with benefits to a large number of diverse utility Participants. The changes in the near-term needs for new resources by the individual Participants are likely to be such that some Participants need capacity earlier than presently forecast and some potentially later. This diversity of needs can be met best by transmission access to a broad range of resources which can be purchased for delivery over the COTP. Furthermore, the earlier completion of the COTP will increase availability of lower-cost surplus energy.

L-309 (continued)

GG jects a capacity value of zero in 1990 (the year before the addition of the project). (CPUC App. 82-04-044, Prepared Direct Testimony of Southern California Edison Company on the Reinstatement of Standard Offer No. 2, Exhibit S-15, p. VII-41R).

HH 8. Acquisition of Capacity by TANC Itself Does Not Benefit the State of California. Benefits to TANC Ratepayers Are Offset by Equal Increased Costs to PG&E's Other Retail Ratepayers.

TANC's "need" for capacity is not really a "need" at all. The lights will not go out in TANC's member cities if no capacity is installed. TANC members can purchase power from PG&E under its wholesale rates. To the extent that TANC takes capacity from the Third AC line, its members will indeed benefit from bypassing PG&E because PG&E's wholesale rates are higher than the cost of the Third AC line. However, PG&E's wholesale rates collect the fixed costs of PG&E's system. Given PG&E's excess capacity situation, to the extent that TANC members bypass PG&E through acquisition of capacity on the Third AC line, their benefits will create equal and offsetting costs on the retail ratepayers of PG&E, thereby forcing more of the costs of Diablo Canyon and other costly new additions onto retail ratepayers. This is not a benefit at all to the State of California, as the EIS suggests. It is merely a transfer of money from the pockets of some Californians (PG&E retail ratepayers) into the pockets of a smaller number of different Californians (TANC cities' retail ratepayers), at least until PG&E's excess capacity situation is alleviated. Even after PG&E needs capacity, to the extent that the embedded costs of capacity, used by FERC for ratemaking purposes, exceed PG&E's marginal costs of capacity, PG&E ratepayers will be the losers.

The reason why TANC will enjoy disproportionate benefits from the new line at the expense of PG&E retail ratepayers lies in the current rate design policies of the Federal Energy Regulatory Commission (FERC) which sets PG&E's wholesale rates to TANC cities. These wholesale rates are currently set so that all fixed costs are collected through demand charges based on the customer's maximum demand every month (currently in the range of $15.00 to $20.00 per kilowatt per month), and all variable costs are collected through energy charges (currently about 2 to 3 cents per kWh). A combustion turbine or a power purchase from the Northwest will cost less than $15 or $20 per kW-month (on the order of $3 to $6 per kW-month). Any fixed costs which are uncollected because of TANC members' bypassing the PG&E system of necessity fall back on PG&E's retail ratepayers.

The EIS is deficient in that it fails to even mention, much less quantify the rate increase to other PG&E retail ratepayers resulting from TANC's purchase of capacity over the Third AC Line and the adverse socioeconomic impacts on those

HH The publicly owned utility Participants in the COTP will pursue other resource options if the COTP is not built. Those options include construction of combustion turbines beyond those already planned or under construction by several of the TANC members, and purchases from large investor-owned utilities such as PGandE. Based on the resource plans of the TANC members, the economic analysis assumed that they would supply their needs by building combustion turbines in a manner similar to recent TANC member installation of combustion turbines.

See responses to L-307 BB part 6, L-307 W, and L-307 A for further discussion of this topic.

L-309 (continued)

HH affected PG&E retail ratepayers.

The EIS is also deficient inasmuch as it does not analyze an alternative which includes no new construction but includes rate reform by FERC to reduce demand charges and hence reduce the incentives which TANC has to bypass the PG&E system.

II **9. TANC's Estimates of the Cost of Avoidable or Deferrable California Resource Options Are Too High, Thereby Overstating Benefits from the Transmission Line.**

TANC claims that the benefit from capacity from the project would be based on avoiding combustion turbine peaking units at a levelized cost of $94 per kilowatt per year ($458 per kilowatt installation cost multiplied by 20.6% fixed charge rate). BPA's IDU EIS, the California Energy Commission, and PG&E all use lower capital costs of $370 per kilowatt. Furthermore, the 20.6% fixed charge rate is an obsolete number which is based on higher than current interest rates and tax treatment of utilities prior to the new Tax Reform Act of 1986. Using the $370 per kilowatt figure developed by these parties and a 17% fixed charge rate, we obtain a figure of $63 per kilowatt, nearly one-third less than TANC's figure. As a result of this error, TANC makes the Intertie look far better than it really is, even if we were to assume that California needed all of the capacity which TANC suggests is available.

TANC also makes several other errors in specifying new generation resource options available to California in its analysis of resource plans with and without the Third AC line. (App. B, Chapter 10) TANC overstates the heat rate of combustion turbines (13,000 Btu/kWh vs. the California Energy Commission's estimate of 11,000 Btu/kWh in its report entitled Electricity Costs by Generation Technology) and combined cycle plants (9350 Btu/kWh vs. the CEC's estimate of 9200 Btu/kWh and PG&E's estimate of 8260 Btu/kWh at full load and 8800 Btu/kWh at 25% load) By overstating these heat rates, TANC overstates the fuel savings that Northwest power purchases would create.

JJ **10. TANC Fails to Consider Options to Defer Resource Additions Which May Be Cheaper than Combustion Turbines in the Early Years.**

California utilities in the short run may have some cheaper alternatives than immediate construction of combustion turbines. SDG&E and Edison both have a number of mothballed oil plants (SDG&E 230 MW and Edison 446 MW plus 740 MW of contingent retirements, which provide additional cold standby capability) which could be refurbished and returned to service. Capacity from the Third AC line, even if needed, would first defer the return to service of the mothballed

II With respect to the capital cost of combustion turbines, the figures used represent a melded cost to the different California utilities, as presented in CFM-6 filings (Common Forecasting Method). Costs to the COTP Participants are different due to site conditions, emission constraints, and unit sizes. The $370 per kilowatt figure used by BPA is a generic number appropriate for combustion turbines in the Northwest. California combustion turbine capital costs are generally higher than elsewhere in the United States because of pollution abatement equipment requirements. The fixed charge rates are consistent with the interest rates prevailing at the time the study was prepared. The fixed charge rate used in the analysis is based on assumptions regarding the interest rates that will be in effect at the time financing is secured. There is no basis to conclude that today's interest rates are any more appropriate to use as estimates for investment in a utility plant which is to be placed in service in 1991 than were the rates used in the analysis. Heat rate assumptions were developed from a weighted average of the heat rates corresponding to new plants in the utilities' resource plans. The heat rate assumptions and capacity values used for all existing and new resources are available for inspection at the offices of the Project Manager's consultant. As explained in the response to L-306 R3, the combustion turbine heat rate used does not affect the economic analysis since the avoided cost energy as dispatched in the model is based almost exclusively on gas fired steam generation at an assumed 9,500 Btu/kWh heat rate.

JJ The study incorporates over 5200 megawatts of refurbishments between 1992 and 2002. This exceeds the amount the Energy Commission deems likely to be available. Southern California Edison resource plans used in this study include 505 megawatts of peaking turbines at the Big Creek Hydro Project. Big Creek is included in resource plans both with and without the COTP. Thus Big Creek does not represent an alternative to COTP, but is needed regardless.

L-309 (continued)

JJ

units for several years and would not immediately avoid new combustion turbines. Edison also is proposing to add 500 MW of peaking turbines at its Big Creek hydro project. It claims that these turbines are cheaper than combustion turbine generation, after adjusting for the additional energy generation and shifted timing of energy generation that they would produce. If these claims are true, this would also represent a cheaper deferrable resource.

Finally, TANC ignores a clear short-term alternative to capacity purchase over the Third AC line in the early 1990s: purchases by other utilities from PG&E. PG&E has offered to sell energy and capacity at relatively inexpensive rates ($1 to $5 per kW-month plus running costs of gas-fired energy) to a number of western utilities. 4/ PG&E is currently selling firm power to southern California municipalities for a term of several years. These capacity purchases from existing resources would have far less environmental impact than construction of a whole new transmission line to purchase firm capacity.

KK

11. TANC Ignores Inconvenient Facts in Existing and Proposed BPA Rate Schedules to Develop Its Own Unreasonably Low Estimate of Northwest Demand Charges.

BPA's proposed firm capacity rates in its 1987 rate case are $4.71 per kilowatt per month plus an intertie surcharge of $0.63 per kW-month or $64.08 per kW-year. (BPA 1987 Rate Case, Exhibit WP-87-E-BPA-06, pp. B37 to B43) Yet TANC somehow assumes that Northwest capacity prices will be reduced significantly to one-half to three-quarters the cost of a combustion turbine. (App. B, p. 85) This belief that prices will drop significantly below combustion turbine costs is not consistent with BPA's use of its market power. In the nonfirm energy area, it is holding prices at 75% of decremental costs. It has eliminated large amounts of competition through its Intertie Access Policy (even recognized by TANC as a potential problem at App. B, pp. 11-14). BPA's latest means of reducing competition is a new transmission wheeling rate, for other Northwest entities selling power to California: the IS-87B2 "lost opportunity" rate. This rate allows BPA to add a currently unspecified and undefined surcharge to any firm power transaction which in any way reduces BPA revenues. (BPA 1987 Rate Case, Exhibit WP-87-E-BPA-07, p. 25; Exhibit WP-87-E-BPA-28, pp. 11-12; Exhibit

4. A PG&E letter offering power to the Nevada Power Company on these terms was included as Exhibit WAR-3 to the Direct Testimony of Whitfield A. Russell on behalf of the Nevada Consumer Advocate in Nevada Public Service Commission Docket 86-701, and PG&E is currently selling intermediate term firm power to Southern California municipalities.

KK

The proposed BPA capacity rate of $64.08 per kW-year appears to be the result of BPA's efforts to sell firm energy and capacity under a firm power rate. It includes charges related to BPA's inability to sell surplus power. It does not represent a rate developed to serve a competitive market under load-resource balance conditions.

As stated in BPA's Marginal Cost Analysis in the same rate case, the Northwest adds resources to meet energy loads. Capacity brought on line to meet energy loads, in conjunction with the capacity available from the existing system, is more than adequate to meet forecasted capacity requirements, 1987 Initial Rate Proposal filed by BPA as part of its proceedings to revise rates (Marginal Cost Analysis, document WP-87-E-BPA-04, pages 9 and 10). Thus, the Northwest surplus capacity which must be sold out of the region must compete with alternatives available to purchasers. The embedded cost rate for system capacity sales should be less than the marginal cost of a new resource to the purchasing system. If not, the purchasing system will have incentive to construct rather than buy. One-half to 75 percent of combustion turbine costs is a reasonable estimate.

The COTP will increase the pressure on BPA to move toward market determined capacity rates because, with a much larger total Intertie capacity, it will be more difficult for BPA to determine that the entire Intertie is necessary for BPA transactions, particularly if BPA seeks prices at rates well above those of other Northwest sellers.

The proposed rates in 1987 rate cases are only partly relevant to the post 1993 period when the COTP will operate. BPA's proposed "Lost Opportunity Rate" appears to be a concept to incorporate both allocated transmission costs and interference with BPA marketing policy in one rate schedule. Whether this concept is in any way relevant to a future period in which there would be much more Intertie capacity and much less surplus firm energy on the federal system is speculative.

L-309 (continued)

KK

WP-87-E-CC-01). By limiting competition, BPA is assuring its market power to keep capacity rates high. 75% of the cost of a combustion turbine is likely to be the most likely or even a low case, and 50% of the cost of a combustion turbine is much lower than likely.

LL

12. TANC Misrepresents the Cogeneration and Small Power Production Alternative to the Proposed Project.

TANC's discussion of the cogeneration and small power production alternative (App. B., Section 10.3.1) is incorrect and misleading. It states that this alternative is priced at the full cost of a combustion turbine plus the cost of oil/gas peaking generation. This is simply incorrect. The CPUC has issued a "long run standard offer" which would pay cogenerators and small power producers (collectively Qualifying Facilities under PURPA Section 210 or QFs) a price based on the capital and operating costs of an avoided resource, and which would require these producers to bid in the event of oversupply. (CPUC Decision No. 86-07-004).

We see no reason why the Third AC line should not be considered an avoidable resource and put out to bid to see whether cogenerators and small power producers are willing to take a payment based on (1) the transmission capital costs; (2) nonfirm and surplus firm energy prices when that energy is available; and (3) avoidable Northwest demand charges.

The California investor-owned utilities have filed testimony in opposition to this position, but they have never provided any quantification as to whether they think the line is even cost-effective, instead awaiting their own filing of the Certificate of Public Convenience and Necessity to show their analysis. The municipal utilities' refusal to recognize the QF option is even worse. Comments on the initial draft of the EIS by CPUC Resources Branch Chief David Morse put TANC on alert that the CPUC believes that allowing QFs to bid against this transmission line is a reasonable alternative to the line. TANC's responded that municipal utilities had no legal obligation to offer standard contracts to QFs. While this response may be legally correct under rules implementing Section 210 of the Public Utilities Regulatory Policy Act, it in no way alters the fact that the EIS is deficient under the legal principles governing the preparation of environmental impact statements for failing to consider this alternative. TANC's refusal to rationally analyze the alternative of using standard contracts and allowing QFs to bid against the line to see if QFs can beat the cost of the line is a serious deficiency. The QF bid option certainly warrants more than a dismissal in the EIS based on inaccurate facts.

LL

The Draft EIS/EIR assumes cogeneration and Qualifying Facilities (QF) supply 7639 megawatts to California's resource mix between the years 1985 and 2004. This amounts to 34 percent of the total capacity additions. Even with this large number of QF's the COTP appears cost-effective under most circumstances. In order to qualify as a substitute for Northwest capacity obtained over the COTP, an additional 1300 megawatts of QF's would be required and their combined costs would have to be below the net costs of the COTP. The amount in the analysis is based on recent experience with installation rates and costs of such projects.

Utility resource plans already take into account probable availability and costs of cogeneration and QF's. Since those plans assume combustion turbine (CT) construction there is implicit validity in the Draft EIS/EIR analysis. This is especially true in as much as combustion turbines are the alternative on which the cost of QF capacity is typically based.

The amount of cogeneration and other QF capacity reflected in the utility resource plans in the Draft EIS/EIR study is at a level exceeding the CEC 1985 forecast. The excess of the sum of these categories over the sum of the CEC plans is a mix of alternatives not considered in those plans. Even with this additional "mix" alternative the COTP is cost effective because it can still displace construction of new combustion turbine capacity and operation of fuel resources.

Utilities will use energy received over the COTP to displace the highest cost displaceable generation in operation on their system, usually gas or oil fired. They will use firm capacity contracts allowing them to rely on deliveries over the COTP to avoid construction of peaking resources, probably combustion turbines. If additional QF or cogeneration facilities are available, they would displace the same oil or gas-fired generation and allow utilities to avoid construction of the same combustion turbine peaking facilities.

In regard to the CPUC long run standard offer "bidding process" in the event of over supply, this process has not been implemented and if it is implemented is not applicable to utilities which are not subject to CPUC jurisdiction. This process, if implemented, would provide for QF developers to bid against the utilities proposed new resources in some circumstances. Due to the substantial flexibility of the type of resources that can be used to deliver power over the COTP, it would be difficult to predict the price at which a QF's bid would be more favorable than what the utilities can obtain over the COTP. The COTP provides access to dispatchable resources whereas QF's historically have not been dispatchable by the purchasing utility.

LL (cont.) It is also important to note that if combustion turbines and gas fired generation remain the basis of avoided cost prices paid to QF's in California, the ratepayer pays that full price for QF power, whereas with the COTP, the savings from such avoided costs are passed on to the ratepayer, making the ratepayer better off with the COTP than from QF power.

L-309 (continued)

MM

13. TANC Underestimates the Cost of the Project by Ignoring Necessary Environmental Mitigation Measures and Understating Land Acquisition Costs.

In addition to overstating the amount of Northwest energy and capacity and its benefits to California at every turn, TANC also understates the cost of the project. TANC has failed to include the cost of necessary environmental mitigation measures, such as the choice of somewhat more costly alternate routes in several areas, including the Sacramento-San Joaquin Delta (see the remainder of PROPP's comments) and Shasta and Siskiyou Counties (see the comments of the Forest Landowners of Shasta and Siskiyou Counties [FLSSC]). Moreover, based on our discussions with the consultants for FLSSC, it appears to us that TANC also is underestimating land acquisition costs. TANC assumes that it can compensate landowners based on the timber value of only the specific strips to be clearcut for line right-of-way, rather than compensating for the cumulative impact of reduced timber production elsewhere caused by the project. In estimating its land costs, TANC did not consider the requirements of the California Forest Practices Act and the memorandum of understanding between the US Forest Service and the State Water Resources Control Board to analyze cumulative impacts on watersheds not only of the harvest in question but of other harvest plans, roads, and transmission line rights of way and resulting reductions in timber production on land not directly affected by the project. As a result, TANC is likely to be underestimating its costs in compensating forest landowners. These cost underestimates make the project economics appear more favorable than they really are.

NN

14. Summary of Benefits and Costs.

We have not completely quantified how all of TANC's errors affect its benefit-cost analysis. However, even correcting a few of the most egregious errors yields a benefit-cost ratio well below 1.0. Table 4 presents such a correction. The most likely capacity credit scenario (of any which TANC puts forward) is TANC's "Limited" scenario (600 MW, which is consistent with BPA's estimates) with high demand charges (75 percent of combustion turbine costs). This has a capacity benefit of $180.9 million (App. B, Table 8-1, p. 82) The most likely energy scenario (again of any presented by TANC) is the weak OPEC scenario, because it is closer to the DRI forecast, particularly in the early years of project operation which are the most critical to benefit-cost analysis. This has an energy benefit of $489.3 million (App. B, Table 7-1, p. 78). Total benefits are $670.2 million. At TANC's reference cost scenario ($716.5 million from Table 9-3), the project has a benefit-cost ratio of 0.94, as shown in Appendix B, Table 9-2 as the expected value case under Weak OPEC, limited capacity credits, and high demand charges.

MM

The cost of land necessary for easements was considered in the routing process, but was not the only or primary consideration. Routes which contain higher land cost generally represent higher socioeconomic impact, especially if they are urban or suburban in nature rather than in agricultural areas or open space. The routes referred to in the comment are routes in the Delta to the west of the Intertie, and would require not only higher land costs but also more socioeconomic impact near Antioch at the crossing of the Sacramento River. In addition, these routes would require a crossing of the existing Intertie by the COTP. See response to L-309 VV.

Compensation to landowners for reduced timber production caused by the COTP is taken into account in the evaluation of severance damages for the isolation of parcels of timberland or agricultural land. It is recognized that the presence of a transmission line may cause more economic impact beyond simply the use of land upon which it will be placed. These impacts are specifically considered in the actual appraisal and negotiations for an easement and are included in the COTP cost estimate.

TANC has included the California Forest Practices Act and other state requirements in its consideration of cumulative impacts on timberlands. It is recognized that the planning for and construction of a transmission line through timberland will not be an inexpensive process; however, TANC does not feel it has underestimated this cost in considering the overall cost issue of the COTP.

NN

Both suggested adjustments to the components that make up the benefit cost ratio are invalid. The first reduces the capacity benefit by one-third for purportedly inaccurate combustion turbine costs. The combustion turbine costs used in the economic analysis are a representative average of those shown in California investor owned utility CPM 6 filings, adjusted for cost escalation to the date of installation. The second adjustment for energy values errs because it assumes a PNW energy price equal to 75 percent of California's decremental cost. Instead, the study used 82 percent of the marginal cost of gas for the Weak OPEC scenario for the all seasons except spring.

L-309 (continued)

TABLE 4

BENEFIT-COST ANALYSIS OF THIRD AC LINE
CORRECTING SEVERAL MAJOR TANC ERRORS

Capacity Benefits		
Limited amount, high demand charge	180.9	(App. B, p. 82)
Energy Benefits		
Weak OPEC Expected Value	489.3	(App. B, p. 78)
Project Benefits Before Adjustments	670.2	
Project cost (TANC medium)	716.5	(App. B, p. 95)
Benefit-Cost Ratio Before Adjustments	.94	
Adjustments		
Less 1/3 of Capacity Benefit for Inaccurate CT Cost	-60.3	
Less 10% of Energy Benefit for 75% of Decremental Cost in All Seasons and All Scenarios	-48.9	
Project Benefits After Adjustments	561.0	
Benefit-Cost Ratio After Benefit Adjustments Only	.78	
Increase Cost to TANC High Estimate	788.1	(App. B, p. 95)
Benefit-Cost Ratio After Benefit and Cost Adjustments	.71	

L-309 (continued)

NN

However, this 0.94 benefit-cost ratio is a clear overestimate. As discussed in Section 9 above, our estimate of combustion turbine costs (based on combustion turbine capital costs used by BPA, the CEC, and PG&E and a fixed charge rate which does not reflect outdated information) is one-third less than that estimated by TANC ($63/kW-year as compared to $94/kW-year). As the TANC estimate of capacity benefits which I have used is based specifically on 25% of combustion turbine costs, reducing the combustion turbine cost by one-third % reduces the capacity benefit by one-third or $60.3 million. As we discussed above, TANC's energy benefits are also too high, as discussed in Section 2, because they assume that BPA will charge less than BPA itself assumes (only 60% of decremental cost in the spring months in the medium and high cases and with very low escalation in the low case, as opposed to BPA's 75% of decremental cost at all times). We subtract 10% from the TANC estimate or $48.9 million as a means of reflecting this effect. This leaves a total project benefit of $561 million and a benefit-cost ratio of 0.78 using the base cost scenario. As discussed in point 13 above, TANC also underestimated its costs of environmental mitigation and/or compensating forest landowners. Taking these effects into account by using TANC's high cost scenario of $788.1 million from Table 9-3 yields a benefit-cost ratio of 0.71.

Even the 0.71 to 0.78 figures which we have developed here are likely to be too high because they do not consider:

1. The much lower estimates of nonfirm energy deliveries made by BPA discussed in Section 4.

2. The timing of California private utilities' need for capacity (Section 7) and the adverse impacts on other ratepayers associated with TANC acquisition of capacity (Section 8).

3. Cheaper alternatives to combustion turbine capacity discussed in Section 10.

Finally, even if one were to conclude that the project were economic, the EIS still is deficient because the alternative of allowing QFs to bid against project costs must then be analyzed. If QFs were to bid a lower price than the project, they would in all likelihood be preferable because of their lower cost.

L-309 (continued)

SOILS AND GEOLOGY

Pepared by J. H. Kleinfelder & Associates
Geotechnical Consultants
Stockton, California

Comments are presented regarding the soils and geology in relationship to several proposed routes for the California-Oregon Transmission Project (C-OTP), pertaining only to the Southern Section (South of the river) in general.

Several transmission lines varying from 115 kV to 500 kV currently exist along the foothills and through the western portion of the Sacramento-San Joaquin Delta. We understand that the project's various preferred options include upgrading an existing 230 kV transmission line, or going approximately 2,000 feet on either side to provide some redundancy to the transmission system.

OO Our firm has been providing geotechnical engineering services in the San Joaquin Delta region for over 26 years and we are quite familiar with soil and groundwater condtions and construction practices in the area. From simply a soils, groundwater, and construction standpoint, it would be much easier to construct a transmission line on the west side of the valley versus island hopping. The Draft EIS/EIR correctly points out some of the disadvantages of routes through the Delta. These include soft and loose soil conditions requiring extensive foundation work or remedial measures, risk of flooding, fire danger, river crossings, instability and possible liquefaction during earthquakes, and wind and water erosion. The negative impacts of a foothill route (near Antioch), which includes portions of S-9A, are water erosion, land slides, and access.

The Draft EIS/EIR sections we studied appeared to find the foothill route unfavorable. However, we question that conclusion based on our experience at Altamont Pass where our firm has been involved in the design and construction of over 4,000 windmills. The features of a transmission tower versus a windmill are essentially the same. Both involve relatively light structures where the design is controlled by wind, earthquake, and uplift forces. Access roads, erosion prevention measures and careful grading are also required. The benefit of a western foothill route is that the soil conditions are much more favorable to

OO See responses to L-309 H, L-309 I, and L-309 J.

L-309 (continued)

OO drilled pier or spread footing construction and that proper grading can minimize the risks of landslides and erosion.

PP Other than upgrading the existing 230 kV line, the other alternatives in the Delta area involve new construction. Although anything is possible, the cost to provide a tower foundation with the same level of performance and risk as a foothill or western route is quite high. The Draft EIS/EIR suggests that importing a high integrity fill, pilings, or subsurface anchor supports are effective mitigation measures for the low soil bearing materials and liquefaction potential. While it is true that the removal of some of the organic near surface soils and replacement with imported high quality fill can minimize settlement and differential movement of the transmission towers, there are few inexpensive means of reducing the risks associated with liquefaction at such sites. In other words, it is difficult to remove the loose material due to the vertical extent and high groundwater table. Pilings and other subsurface anchors or supports are of little use if the soils surrounding the piles or supports liquifies. To reduce the hazards associated with liquefaction to an insignificant level as desired, it is our opinion that some in situ treatment will be required such as dynamic compaction or vibroflotation. The sands beneath the tower locations would require modification for some distance beyond the tower footprint to insure an "island" effect. Such treatment would not be needed for the western foothill routes.

QQ In some areas, we anticipate that soft silt and clay materials would be encountered rather than clean and silty sands. Although liquefaction would not be a problem, the friction values used in the design of piers in such instances will generally be 1/4 to 1/2 the values used for piers constructed beyond the Delta area.

RR Regarding agricultural loss, if the organic peat soil is removed under the lines the ground would be less favorable for farming.

Our firm has typical soils and rock profiles for the Southern Section; this information is compiled from our past projects at Altamont Pass and in and around Byron, Discovery Bay, Brentwood, Knightsen, Bethel Island, and Antioch.

Ron Heinzen, C.E.

PP See response to L-309 J. We are in agreement with the comments noted on the organic nature of the soils in the Delta area and the liquification potential. We agree that it is true that such foundation design requirements would not be required on routes in foothill areas. However, because of the requirement to terminate the transmission line at Tracy Substation it leaves no other alternative but to cross the Delta area where such soils exist.

QQ Comment noted.

RR Peat soil will not be removed from beneath the transmission lines, except where the towers are situated. Each landowner will have the opportunity to negotiate compensation for the present and future value of losses within the easement.

L-309 (continued)

SS

1. Please compile accurate cost estimates on construction of the proposed new Delta routes (including costs for necessary soil replacement, in situ treatment, as well as right-of-way acquistion) and compare those costs with accurate estimates for an upgraded western foothill route. These comparisons are absolutely necessary for a reasoned determination by decison-makers.

TT

2. Please supply accurate cost estimates for upgrading the 230 kV line in the existing right-of-way in the eastern Contra Costa Delta area.

SS

The cost for the preferred route south of the Sacramento River including right-of-way acquisition, foundation work, materials, and construction is estimated to be approximately $23 million. The cost for a western foothill route between the Sacramento River crossing and Tracy Substation was not estimated because it would require crossing both 500 kV Intertie lines twice, which would seriously jeopardize power system reliability and not meet the objectives of the COTP. A new crossing of the San Joaquin River at a very difficult point would also be required.

TT

The cost for upgrading Western's existing 230 kV lines south of the Sacramento River was estimated to be approximately $8 million. However, locating a third 500 kV transmission line adjacent to the existing two 500 kV Intertie lines would seriously jeopardize power system reliability and would not meet the objectives of the COTP.

L-309 (continued)

COMMENTS REGARDING DRAFT EIS/EIR
for the
CALIFORNIA - OREGON TRANSMISSION PROJECT

These comments concern the selection of the route to be used in crossing the Sacramento and San Joaquin Rivers. The routes involved are those referred to as the S-8 routes and the S-7 routes.

The EIS/EIR states that the preferred route across the rivers is composed of the segments S-8B, S-8C, S-8 Alt 1, and S-8E1. Please refer to Volume 2A, Figure 3.0-2.

The EIS/EIR is defective in the methodology used to reject other apparently superior routes.

Antioch (S-7) Routes

The EIS/EIR indicates these routes have the following advantages (see page 2.4-2):

- The area that is primarily rangeland south of Antioch provided an alternative to the Delta routes which run through extensive biological, recreational, and agricultural resources.
- The S-7 route traverses an area of drier, more stable soils than the Delta routes.
- The right-of-way for PG&E's 230 kv line coming from Contra Costa Substation in East Antioch provides a parallel route opportunity.
- PG&E's Vaca Dixon-Contra Costa 230 kv line crossing the San Joaquin River provides a parallel route opportunity which reduces visual impacts at the River.
- Separation from the existing PG&E 500 kv Intertie lines could be maintained until the Tracy Substation area where a crossover would be used.

The S-7 routes were apparently eliminated in 1985 because of alleged difficulties in routing between the south shore of the San Joaquin river and the "cultivated farmland and rolling rangeland" south of Antioch. Two routes were investigated, S-7E and S-7F.

According to the EIS/EIR the S-7E route was eliminated because:

- The route is close to the Antioch Dunes National Wildlife Refuge;
- PG&E's right-of-way is extremely narrow passing through a densely populated residential area south of the Dunes; and
- An apartment complex is planned for the urban vacant area southwest of the existing residential area and PG&E's substation.

L-309 (continued)

According to the EIS/EIR the S-7F route was eliminated "after an engineering review by Sargent & Lundy indicated than siting a line and the accompanying tower structure would disrupt both the PG&E and L-P operations, and there would be insufficient room for a large transmission line and tower between the PG&E power plant and the L-P plant."

UU The advantages of the S-7 route are compelling.

There can be no doubt that it would result in a far more reliable system than would the S-8 routes.

1. Physical separation from the existing 500 kv intertie would be measured in miles instead of feet as it is presently. The separation distance would be in excess of three miles which would be sufficient to provide a credible argument of increased system reliability. A similar credible argument for the proposed construction would be difficult at best.

2. All construction would be in far more accessible areas thus decreasing the time to repair the line in the event of damage.

3. Fewer miles of line would have to be built over water or unstable soil. Fewer tower foundations would be required in difficult soil conditions.

4. All construction would be removed from the Delta area—one of California's most environmentally significant areas.

The reasons presented for preferring the Delta route over the Antioch route were given in the EIS/EIR as:

- S-8 routes located east of PG&E's existing 500 kv intertie lines connect directly with Tracy Substation, without an intertie crossover scheme which would infringe upon project reliability.

- There were several opportunities for narrower crossings of San Joaquin River with S-8 rather than S-7 routes.

- There was very little room for siting a transmission line and tower along the Antioch waterfront (S-7), whereas room on Sherman Island (S-8) was not an apparent problem.

VV The first reason can not be supported. There is no reason the new line could not remain west of the existing intertie all the way to Tesla substation. Even if a crossover were necessary, it could be made at Tracy substation with very little marginal impact on system reliability.

Furthermore, it has not been addressed, let alone established, that a crossover at Tracy substation would result in a less reliable system than the proposed construction. With the proposed construction, the new line is essentially co-located with the existing intertie for miles. The S-7 route provides a credible amount of separation and hence an improvement in reliability.

UU See response to L-309 T.

VV The COTP cannot be routed west of the Intertie all the way to Tesla Substation. The COTP must be terminated at the Tracy Substation to provide COTP power deliveries to Western's existing Central Valley Project power system at the Tracy 230 kV Substation. With the upgrade of the Western 230 kV line to 500 kV, the COTP must be terminated at Tracy to allow the northern generation to be delivered to the Central Valley Project via Tracy.

If a crossover were to be made at Tracy as suggested, there would be reliability concerns about a three line outage which could have catastrophic effects on power users in the western United States. The routes east of the Intertie provide the minimum separation and at the same time do not require a crossover.

L-309 (continued)

VV (cont.)

It is also possible that the comment is suggesting that the two existing Intertie lines be connected to the Tracy Substation, that the COTP enter Tracy from the west, and that the connections required to "cross" the lines be made within the substation bus connections. This would require a significant modification of the existing system including the installation of many additional facilities to terminate the existing lines in the substation. Moreover, power system studies have shown that the loss of all three lines, which could occur with the loss of bus work within the substation, has unacceptable reliability consequences.

L-309 (continued)

WW The second reason is not substantiated. The "narrowness" of the crossing is but one factor in assessing the impact of a route on system reliability. The exposure at the crossing site and the opportunity for stable and secure construction on each side of the crossing are at least as important. The EIS/EIR is quite specific in its statement that soil conditions are superior in the S-7 route area.

If the assertion that narrowness is inherently better is accepted at face value, the EIS/EIR is incorrect in assigning it as a benefit to the S-8 routes. While the river crossing itself is narrower in the case of the S-8 Alt 1 route, the proposed route places the line over marsh and water for miles. The proposed route is located essentially over Taylor Slough and crosses Dutch Slough.

XX The third reason is nothing more than a restatement of the previously presented reasons for rejecting the S-7 routes. These reasons will be discussed subsequently.

It is clear that the only legitimate reason supportable within the EIS/EIR for preferring the Delta routes is the negative one—the Antioch routes can not be sited. The EIS/EIR leaves no doubt as to the technical superiority of the Antioch routes.

The EIS/EIR is defective in it's treatment of the siting difficulties associated with the Antioch routes. Identifying where a line can not be located is not the same as considering all of the options involved in siting one. The sole difficulty described in making the S-7 route viable is that of finding a way across Antioch. There are many unconsidered alternatives.

> The area immediately east of Antioch and west of Big Break does not seem to have the urban congestion associated with the two route alternates (S-7E and S-7F) discussed in the EIS/EIR. No argument has been presented against using this area.
>
> There are two 230 kv lines that currently cross Antioch. No argument against rebuilding these lines has been presented. One of these lines goes directly to Tesla Substation. No new routing would be required if that line were rebuilt or its right-of-way used. This option appears to involve the least environmental impact of any of the comparable alternatives presented.

Since, according to information and assertations presented within the EIS/EIR, the Antioch route is clearly superior to the Delta routes, both technically and environmentally, the selection of the Delta route was improper and in error.

The EIS/EIR is clearly defective it its superficial treatment of the S-7 route alternatives. Obvious alternatives to the rejected S-7E and S-7F routes were not addressed at all.

WW The "narrowness" of crossing the San Joaquin River does not refer to separation of the transmission line from the existing Intertie but to that part of the river itself. The existing river crossing structures will be reused in place. The existing foundations have been evaluated and it has been determined that they are sound and sufficient for use for the construction of the COTP.

XX Segment S-7F was chosen to avoid the Big Break area to the east since that area involves a wider river crossing. Additionally, the area just east of the Antioch Bridge had industrial and urban congestion as is shown on the Land Use and Land Cover Map figure 4-1G in Volume 4A of the Draft EIS/EIR.

The upgrading of the Vaca-Dixon/Contra Costa 230 kV lines would not meet the requirements of the COTP Participants and would be technically difficult to build. Paralleling this line was examined in route segment S-7E and was eliminated as an alternative for reasons discussed in Section 4.1.3 of the Phase II Report in Volume 2A of the Draft EIS/EIR.

L-309 (continued)

Delta (S-8) Routes

YY Various interested parties, including PROPP, have presented environmental concerns about the proposed S-8E1 route segment. The only argument presented in favor of this route over the far more environmentally benign S-8F route is based upon alleged improvements in system reliability that are thought to be gained by the physical separation of the existing intertie from this new line.

If there is a concern regarding physical separation of the two lines then there is no reasonable alternative to making the Antioch routes work. None of the Delta routes provide a significant improvement in reliability relative to each other.

The EIS/EIR references in Volume 2A section 4.1.8 a study by Sargent and Lundy that apparently showed that lines closer than 1200 feet "threaten the integrity of the transmission system due to potential outages caused by the impact of aircraft." The kindest thing that can be said about this reason for eliminating route option S-8F is that it presumes too much. What is the demonstrable incidence of "aircraft impacts" with 500 kv transmission lines located in areas similar to this one? It is not difficult to imagine all sorts of "threats" to lines but these hypothetical difficulties can not be arbitrarily raised in importance to control decision making.

There is no question that physical separation is good for reliability. It is, however, reckless to assert as the EIS/EIR does that a "threat to system integrity" can be eliminated or even seriously mitigated by a few feet of additional separation.

ZZ If this logic were to be reasonably pursued there would be no alternative to finding a way of building the Antioch route.

Since the EIS/EIR does not consider physical separation to be of sufficient importance to pursue the Antioch alternative with more vigor it is left for the public to wonder what the benefit of a few feet of additional separation might be compared to the substantial environmental impact involved in developing an entirely new route. Will the few feet that will be gained by using the S-8E1 route deliver a reduction it this "threat to system integrity" that is commensurate with the substantial increase in degradation of the environment? The EIS/EIR provides no information to help the public make such a judgment.

Without some assessment of the cost in environmental damage relative to the societal benefit of improved freedom from "threats to system integrity" (as measured in feet) the EIS/EIR is incomplete and therefore defective.

YY The comment expresses concern regarding separation of the two lines. The matter involves separation of three lines. In the Delta area, all three 500 kV transmission lines would converge. The loss of all three 500 kV transmission lines would result in an unacceptable outage in the western United States. To reduce the possibility of such a three-line outage, it is necessary to separate the new line by a minimum distance. Sargent & Lundy's report, entitled "Centerline Separation Reliability Analysis for Malin-Round Maintain 500 kV Transmission Lines," statistically determined 1,200 feet to be a minimum separation below which the threat of a system failure caused by impact of aircrafts is of excessive probability. Such impacts have occurred in the past. Most recently, in the Fresno, California area a single-engine aircraft struck a 500 kV transmission line, severing all three phases and causing outages on the adjacent lower voltage transmission lines. A similar incident occurred in the Imperial Valley in southern California causing an outage of more than one transmission line when a military aircraft dragged 2,000 feet of wire across the transmission lines. The threat of aircraft impacts is very real and the consequences of an outage of all three transmission lines is so great that this threat must be properly addressed in the design of the transmission line. The separation distance must be such that multiple type outages that have occurred in the past will not be repeated. The distance of 2,000 feet, based upon a length of wire carried by an aircraft, would reduce the risk of multiple outages to an acceptable level. For this reason, the COTP has established 2,000 feet as its separation criteria.

ZZ The Antioch alternative was carefully evaluated. It was eliminated largely because of the lack of opportunity to locate the 500 kV transmission line between PGandE's power plant and the Louisiana Paper Company near the San Joaquin River. Further, the Antioch route requires crossing of the existing Intertie, which would reduce the reliability of the Intertie system and, thus, not meet one of the objectives of the COTP. The environmental impacts of all route alternatives considered as feasible alternatives have been evaluated on a comparative basis.

L-309 (continued)

The EIS/EIR is defective

A1 There are obvious options for implementing the technically and environmentally superior Antioch (S-7) route which have not been considered.

B1 The information presented in the EIS/EIR is inadequate to allow an informed judgment regarding the benefit in reduced "threats to system integrity" that might result from the few feet of additional separation involved in implementing the S-8E1 option as opposed to the more environmentally benign S-8F option.

The conclusions the EIS/EIR reaches regarding optimum siting are highly questionable from both a technical and environmental point of view.

Edward J. Farmer

Edward J. Farmer, P.E.

A1 The Antioch route is not considered technically and environmentally superior. See responses to L-309 T and L-309 VV. See also Section 1.2.2 of Volume 1 of this document for further discussion of routes west of the Intertie.

B1 See responses to L-14 D and L-309 YY.

L-309 (continued)

RECREATION, SCENIC & AESTHETIC IMPACTS

C1 The proposed C-OTP routes in the Contra Costa Delta area will have significant impacts on scenic qualities, aesthetics, recreation, and human beings. No satisfactory mitigation for these impacts is possible.

D1 CEQA identifies the Sacramento-San Joaquin Delta as an area of "critical environmental sensitivity." (CEQA - Projects of statewide, regional, or areawide significance - Section 15206. 4 E) Therefore, it seems clear that potential adverse impacts have to be evaluated even more carefully in the Delta than those in areas of lesser significance.

Scenic and aesthetic values are not to be dismissed lightly. The legislative intent and policies of the California Environmental Quality Act (CEQA) make this absolutely clear when stating that there is need for an environment which is "pleasing to the senses and intellect of man." (21000. b) Furthermore, the act calls for "all action necessary to provide the people of this state with...enjoyment of aesthetic, natural, scenic...qualities." (21001. b) These policies are not obscure points hidden in the verbage of the CEQA guidelines, but are instead the basic premises upon which the entire act rests.

E1 The communities in eastern Contra Costa County along the Delta waterways serve as commercial centers for water-oriented recreation businesses. The Delta Master Recreation Plan (1976) states, "...recreational resources of the Delta are of critical concern to the State." Later in the report it says "The Delta is a major recreation resource in California, and the existing recreation activities are significant to the Delta's economy." The plan encourages development of future recreational water-dependent projects in areas where there are existing commercial recreation businesses, such as Bethel Island, Orwood, and Discovery Bay.

F1 According to the Draft EIS/EIR (page 3.1-31, Vol. 1, paragraph 1) "The primary impact of transmission lines on recreation resources is visual." And, in a section on visual impacts the Draft EIS/EIR (page 4.1-29, Vol. 1, 4.1.7.4) it states that significant visual impacts could be expected along routes A, B, and C "due to the incompatibility and visibility of transmission structures in the landscape, coupled with

C1 On page 21 of the Summary of Volume 1 of the Draft EIS/EIR, mitigation measures are identified for Southern Alternative B. We acknowledge that in areas where the proposed line does not parallel existing lines, there will be residual environmental impacts.

D1 See response to L-295 F1.

E1 Comment noted.

F1 The Draft EIS/EIR acknowledges that transmission lines in the Delta would exhibit relatively high visibility and visual incompatibility with Delta landscapes. Nevertheless, the range of visual impacts would be limited by the visibility of the structures that would support the lines, as discussed in Section 3.7, Visual Resources, in the Data and Impact Analysis Report included in Volume 2A of the Draft EIS/EIR. The implementation of the visual resources mitigation measures (Section 1.1.5 VII.A-J of the Final EIS/EIR) will be effective in helping to further reduce visibillty in open landscapes such as the Delta.

L-309 (continued)

F1 the high number of sensitive viewers, particularly residents and recreationists."

Tall, ungainly transmission towers would adversly affect the scenic beauty of the Delta area. No satisfactory mitigation is possible because the land is flat and marshy. The vistas stretch for miles and are unbroken by natural buffers such as rolling hills or tall trees.

G1 One suggested mitigation measure for the adverse visual impact is the use of nonspecular conductors and predarkened tower steel. However, this mitigation would conflict with another proposed mitigation to deal with potential waterfowl collisions. Under mitigation measures (page 5.1-13, Vol. 1, E Wildlife 4.) it is recommended that in areas of high waterfowl collision potential that static wires be marked or modified. The Contra Costa Delta routes are all in the Pacific Flyway and thus any lines crossing the area would have a significant impact due to the high potential for waterfowl collisions. The marking or modification would be to make the towers and wires more visible to the waterfowl and birds so they could avoid collisions. The proposed measures -- one for viewers and one for birds -- would cancel each other out.

H1 Recreational activities such as fishing, boating, hunting, waterskiing, and windsurfing are the basis of a major portion of the economy of the east Contra Costa Delta area. Bethel Island and Hotchkiss Tract (Sandmound Slough area) are designated recreational-residential communities in the Contra Costa County General Plan. Orwood Tract is also a developed recreation area. The sloughs and waterways running through the eastern part of the county provide miles of dispersed recreational activities. Recreational activities and designated recreational areas along the sloughs and waterways cannot be moved, but transmission line routes can be.

In C-OTP's Phase 1 Report, March, 1986 (Visual resources section, page 3-22, 3.5.2, "Viewers in the Study Area") it is acknowleded that "Generally, persons engaged in recreational pursuits comprise one of the most sensitive viewer groups. Recreational activities are freely chosen and people often seek settings that enhance their activity with attractive surroundings." We agree with this statement and feel that it should have been given much more attention during the compilation of the Draft EIS/EIR.

G1 When adopted mitigation measures directly conflict with one another, they will be resolved through consultation with the appropriate land management or regulatory agency(s). An example would be an instance where marking the static wire for waterfowl and other birds will have an adverse impact on visual resources.

H1 The recreational opportunities found in the Bethel Island/Sandmound Slough area are major reasons why the S-8D route crossing Bethel Island was not selected as part of the preferred route. The Orwood Tract has been added to Table 3.6-14 in Volume 2A which lists recreation resources; see Volume 1 of the Final EIS/EIR, Section 1.2.3.

The statement on page 3.6-79 of Volume 2A of the Draft EIS/EIR that there would be no significant impacts to recreation resources is based on the analysis of direct effects on this land use. Please see the statement on page 3.6-28 to the effect that recreation impacts are judged significant if the normal use of a recreation area would be restricted or precluded. Visual impacts on the quality of the recreation experience are treated as indirect impacts on recreation and other forms of land use in the Draft EIS/EIR. It is acknowledged that some recreationists could or do choose to avoid areas where they would be exposed to views of transmission lines. Given the existing presence of transmission facilities and other evidence of human activity in the Delta, however, it appears unlikely that construction of the COTP would induce sufficient numbers of recreationists to avoid the Delta to the point that the regional economy would be affected. Instead, it appears likely that people who are adverse to views of transmission facilities would visit areas in the Delta where these facilities are not already visible.

L-309 (continued)

H1

Acknowledging the above statement from the Phase 1 Report, we are nonplussed to find in the Draft EIS/EIR (page 3.6-79, Vol. 2A, 3.6.6 Residual Impacts) a statement under "Recreation" which flatly says, "There are no significant impacts to recreation resources." Indeed, if recreationists are "sensitive viewers" and freely choose attractive surroundings, a logical assumption would be that recreationists would avoid areas of unsighlty visual impacts and find better places to go.

I1

The Draft EIS/EIR is inadequate because it does not deal with the potential substantial adverse effects on human beings which would result from the construction of the transmission lines in the Contra Costa Delta area. CEQA, Section 21083 (c), says an EIR must consider whether "(t)he environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly." (Cross reference with CEQA Section 15382.)

The adverse effect on human beings in the Contra Costa Delta area will be an economic one. The C-OTP line will cause a loss of scenic beauty and destruction of the aesthetics now enjoyed by recreationists in the east Contra Costa Delta area. This physical change will cause recreationists to leave the area and look for water-recreation areas which are not blighted by transmission lines. The loss of the recreation business, a major economic resource for the Contra Costa Delta area, will have serious negative economic consequences for human beings.

CEQA speaks directly to this very situation in Section 15382., "A social or economic change related to a physical change may be considered in determining whether the physical change is significant."

J1

In the Visual Resources section (Draft EIS/EIR Vol. 2A, 3.7), we find under "Viewer Response" the statement, "Thus, viewers...at developed recreation sites are more likely to be concerned with visual amenity than viewers in industrial areas." The section continues setting out various classes of viewpoints generated by the VIEWIT computer program. Computer generated tables appear in the section, and at the end of the section we find photo-simulations purporting to illustrate the appearance of the project. One photo-simulation, figure 3.7-5 taken from Discovery Bay, represents the Contra Costa County Delta area. We can conclude from studying the illustration that if you

I1

The impacts resulting from reduction of scenic quality are discussed and assessed in Volume 2A, Section 3.7. The presence of the COTP might possibly result in a reduction of recreation-related income within the Delta, but this is unlikely given the number of transmissionlines already present. The nature and degree of the impact cannot be quantified. Regardless, the amount of the economic impact resulting from the COTP is not likely to differ significantly, depending upon which route is chosen. Section 1.1.5 of Volume 1 of this Final EIS/EIR lists applicable visual mitigation measures. See also response to L-309 H1.

J1

It is acknowledged that the visual impacts of a high-voltage transmission facility diminish with distance, as noted in this comment and in the response to comment L-309 F1. It is believed that the majority of residential views of the COTP in the Delta would be middleground views such as the photo-simulation reproduced in Figure 3.7-5 in Volume 2A of the Draft EIS/EIR. However, an additional photo-simulation has been included in Section 1.2.3 of Volume 1 of the Final EIS/EIR to illustrate foreground views in the Delta. It is a view toward the existing Intertie lines and alternative route segment S-8E1 (approximately 1,500 feet from the viewpoint) from a marina along Taylor Road on Bethel Island; this segment is included in the Project preferred route.

L-309 (continued)

J1

stand one-and-a-half miles from a transmission line on a hazy day that the lines appear one-and-a-half-miles away. This photo-simulation does not show the intrusiveness of the towers and lines as they would be viewed from approximately 1,000 feet away by residents, or as viewed directly overhead by boaters in Taylor Slough. Nor does it show a view of the lines that recreation visitors would have as they approach Orwood Tract's marinas.

K1

In contrast to the inadequate visual resources-recreation sections in the Draft EIS/EIR for the C-OTP lines, are the Land Use - Recreation and the Visual Resources sections presented in the Los Banos-Gates Project report (Volume 2B). The preparers of the Los Banos-Gates studies present evidence that they actually visited the sites and documented uses in the area thoroughly as is required by CEQA guidelines. The descriptions of specific roads, slopes, streams, paths, picnic tables, restrooms, camping spaces, and other recreational resources is quite detailed. On page 3.8-9 (Vol. 2b), it states that property owners' attitudes about the lines were solicited by PG&E staff when they were obtaining permission for access to particular areas for data gathering. This was not done in the Contra Costa Delta area. No property owners that we know of in the area were asked for their opinions or attitudes (or for that matter for permission to access their land for data gathering). Delta area landowners in the preferred route heard about the proposed lines for the first time in late 1986 when permission was asked for surveying.

L1

Reference: page 3.1-32, Vol. 1 Draft

The Draft EIS/EIR is in error when it states: (Paragraph 5) "However, no alternative routes cross hunting clubs." Southern Section Route B crosses Veal Farms and Veal Hunting Club. This private pheasant hunting club has been licensed and in operation for over 20 years. Private hunting activities are also found on the Dal Porto Property in Hotchkiss Tract and on Jersey Island. All of these regularly used hunting areas are crossed by route B in the Contra Costa Delta area.

M1

As for recreational-residential development, The Delta Wildlife Habitat Protection and Restoration Plan, published by the California Department of Fish and Game/U.S. Wildlife Service (1980), characterized Bethel Island as a "present and potential urban growth area." It further states, "At the western entrance to the Delta, near Bethel Island and Hotchkiss Tract,

K1

Extensive field reconnaissance was conducted in the course of the visual impact analysis that is summarized in the Draft EIS/EIR. This analysis included the identification of visual impacts on recreation areas that would not be crossed by the transmission alternatives but from which those alternatives might be visible. The preparers believe that the level of detail in which this analysis is reported is adequate to identify and compare the visual impacts of the alternatives. For additional supporting information, please refer to Section 3.6, Land Use and Status, and Section 3.7, Visual Resources, in the Data and Impact Analysis Report included in Volume 2A of the Draft EIS/EIR.

L1

Table 3.6-14 and the accompanying text have been changed in the Draft EIS/EIR (Volume 2A, Section 3.6) to incorporate the information mentioned on private hunting clubs on Veale Tract and Jersey Island. Please refer to Section 1.2.3 of Volume 1 of this Final EIS/EIR.

M1

See response to L-309 H1. It should be noted that Frank's Tract is to the east of Bethel Island while the preferred route is to the west of Bethel Island.

L-309 (continued)

M1

development will continue until the urban complex is filled in entirely."

The Optimum Plan - Franks Tract State Recreation Area, published by California State Parks and Recreation and the East Bay Regional Park District, acknowledges the importance of the area to the western Delta in its statement, "Recreation-residences border two-thirds of Bethel Island, which is the principal recreation destination point and support base in the central western Delta."

The Draft EIR/EIS does not adequately deal with the vital importance of established recreation sites, the potential for new recreational development, existing recreational-residential communities, or future recreational-residential development in the Contra Costa County Sacramento-San Joaquin Delta area. The Bethel Island Area R/UDAT Report: Community & Response by the American Institute of Architects R/UDAT, 1985, contains a comprehensive study of existing and planned recreational/residential development in this section of the eastern Contra Costa Delta area. (See also Appendices - Letter from Delta MLS.)

L-309 (continued)

RECLAMATION DISTRICTS

Economic Effects

N1

The Draft EIS/EIR completely ignored the long-term economic effects on reclamation districts in the Southern Section crossed by the transmission lines.

Land use economics consultant, Frederick M. Geier of Angus McDonald & Associates, Berkeley, California, explained, "Reclamation districts are responsible for maintaining levees and drainage systems to protect property owners in the districts from the hazards of flooding. Each district assesses each parcel of property within its jurisdiction an amount to defray the cost of providing levee maintenance. The amount of the assessment varies with land use type, parcel location, and relative benefit to the property. These assessments, which are separate from county property tax assessments, are based on land value not improvements and are collected directly from property owners."

Transmission line routing in the Southern Section was based, in part, on the existence of well-maintained levees to protect the towers from flood hazards. (See 4.1, Vol. 2A, "Route Segments Eliminated", page 2.4-3) For example, the Draft EIS/EIR states that a potential route over Webb Tract was eliminated because, "Webb Tract is subject to more flooding than some of the other Delta islands which would make repair and maintenance of the transmission line difficult." Then, on page 4.1-19, (Vol.1) when discussing Alternative Routes A, B, and C, the Draft states that the tower structures would be located in floodplains, "although many of these would be in diked agricultural lands." The superiority of the "dikes," or levees in the preferred route segment, in contrast to the potential for flooding on the Webb route, clearly influenced the selection.

C-OTP has proposed putting transmission lines through reclamation districts in the Southern Section thus taking advantage of the benefits of well-maintained levees, and yet, C-OTP representatives at public hearings stated that there are no plans to make any contributions to the reclamation districts for the continuing maintenance of the levees. The Draft EIS/EIR did not present any mitigation measures for reclamation districts.

N1

A reclamation district is a special district whose main function is the maintenance of levees and drainage systems to protect against the hazards of flooding. As a special district, a reclamation district has substantially the same governmental powers as those shared by most other local governments under the State Constitution and the California Water Code (Code Section 5000 et seq.) These powers include the ability to assess property owners to fund services. The preferred route of the COTP may possibly cross over the following reclamation districts: No. 2, No. 341, No.773, No. 800, No. 830, No. 1601, No. 2024, No. 2065, No. 2072, and No. 2113.

By law, reclamation district assessments are based on the benefits that the land (not including improvements) receives because it is protected from flooding by the reclamation district. Based on this "benefits" method of assessment, the COTP could impact reclamation district finances. However, several reclamation districts in the Delta area have foregone the "benefits" methodology in favor of assessing all land equally on a flat per-acre basis. The COTP will not have a fiscal impact in these districts.

The construction of a transmission line on agricultural land will reduce the agricultural production capacity of that land. The land at the footing location will no longer be available for agricultural production, resulting in a slight decrease in agricultural production and, consequently, a reduction of benefit. Generally, many farmers continue to actively farm the land under the tower. According to the "benefit" assessment methodology, the reclamation district assessment to the land owner should also be slightly decreased if towers are located on the property.

Faced with the slight potential for a decrease in revenue, the reclamation district has two options: 1) maintain the current level of services by reassessing the property owners so that the total assessments remain unchanged, thus shifting a greater portion of the assessment burden to the nonaffected property owners; or 2) decrease the level of services provided. In reality, the above-mentioned impacts rarely occur. Several reclamation district assessors in the Sacramento Delta have stated that they are not aware of a district ever responding to a transmission line by reducing the assessed benefits of the property in question. Although there may be a potential loss of benefit, it is not likely, from past practice, that the transmission lines will, in fact, affect the assessments of property owners within the reclamation districts or affect the maintenance of levees within the affected districts.

L-309 (continued)

N1

The Draft EIS/EIR acknowledges that there is a long-term property devaluation resulting from the encumbrance of the towers and lines crossing a parcel of land (page 3.8-3, Vol. 2A). Accordingly, the property owner will receive direct compensation to cover the cost of this loss of property value through a payment for easement rights.

This may be all well and good for the individual property owner whose land is crossed by the lines, but it is certainly not good for others in the same reclamation district. According to economist Frederick Geier, "The reclamation district's total basis for land assessment will go down. Correspondingly, the level of levee maintenance would either have to be reduced, or the maintenance costs would have to be spread to other property owners in the reclamation district. The net result would be that property owners near but not within the transmission line right-of-way would bear additional costs to maintain the levees to protect C-OTP's transmission lines."

This is an example of a physical project which could cause an adverse social and economic impact. (See CEQA Section 15382 and Section 21083.) This potential substantial adverse effect on human beings must be adequately mitigated. In this case mitigation can be in the form of continuing annual levee maintenance payments to the affected reclamation districts by C-OTP.

1. Please list all reclamation districts which will be crossed by the transmission lines.

2. Propose adequate mitigation measures for the adverse social and economic impacts on the reclamation districts.

Physical Effects

O1

The problems of transmission lines crossing over sloughs in the eastern Contra Costa County Delta area (Southern Section) were not adequately addressed in the Draft EIS/EIR.

Reclamation District 799's engineer stated in a separate letter presented at the public hearing on January 13, 1987, (See appendices) "...large transmission lines along our levee... will impair

O1

The District Engineer for Reclamation District 799 was consulted regarding the height of dredge booms used for maintenance. She stated (Burns, pers. comm.) that the dredge used for general levee maintenance is less than 50 feet tall, and they have not experienced problems working around the existing lines. Her concern was that a much taller crane must be used for periodic maintenance on the pump station house. Since the COTP can be sited to avoid the pump station house, and since the line is already being designed to allow for a minimum conductor height of 50 feet above sea level in all areas of potential flooding, there should not be a problem. The exact height of the crossing will not be known until the design is complete.

L-309 (continued)

O1

future access by dredges with long booms for maintenance or emergency repair work."

Emergency repair work on levees is never predictable and reclamation district directors will be obligated to call in the nearest available dredging company should emergency work be needed. There will not be time to determine if a particular dredge boom will fit under the transmission lines. Delay in repairs caused by low transmission lines could cause great loss of property and possibly lives.

1. What height of crossing would accomodate long dredge booms in the eastern Contra Costa Delta area sloughs?

2. How will raising the crossing heights over sloughs change the planned engineering in the Southern Section?

P1

CEQA guidelines (15125) direct preparers of EIRs to familarize themselves with local conditions. This is lacking in the C-OTP EIS/EIR Draft concerning the Southern Section -- Eastern Contra Costa Delta area. In Delta areas reclamation districts are responsible for maintaining levees and draining the tracts and islands. These districts usually have pumping stations and extensive drainage networks. These were not noted in the Draft EIS/EIR. The lack of information led to one obvious error in routing decisions.

The Draft EIS/EIR states on page 5.1-16, Vol. 1, "Routing of the transmission lines directly over water or irrigation pumps must be avoided."

Bob Gromm, chairman of the Board of Trustees of Reclamation District 799 presented written (See appendices) and oral testimony at the public hearing on January 13, 1987, regarding C-OTP's preferred route B and its impact on the pumping station in his district. The district engineer's letter stated, "The route along Dutch Slough Road in our district crosses over the district's main drainge pump station. These two large pumps are the backbone of an essential system that drains the district, most of which is below sea level. The pump structure rests on piles over a sump reinforced with sheet piles. To relocate the pump station would require rebuilding this substantial stucture as well as extensive regrading of several large drainage ditches."

P1

The routes identified in the Draft EIS/EIR are approximately 1,500 feet in width for study purposes. Within these 1,500-foot routes, a 200-foot wide right-of-way will be acquired on which the transmission line will be constructed. Field review indicates that the COTP can be sited in such a way as to avoid Reclamation District 799's pumping station. Other pumping stations can be similarly avoided.

L-309 (continued)

P1

1. Will Reclamation District 799's pumping station and drainage system be relocated? Will the drainage system be changed? How much will this cost?

2. How many pump stations and drainage systems in other reclamation districts will be affected by the transmission lines?

L-309 (continued)

WATERFOWL COLLISION POTENTIAL

Q1

The Draft EIS/EIR recognizes that powerlines are serious collision hazards for waterfowl and raptors. The document notes that there are no satisfactory mitigation measures which will alleviate this significant negative environmental impact in areas of high waterfowl concentration, especially in areas where low topographic variation and frequent poor visibility conditions exist (page 17, Vol. 1). The Draft EIS/EIR documents these conditions as existing in all southern routes. The San Joaquin-Sacramento Delta area in Contra Costa County experiences extreme conditions of poor visibility during the winter months, caused by both tule fog and ocean fog banks which drift east up the river channels. Foothill areas to the west of the Delta do not experience such frequent occurences of tule fog during the winter months.

In Volume 4A: COTP Map Appendix, Draft EIS/EIR, figure 4-3G correctly shows that much of the area in the eastern Contra Costa Delta area traversed by the proposed routes is a "waterfowl use area." However, in Volume 1, figure 3.0-7 the report's map indicates that the area from the western edge of Jersey Island to the eastern edge of Bethel Island and south in the corridor of C-OTP's preferred route B is almost devoid of waterfowl and thus apparently is not considered an "area of high waterfowl collision potential." This mapping data is not accurate according to local experts and knowledgable biologists familiar with the area.

Bob McClandress, staff biologist for the California Waterfowl Association, stated that there is high potential for waterfowl collision anywhere in the Delta area, particularly in an area of major confluence. Pete Margiotta, a hunter in the area for 36 years and a member of Sportsmen For Equal Access, stated that he is familiar with the waterfowl flights in the area and knows of no breaks in the flight patterns such as depicted on C-OTP's map. Dan Gifford, unit biologist for the Delta with the State Fish and Game Department, stated that it is impossible to draw a precise line on a map in the Delta where bird and waterfowl flight paths are concerned. He further noted that no one can accurately predict the changing patterns of waterfowl flights from year to year. Local observation, one of the best and most reliable means of identifying bird flights, confirms

Q1

The Department of Fish and Game states in their comment letter (L-333 Y): "The report's map of the "Affected Environment" (such as Figure 3.0-7) correctly shows the area of high waterfowl collision potential."

Areas not mapped as having high waterfowl collision potential are by no means "almost devoid of waterfowl." Collision potential was determined from maps of waterfowl feeding use levels provided by DFG (Wernette, pers. comm.). Use levels were determined from aerial surveys. Waterfowl use is determined mainly by land use patterns, especially cropping, which alters the attractiveness of lands to waterfowl. It is true that cropping patterns can and do change. Nonetheless, past uses provide the best available indication of future uses.

Areas with significant collision potential were defined from areas regarded by CDFG as having high and moderately high waterfowl use. Areas identified of moderate and low waterfowl use were considered to have less-than-significant collision impacts. This methodology accounts for the sharp lines on maps between significant and less-than-significant collisions. While no method for evaluating collision potential would be precise, extensive coordination with numerous waterfowl experts (e.g. Wernette, Duel, Gilmer, and Gifford pers. comm.) led us to no better method short of long-term detailed studies.

No abrupt changes in flight paths occur in the area. Increased numbers of flights, at heights where collisions may occur, are more likely near areas where feeding concentrations occur.

The statement concerning flight directions is not contradicted by the maps. Figure 4-3G, which is acknowledged in the comment as being correct, shows waterfowl use areas east and northeast of the proposed Delta routes. Despite the fact that flights occur to the east of the proposed routes, this does not mean that all areas east of the routes would have high collision potential. Waterfowl use levels at Jersey and Bethel Islands were considered "low" by CDFG (Wernette, pers. comm.).

An error was made in reporting mileages of significant waterfowl collisions. The correct figures by alternative are: Alternative A: 17 miles rather than 16; Alternative B: 23 miles rather than 26. These figures are consistent with the Draft EIS/EIR, Figures 4-3G (Volume 4A) and 3.0-7 (Volume 1).

The numbers of collisions that could occur are unknown, but are not expected to exceed a few hundred per year. This would be a very small source of mortality compared to other sources, including hunting which has harvested over a million birds per year in California until the last few years. It is doubtful that collision mortality along the COTP line will have a population impact on species.

Mitigation measure V.E. in Section 1.1.5 of the Final EIS/EIR is intended to be applied in the areas of the Sacramento River Delta and other critical areas where it is determined in consultation with the wildlife agencies that it may be effective.

L-309 (continued)

Q1

that major bird and waterfowl migrations fill the skys in the eastern Contra Costa Delta area every winter. The eastern Contra Cost Delta area is in the Pacific Flyway.

The Draft EIS/EIR itself adds another contradiction to the mapping pattern shown in figure 3.0-7, when it states on page 3.1-28 that Alternatives A and B (South) cross "important wetland habitats used by wintering waterfowl....Birds also make frequent flights from the Suisun Marsh and adjacent areas to feeding areas east and north east of the proposed route(s)." Jersey and Bethel Island are located east of Suisun Marsh. Further, on page 4.1-23, Vol. 1, the report states, "Twenty-six miles of Alternative B would have significant waterfowl collision potential. This impact cannot be mitigated."

Winter fog conditions and major winter waterfowl and bird migrations leading to bird collisions in the eastern Contra Costa Delta area are dismissed rather lightly in the Draft EIS/EIR when Alternative B is designated as an "environmentally superior route."

1. The eastern Contra Costa Delta should be re-evaluated and further consideration should be given to the danger of new transmission routes in this area.

2. Please reconcile the map (figure 3.0-7, Vol. 1) and the text on page 4.1-23, Vol. 1.

L-309 (continued)

WATER WELLS & PUMPS

R1

The Draft EIS/EIR states on page 5.1-12, Vol.1, "Project features, access roads, and rights-of-way shall not be constructed to interfere with currently producing groundwater wells." The report also states on page 5.1-16, Vol. 1, "Routing of transmission lines directly over water or irrigation wells and pumps must be avoided."

Jim Blake of Contra Costa County's Environmental Health Department has stated that there are hundreds of groundwater wells in eastern Contra Costa County. The Environmental Health Department does not have an accurate count of the wells which supply domestic water to individual residences, but it does have some records on small mutual water company wells.

The Draft EIS/EIR did not provide even an approximate count of the water wells crossed by the proposed transmission line routes in the Southern Section. The eastern Contra Costa Delta area in the proposed alternative route paths does not have municipal water service. All domestic water is drawn from wells.

1. Please provide a complete list of all water wells, pumps, and irrigation systems crossed by the Southern Section Alternative Routes.

2. How will the transmission project compensate well owners crossed by the right-of-way?

R1 Locations of currently producing groundwater wells will be considered during the final routing adjustments. Identifying all wells on all alternative routes is unnecessary for assessment of impacts on water supply, since the mitigation measures would reduce the impacts to less-than-significant levels. Mitigation measures include adjusting the route to avoid interfering with the wells. Landowners will be compensated for any wells which are rendered unusable because of the transmission line. See Section 1.1.5 of the Final EIS/EIR.

L-309 (continued)

BETHEL ISLAND
FIRE PROTECTION DISTRICT
3045 Ranch Lane/P.O. Box 623
Bethel Island, CA 94511
Business Phone (415) 684-2211

Feb. 26, 1987

Environmental Coordinator
California-Oregon Transmission Project
P. O. Box 660970
Sacramento, Ca. 95866

To whom it may concern:

S1 After reviewing volume 1 and volumne 2A of the draft environmental impact report and the COTP supporting environmental report, it appears that the fire protection concerns may not have been adequately addressed. The Bethel Island Fire District would like these problems addressed to our satisfaction prior to any physical activity starting on this project.

I will list concerns we have with your project, some of which are mentioned in volumne 1 and 2A.

1. On page 1.1-2 volumne 1, last paragraph, December 22, 1982, power line and towers blown down. These power lines will be crossing open land in most instances and since a large percentage of the soil in the Bethel Island Fire District is peat dirt which burns and cannot be extinguished by means other than flooding, we feel that primary company responsible for this project should agree to pay for extinguishment of all fire started by or connected to this project. Depending on the size of the area affected the cost can be enormous.

2. Page 2.1-20, Southern section alternatives and options. If the power lines in alternative A or B are installed they will add one more obstacle if they fall or otherwise block the roads leaving Bethel Island. We feel that this could happen during flooding or a major earthquake in addition to the towers and power lines being blown down.

3. Page 5.1-18, J. Field, Corona, and Safety considerations.

   5. Equip all vehicles working along right of way with fire fighting equipment. Equipment should be outlined by the local fire district.
   6. Any plan for correct fire district response should checked by the local fire district or formulated by the local fire district at the expense of agency controling the project.

4. Page 3.10-1, volumne 2A, section 3.10.2 Potential Impacts, Paragraph 2. Main fire hazards, We agree that these are serious fire hazards and should be addressed. In addition to these considerations I will again direst your attention to the continueing problem of fires occuring from downed power lines. These fires can and will result in many thousands of dollars being spent for extinguishment.

S1 See responses to L-324.

L-309 (continued)

BETHEL ISLAND
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S1

These costs cannot and will not be charged to the Bethel Island Fire District.

5. Page 3.10-17, 3.10.4.4 Field effects on cardiac pacemakers and flammable materials. Since numerous people from other states and areas of California may not know of the pacemaker hazard prior to contact with the problems associated with the power lines, it appears that short of having some one check all persons entering the Bethel Island area and in the Delta it may be impossible for us to keep persons with the inappropriate pacemakers from exposure.

Sincerely,

Joseph J. Whitener, Chief
Bethel Island Fire Protection District

L-309 (continued)

PROJECT ALTERNATIVES

Discussion of project alternatives was inadequate in the Draft EIS/EIR.

Alternative Routes

T1 A routing alternative, the Antioch S-7E and S-7F, is covered in our sections, "Routing Guidelines," "Soils and Geology," and "Route Selection." Other alternative routes which were not explored in any detail by the Draft EIS/EIR are the opportunities existing east of the Sierra and those parallelling Interstate 5. These alternatives were dismissed without sufficient information.

Alternative Power Supplies

U1 Our section "Economics of the C-OTP" presents viable alternatives to the transmission project.

New Technology

V1 New information, not available during the preparation of the Draft EIS/EIR, came to light during the month of February, 1987. This new information on superconductive compounds should be made a part of the Final EIS/EIR.

The National Science Foundation announced on February 15, 1987, that researchers, Dr. Paul C.W. Chu at the University of Houston and Dr. Mau-Kuen Wu at the University of Alabama had produced a superconductive compound. According to the New York Times, wire made of the compound could have vast implications in the transmission of electricity.

Dr. Chu, in a phone interview on February 20, 1987, told us that wire made from this compound can transmit electricity great distances without loss of power, and added another advantage was that transformers were not needed. When asked about the possibility of using the compound for an undertaking such as the California-Oregon Transmission Project, Dr. Chu said that the ultimate savings of superconductivity would more than offset the costs of installing the underground line. Dr. Chu said such a system would be better for the environment. The

T1 Discussion of an alternative east of the Sierra Nevada mountains is presented in the Draft EIS/EIR, Volume 1, Section 2.5, page 2.5-7. See also response to T-69 F. A route alternative parallel with I-5 does not allow use of the upgrade of the existing Western 230 kV transmission lines, thereby requiring the construction of many miles of new line and increasing environmental impacts. See response to L-309 U.

U1 See responses to L-309 JJ and L-309 LL.

V1 One of the major objectives of the COTP is to increase the reliability of the existing AC Intertie. Use of a new undeveloped and unproven technology would not be appropriate for use on the COTP. These compounds are presently only in the early stages of experimental development and are not appropriate for consideration for the COTP.

L-309 (continued)

V1

article in the New York Times estimated development for perfecting the wire might take a "few years." However, when Dr. Chu was asked in our telephone interview about development time he said it could be greatly shortened if an appropriate funded project was available.

Information about the compound and its applications will be available in the March 2, 1987 journal, Physical Review Letters, published by the American Physical Society of New York.

To be certified as complete, the Final EIS/EIR should incorporate all available information on the new superconductive compound discovered by Dr. Chu and Dr. Wu. Its application to the economical transmission of power should be evaluated as an alternative to the transmission towers and lines proposed by C-OTP.

L-309 (continued)

AESTHETIC DAMAGE COMPENSATION

W1 Recently, the Colorado Supreme Court ruled that landowners must be compensated by power companies for damage to their land in cases where transmission lines cause loss of views or damage the land's beauty. In the past, Colorado courts normally refused to order power companies, cities, and railroads to pay landowners for aesthetic damage.

The Colorado high court's ruling was based on the fact that the Colorado Constitution specifically says private property is not to be taken or damaged without the owner being compensated. It should be noted that California's constitution in Section 19, Article 1, also specifically requires compensation to a property owner when property is taken or damaged. Therefore it is possible that such a finding could also be made by California courts if they follow the same line of reasoning as did the Colorado Supreme Court. (See appendices - Delta MLS letter.)

LAND USE MAPPING

X1 In Volume 4A, C-OTP Map Appendix, in the Draft EIS/EIR, land use and land status markings are not accurate in the eastern Contra Costa Delta area. Figure 4-1G, map C, does not show existing urban residential densities along Dutch Slough Road, nor does it show the existing urban density along Sandmound Boulevard, but instead categorizes the area as "other." Figure 4-2G, map C, does not show the existing residential areas along Dutch Slough Road nor those along Sandmound Boulevard. Also lacking is a designation for an approved subdivision at the end of Sandmound Boulevard.

Y1 Figure 4-1G does not indicate existing wetlands at the southeastern tip of Jersey Island, nor other smaller tule island wetlands in Taylor and Dutch sloughs. Both maps lack accurate counts and

Z1 indications of existing, developed recreation sites in the area. A careful study of the Jersey Island/Bethel

A2 Island/Sandmound area was done by East Bay Regional Parks, presented in a report entitled, Optimum Plan, Franks Tract State Recreation Area. Maps in the optimum plan report catagorize the wetlands at the southeastern tip of Jersey Island as "Areas of Sensitive Habitat."

W1 The Delta MLS letter cited in this comment asserts that the proposed power line would diminish property values because recreational demand in the area would decrease. The comment appears to suppose that compensation would be required for this "damage" under the Colorado Constitution and, hence, perhaps also under the California Constitution.

As the comment recognizes, the California courts have not gone so far. In California, an action for inverse condemnation requires an invasion of property which burdens a landowner to his detriment.

The comment is not further considered in this Final EIS/EIR, because it is based on legal authority which is not applicable in California, and it could be satisfied by action by the COTP.

X1 See the response to L-290 M. Also, the approved subdivision at the end of Sandmound Boulevard is described in Table 3.6-20, Volume 2A, Phase III, of the Draft EIS/EIR.

Y1 Figure 4-1G has insufficient resolution to show the wetlands referred to in this comment. These wetlands are mapped in Figure E-7 of Appendix E in Volume 3A of the Draft EIS/EIR.

Z1 Figure 4-2G shows the location of major recreational sites in the Delta area between the Sacramento River and Tesla Substation. Dots were used to display these sites rather than actual boundaries in order to produce a more readable map.

A2 The "Area of Sensitive Habitat" is listed as a high quality wetland on Taylor Slough in Table 2 of the Summary of Volume 1 of the Draft EIS/EIR to be avoided by all disturbance after additional field study during final right-of-way siting.

L-309 (continued)

B2 Field investigations should be conducted in the eastern Contra Costa Delta area and the maps revised before certification of the final EIS/EIR.

CONTINUING COMPENSATION

C2 The proposed right-of-way easement compensation plans for the entire transmission route presented in the Draft EIS/EIR do not take into account the continuing impact of the right-of-ways for years to come. The costs for taking forest lands out of production for many years cannot be adequately mitigated by a one-time easement payment. It is impossible to calculate the future value of the lost productive land today. As supply and demand for forest products changes, the lost value of the non-productive land will change. We feel the only reasonable compensation for rights-of-way would have to be yearly payments based on actual costs and losses. This same reasoning can also be applied to the loss of productive farm land and the continuing costs associated with working around the tower bases. Labor cost will fluctuate over the years as will the price of farm products. Compensation for the continuing loss and continuing disruption to irrigation, planting, and land use practices required by the placement of the towers and lines must be paid for on an annual basis, not a one time payment.

INTERNAL INCONSISTENCY IN DRAFT EIS/EIR

D2 A disturbing aspect of the Draft EIS/EIR is the more thorough alalysis provided for the 84-mile Los Banos-Gates Transmission Project versus that provided for the 340-mile California-Oregon Transmission Project. Although the length of the C-OTP is four times that of Los Banos-Gates, the supporting environmental reports (Vols. 2A and 2B) are about the same size, the technical appendices for the shorter route is three times larger than for the longer routes (Vols. 3A and 3B), and the maps appendices are about the same size (Vols. 4A and 4B). Apparently much more work was done on the Los Banos-Gates segment and the resulting analysis is superior. Why were 12 technical appendices required for the 84-mile route while only 5 technical appendices were required for the 340-mile route?

B2 See response to L-306 U. The COTP will conduct additional biological, archaeological and other field investigations along the preferred route in response to environmental requirements beyond NEPA and CEQA, such as the Threatened and Endangered Species Act and the National Historic Preservation Act.

C2 Western is forbidden by law to compensate landowners (for easements) on an annual basis unless specifically authorized to do so by Congress. See also response to L-184 A.

D2 The Los Banos-Gates sections of the Draft EIS/EIR were originated by PGandE and its environmental contractor prior to a decision between TANC, Western, and the CPUC to combine the environmental review of the two projects. The environmental process for the two projects began independently and the projects are being proposed by different entities. In January 1986 the lead cooperating and responsible agencies and the COTP proponents determined that because of the interrelationships between the projects, the projects should be considered under one joint Draft EIS/EIR. Similar levels of analysis were conducted for the two projects. However, in order to keep the document to a manageable size more summarization of the background data for the COTP was necessary. See also response to L-203 B.

L-309 (continued)

E2 Similarly, Volume 2C of the Draft EIS/EIR concludes that honeybees and cardiac pacemakers may be affected by electrical and magnetic fields (page 32), while Volume 2A, 3.10-13 concludes that household appliances have a maximum magnetic field greater than the transmission line.

PREMATURE EXPENDITURES

F2 The Draft EIR/EIS assures readers on page 2.1-6, Volume 1, that right-of-way acquisition processes will begin only after lead agencies' decisions on the Final EIS/EIR, and the C-OTP participants' decisions to proceed with the project.

This, however, does not seem to be the case in the eastern Contra Costa Delta area or in the timber areas in Siskiyou and Shasta counties. Landowners in the "perferred routes" have been approached by representatives of C-OTP participants and asked to give permission for route surveying. Landowners who have refused permission for surveying have already been called to appear in court for hearings. Preparations to survey C-OTP's perferred routes seems premature and makes it appear that decisions on exact routes have already been made, prior to the lead agencies even receiving comments on the Draft EIS/EIR. The costs (to landowners and the agencies) for court hearings on routes which may not be found to be environmentally acceptable by the lead and responsible agencies should be examined carefully. These expenses and activities cannot be considered those "that normally precede right of way acquisition" since the final route selections have not yet been made. In Volume 3A Draft, page A-6, it states, "Survey activities would begin when the selected route is identified...." Obtaining permission for surveying is certainly a "survey activity."

1. Has the "selected route" already been identified? If so, doesn't this circumvent the entire EIS/EIR decision-making process?

2. Have landowners in non-preferred alternative routes been approached for permission to survey?

3. How will the costs for personnel time and court hearings for premature surveying permission be

E2 Honeybee hives directly under the conductors (wires) of the COTP could be affected. If the hives were shielded with wire mesh or placed outside the right-of-way, studies have shown that no effects to the bees' activities in the hive would be seen. Flying under the line does not seem to affect bees.

Cardiac pacemakers will not be affected. A very few models could go into a fixed pacing mode directly under the line. This has never been a problem and no agency believes there is a real hazard for wearers of pacemakers. Newer models now incorporate designs to stop all possible effects, for example, most microwave ovens no longer affect pacemakers.

F2 The survey work on the preferred alternative was done to confirm the feasibility of the route. It is considered prudent to accompany the EIS/EIR process with survey work along the preferred route in order to support the project schedule. If the preferred route were to change, survey work would have to be conducted on the new route. In a few cases, landowners along optional or alternative routes have been contacted for permission to enter. The COTP costs during the project development phase, including the environmental process, are to be differentiated from costs during the project construction phase.

L-309 (continued)

F2 accounted for in the project's budget should the "preferred routes" be found unacceptable?

CONFLICT OF INTEREST

G2 The Draft EIS/EIR states in the Forword that Western Area Power Administration is the lead federal agency under the National Environmental Protection Act, and the Transmission Agency of Northern California is the lead agency under the California Environmental Protection Act. TANC is both a C-OTP participant and the lead agency under CEQA. Participants in the C-OTP, including WAPA, will decide whether or not to construct the C-OTP.

These relationships raise questions about conflicts of interest. At a local level in California, decision makers who have an obvious conflict of interest (such as land ownership or a business relationship) are not allowed by the Fair Political Practices Commission to participate in decisions which might benefit themselves or their employer.

No one who has a conflict of interest should be allowed to make a final determination on the EIS/EIR, nor should agency members be allowed to determine whether or not to construct the C-OTP.

G2 See response to L-330 D.

L-309 (continued)

MANDATORY DISCUSSIONS UNDER CEQA

The Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance and Enhancement of Long-Term Productivity

H2 Section 4.5 of the Draft EIS/EIR is defective and legally inadequate with respect to the analysis of the C-OTP transmission line impact on the Delta. Section 15126 (c) of the CEQA Guidelines specifically requires that special attention be given to impacts which narrow the range of beneficial uses of the environment. As beneficial uses of the Delta environment are not described, project impacts on those uses are not identified. Specifically, the ongoing potential for hazards to migratory waterfowl should be identified as an adverse impact which would degrade the long-term productivity of the Delta as a wildlife habitat. Similarly, the long-term impact on recreational values or productivity of the Delta should be discussed in this section.

I2 Another area of deficiency in this section is the lack of discussion of the long-term impact (loss of productivity) on productive gas wells and water wells along the transmission line route. The report should quantify the potential for new gas wells and water wells which would be precluded from development as a result of project implementation.

J2 This section should also be revised to include a discussion of why the project sponsor believes the project is justified now rather than reserving this project as an alternative for the future.

Growth Inducing Impacts

K2 The growth inducing impact discussion (Vol. 1, Section 4.6) is vague, ambiguous, deficient, and legally inadequate. The project is said to enhance the economic environment in California, yet the discussion concludes there would be no significant growth inducing impact. Doesn't an enhanced economic environment tend to enhance growth? How will the economic environment be enhanced? Will the project result in more energy intensive land uses if the project results in cheaper electrical power?

H2 Information on COTP impacts to the long-term productivity of wildlife habitat and recreation in the Delta have been included in the revision of this discussion in Section 1.1.4 of Volume 1 of the Final EIS/EIR.

I2 The impacts to existing productive gas and water wells is addressed in Sections 3.2 and 3.3 of Volume 2A of the Draft EIS/EIR. Regarding potential new wells, see L-309 M2.

J2 For a discussion of the current and future need for the COTP, see Section 1.0, Volume 1 and Volume 3A, Appendix B of the Draft EIS/EIR.

K2 See revised Section 4.6 (Growth Inducing Impacts) in Section 1.1.4 of Volume 1 of the Final EIS/EIR.

There are no energy-related obstacles to growth in California. Therefore, it cannot be assumed that the benefits of increased transfers of lower cost Pacific Northwest hydropower will enhance or reduce growth within the State of California.

L-309 (continued)

K2 CQUA Guidelines (15126 (g)) require a discussion of whether this project would remove obstacles to growth. The report relies on representations from participating power companies that this would not be the case. A legally adequate analysis would commence with identification of the jurisdictions which would be beneficiaries of the new power source. Then, each jurisdiction (cities and counties) would have to be interviewed to determine area constraints to development and whether increased supplies of cheaper power would affect new residential, commercial, and industrial development. Only then could a growth inducing impact analysis be performed.

If increased transmission system reliability and enhanced inter-regional power transfers can increase the quality of future commitments to providing power, then there is a de-facto growth inducing impact.

Unavoidable Adverse Impacts

L2 Section 4.7 of the Draft EIS/EIR is insufficient, defective, and legally inadequate. The report does not reflect an adequate understanding of the Delta region and thus fails to indentify potential impacts. As the alternatives analysis has not even included a non-Delta impacting route, erroneous conclusions are made.

M2 CEQA Guidelines (15126 (b)) requires not only an identification of impacts that cannot be alleviated, their implications, and the reasons why the project is being proposed, notwithstanding the effect. This discussion should include not only the impacts identified on page 4.7-1, but also seismic hazards, increasing flood hazards if levees are not maintained, loss of potential water wells, degradation of habitat value, degradation of recreation potential, and degradation of retirement community potential in eastern Contra Costa County.

Cummulative Impacts

N2 The cummulative impacts analysis of the Draft EIS/EIR is defective because cummulative environmental impacts to the Sacramento-San Joaquin Delta are not discussed. These impacts include waterfowl collision potential, degradation of wildlife habitat, aesthetic impacts, ozone production, and degradation of a recreational resource.

L2 The lead agencies believe the section is adequate. It lists the impacts, then refers the reader to both summaries and detailed discussions of unavoidable adverse impacts. To reach the Tracy and Tesla substations and also utilize the environmentally advantageous Western upgrade section north of the Sacramento River, crossing the Delta cannot be feasibly avoided.

M2 Seismic and flood hazards are impacts that could occur to, rather than from, the projects, and are therefore not included in the discussion of COTP-induced unavoidable adverse impacts. Impacts to potential (unbuilt) water wells, retirement communities, and recreational developments were included in Volumes 1, 2A, 2B, and 2C when known but were generally considered too speculative in nature to evaluate in this section in detail. For a discussion of the degradation of habitat as the result of the COTP, see Table 2 in the Summary of Volume 1, Volume 2A (Phase II Report, Table 3.5-7), and Section 4.0 of Volume 1 of the Draft EIS/EIR.

N2 Section 15130(a) states: "Cumulative impacts shall be discussed when they are significant." Section 15130(b) states: "The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project alone. . . . The following elements are necessary to an adequate discussion of cumulative impacts:

1. Either:

   (A) A list of past, present, and reasonably anticipated future projects producing related or cumulative impacts . . . or

L-309 (continued)

N2
(cont.)

(B) A summary of projections contained in an adopted general plan or related planning document which is designed to evaluate regional or area-wide conditions.

2. A summary of the expected environmental effects to be produced by those projects . . .

3. A reasonable analysis of the cumulative impacts of the relevant projects . . ."

Section 4.4.1 has been revised and fully complies with the CEQA Guidelines as written. The specific impacts to which the commentor refers are project related impacts. Their cumulative impacts in light of other reasonably anticipated projects are discussed in Section 1.1.4 of Volume 1 of this Final EIS/EIR.

L-309 (continued)

O2 As the report does not describe the transmission lines which exist and are proposed to link southern California to Canadian power sources, the potential of the proposed project to function in this larger network is not analyzed.

P2 Lastly, CEQA Guidelines require a list of past, present, and reasonably anticipated future projects producing related or cummulative impacts. For the C-OTP transmission line, this analysis must focus on the projects past, present, and reasonably anticipated within the planning jurisdiction of the areas which will be the beneficiaries of the increased power supply.

Rule of Reason

Q2 CEQA states that the range of alternatives required in an EIR is governed by the "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice. The key issue is whether the selection and discussion of alternatives fosters informed decision making and informed public participation. Because all the route options in the eastern Contra Costa Delta area cross the same terrain and microclimate, they are really the same route from an environmental point of view. Thus the Draft EIS/EIR does not provide decision makers with sufficient information to make an informed decision.

O2 See revised Section 4.4 (Cumulative Impacts) in Section 1.1.4 of Volume 1 of the Final EIS/EIR. See also BPA's IDU EIS for a discussion of the interrelatedness of the COTP with the existing system and proposed additions.

P2 Comment noted. See revised Section 4.4 (Cumulative Impacts) in Section 1.1.4 of Volume 1 of the Final EIS/EIR.

Q2 A full range of alternatives was originally considered for the COTP, including systems alternatives and routes outside of the Delta. The reasons for their elimination are discussed in the Draft EIS/EIR, Volume 1, Section 2 and Volume 2A, Phase II Report, Section 4.0. See also response to L-309 L2.

L-309 (continued)

APPENDICES

Bethel Island Area Association Draft Analysis of Routing Problems, July 1986

PROPP letter to TANC, December 31, 1986

Burns Engineering letter, January 13, 1987

Reclamation District 799 letter, January 5, 1987

Delta Multiple Listing Service letter, January 22, 1987

Contra Costa County Comments, February 20, 1987

L-309 (continued)

CALIFORNIA-OREGON TRANSMISSION PROJECT -- RESPONSE

DRAFT
ANALYSIS OF ROUTING PROBLEMS

for proposed routes
S-8A, S-8C, S-8D, S-8E, S-8F, S-8G, S-8H, S-8I,
S-8J, S-8 ALT 1, and S-8F1

in eastern
Contra Costa County, California

Prepared by

Transmission Line Subcommittee
of the
Bethel Island Area Association

July, 1986

L-309 (continued)

This report has been prepared in response to the proposed routing of the California-Oregon Transmission Line through the Bethel Island, Knightsen, Byron, and Discovery Bay areas in eastern Contra Costa County. The Draft Routing Guidelines (12/16/85) for the transmission project have been used as the format for our report. Each section in this report corresponds with sections outlined in the guidelines.

ENGINEERING

R2 (Design, System Planning, Technical)

Minimize: Unstable ground

A proposed transimission line route crosses Bethel Island where unstable ground has been recognized as a cause for concern. According to the Environmental Impact Report prepared for the Conner General Plan Amendment in 1984, on page 55, "...Bethel Island has subsided about 5 feet as of 1952."

R2 Comment noted. The preferred route does not cross Bethel Island.

GEOLOGY, SOILS and MINERALS

S2 Avoid: Liquefaction areas

Liquefaction was cited as a geotechnical hazard in the Bethel Island Conner General Plan Amendment EIR. Geotechnical reports (Kleinfelder, 1981; Jones, 1980) were cited in the EIR, and on page 52, the report states, "...loose to medium dense, fine to medium grained sands were encountered. ...The groundwater was

S2 Comment noted. The preferred route does not cross Bethel Island.

L-309 (continued)

S2 typically at a depth of 4 to 8 feet. ...Therefore, it is our opinion that the soils at the site are susceptible to liquefaction. It should be noted that this is the same conclusion reached by Jones (1980) for the Delta Coves project." The proposed transmission line runs directly through the Delta Coves project site on Bethel Island.

WATER RESOURCES

T2 Avoid: Proximate paralleling lake shores and streams

The proposed transmission lines run parallel to, or in close proximity to, or cross Taylor Slough, Dutch Slough, Sandmound Slough, Rock Slough (the water source for central Contra Costa County and Oakley), Dredger Cut, Indian Slough, and Old River.

U2 Minimize: Crossing floodplains and rivers

Jersey Island, Bethel Island, Hotchkiss Tract, Holland Tract, Veal Tract, Palm Tract, Orwood Tract, and Byron Tract are all designated by the Federal Emergency Management Agency as floodplains.

BIOLOGICAL RESOURCES

V2 Minimize: Small fisheries areas

Crossing riparian zones, wetlands and floodplains

Migration routes of game animals

Crossing of major flyways

The projected routes of the transmission lines in eastern Contra Costa County impinge on all of the above listed biological resources.

The Delta Wildlife Habitat Protection & Restoration Plan,

T2 See response to L-309 K.

U2 See response to L-309 L.

V2 Attempts were made to minimize the crossing of areas in Contra Costa County identified in this comment, within the COTP constraints. Sensitive fisheries, riparian zones, and wetlands will be avoided by spanning them. All of the Delta is a floodplain, but habitat values are generally low for most species because lands are farmed. Waterfowl flight areas are discussed in the response to L-309 Q1. No migration routes for terrestrial species are crossed.

L-309 (continued)

V2 published by the California Department of Fish and Game/U.S. Wildlife Service (1980), states on page 1-3, "...the Delta occupies a key position on the Pacific Flyway, which is the major migratory route used annually by west coast waterfowl and other birds." Bethel Island is the western entrance to the Delta and the other areas being considered for the proposed powerlines in eastern Contra Costa County lie along the western edge of the San Joaquin-Sacramento Delta.

The Habitat Protection report continues on page 2-9, "...the Delta is an important wintering habitat for 60% of the waterfowl that use the Pacific Flyway, and for 91% of all waterfowl that winter in California."

W2 The Sacramento-San Joaquin River system and the sloughs in eastern Contra Costa County are important fishery areas. The Bay-Delta waters contain 91 species of fish, and according to the Habitat Protection report, "Seventeen of these species are found only in this (Delta) system."

X2 Riparian habitats are found along the sloughs bordering the tracts and islands in eastern Contra Costa County. In a recent study, "Franks Tract State Recreation Area," prepared for the California Department of Parks and Recreation by the East Bay Regional Park District, it is noted on page 25 that, "Stands of riparian woodland and riparian shrub-brush on the more substantial islands (ringing Frank's Lake) provide habitat of the greatest structural and biological complexity and thus attract a great diversity of wildlife species..." Further on the report continues, "The marsh habitat, which occurs largely on islands is important

W2 The construction of the transmission line should not have any significant impacts to Delta fisheries since existing access roads would be used during construction, transmission towers would be placed outside of water bodies, and water bodies would be spanned by the conductors.

X2 Such important resources (designated unique and sensitive plant communities in the Draft EIS/EIR) will be avoided. See Table 2A in the Summary of Volume 1 of the Final EIS/EIR.

L-309 (continued)

X2 as a food source and shelter for waterfowl."

Little Frank's Tract, located northeast of Bethel Island, is maintained as a wildlife refuge by the State Parks Department. The Frank's Tract report states, on page 27, "...portions of Bethel Island contain small seasonal and permanent marshland areas and riparian habitat that are important for an even greater variety of wildlife species. Drainage channels also provide another valuable form of wildlife habitat."

The proposed transmission line crosses over Bethel Island's drainage channels and makes it way over other valuable shoreline riparian habitats.

ELECTRICAL/MAGNETIC EFFECTS

Y2 Minimize: Residential areas

Bethel Island and Discovery Bay are developed residential areas. The Delta Wildlife Habitat Protection and Restoration Plan characterized Bethel Island as a "present and potential urban growth area," on page 5-3. On page 5-6 of the same report it was stated, "Discovery Bay could well grow beyond a population of approximately 12,000 persons. ...At the western entrance to the Delta, near Bethel Island and Hotchkiss Track, development will continue until the urban complex is filled in entirely."

It should also be noted that Bethel Island's population is an older one with many retired persons. The 1980 census revealed that the island area had the second largest concentration of persons over 65 in the entire county. An older population is more subject to stress from noise (transmission hums) than are younger people, according to the U.S. Environmental Protection Agency.

Y2 Comment noted. The design standards for transmission line noise will be within limits established by EPA guidelines applying to environmental noise. See also response to L-329 C1.

L-309 (continued)

SOCIOECONOMICS

Z2

Minimize: Commercial Activities

The communities in eastern Contra Costa County which abut the Delta waterways serve as commercial centers for water-oriented recreation businesses. The Delta Master Recreation Plan (1976) states on page I-5, "All future planning...in the Delta should recognize that the...recreational resources of the Delta are of critical concern to the State." It further states, on page III-1, "The Delta is a major recreation resource in California, and the existing recreation activities are significant to the Delta's economy."

The Delta Master Recreation Plan encourages development of future recreational water-dependent projects in areas designated "Multiple Use" where existing commercial recreation businesses exist, such as Bethel Island, Orwood, and Discovery Bay.

Transmission lines overhead would severly impact established commercial recreation businesses which are major contributors to east Contra Costa's economy. Furthermore, the intrusion of the lines into a recreational area will probably preclude future recreational development.

Z2

The existing transmission lines may or may not result in a reduction of recreation related income within the Delta. The nature and degree of the impact from a new line on recreation cannot be quantified. Regardless, a comparison of the socio-economic impacts resulting from the alternative transmission line routes in part led to the decision to avoid crossing Bethel Island with the preferred route. See also response to L-309 H1.

LAND USE

A3

Avoid: Designated recreation sites

Adverse impacts of power transmission lines are addressed in the Delta Master Recreation Plan on page A-17, section 3, "Utility Projects," under "Scenic and Multiple Use Areas," where it states, "Projects in, on, or over the waterways shall be limited to existing corridors and locations to minimize scenic intrusions."

A3

Specific recreation resources were avoided whenever possible, given engineering and other environmental constraints. Dispersed recreation resources such as boating and fishing are so widespread in the Delta that it is infeasible to avoid all impacts.

L-309 (continued)

A3 Bethel Island, Holland Tract, Orwood Tract, and Discovery Bay are recognized by the State of California and Contra Costa County as valuable recreation sites.

In 1985 a national team of environmental, economic, development, planning, and architectural experts studied Bethel Island's potential for future growth. The team published a report entitled "Bethel Island Area R/UDAT Report -- Community and Response." On page 46, the report recommended the following goal: "Make the resources of the Delta region available for the public recreational needs of the Bay Area population consistent with protecting the environment and respecting the legitimate interests of community members for privacy and economic growth."

Minimize: Future planned urban areas (as specified in existing general plan)

Existing or potential mineral resource extraction sites

Recreation sites

Developed recreation areas

B3 The proposed transmission lines would cross many recreation sites and developed recreation areas (see previous responses under "commercial activities" and "designated recreation sites").

C3 At least two future planned urban areas, specified in the existing general plan, would be nearby or in the path of the proposed transmission lines. Last year the Conner Golf Course Condominium project on Bethel Island was approved under a general plan amendment by the County Board of Supervisors. The Sandmound Woods project in Hotchkiss Tract was also approved by the county supervisors as a general plan amendment last year.

B3 See response to L-309 A3.

C3 These projects were noted in Volume 2A, Tables 3.6-20 and 3.6-21 of the Draft EIS/EIR. The preferred route does not interfere with these "planned urban areas," as it does not cross Bethel Island.

L-309 (continued)

D3 As for mineral extraction sites, the proposed line crosses directly over active gas well sites on Bethel Island.

CULTURAL RESOURCES

E3 Avoid: Native American Heritage burial and ceremonial sites

Native American ceremonial sites are known to exist on high ground in the Bethel Island/Sandmound Slough area (Hotchkiss Tract).

VISUAL RESOURCES

Minimize: Areas of low visual absorption capability

Foreground and middle ground of sensitive viewing locations including homes and recreation sites

Developed recreation sites

Intruding or impeding views to Mt. Shasta*

F3 As stated earlier in this report, there are important recreation sites and developed housing areas under or near the proposed transmission lines. Furthermore, since the eastern Contra Costa County area is flat, vistas stretch for miles. No intervening hills or other natural visual barriers are available to conceal the proposed transmission lines from view.

G3 *We must admit that the proposed transmission lines in Contra Costa County will not impede views of Mt. Shasta, however, they would indeed intrude on our view of Mt. Diablo, a magnificent mountain treasured by all Contra Costans.

D3 The preferred route does not cross Bethel Island.

E3 See response to L-205 D.

F3 See response to L-309 S.

G3 See response to L-15 E. It is acknowledged that the various transmission alternatives in the Southern Section of the study area could intrude on views of Mount Diablo available from some viewpoints in the Delta. Section 1.1.4 of Volume 1 of this Final EIS/EIR includes these alternatives.

L-309 (continued)

Positive Resolution of Powerline Problems P.R.O.P.P.

P.O. BOX 339 · BETHEL ISLAND, CALIFORNIA 94511 · 415-684-3382/684-2110

December 31, 1986

The Transmission Agency of Northern California,
James Beck, Chairman
The Western Area Power Administration,
William Clagett, Administrator
PO Box 661030
Sacramento, CA 95866

Reference: California-Oregon Transmission Project
Draft EIR/EIS

Gentlemen:

H3 P.R.O.P.P. is requesting, on behalf of the East Contra Costa County Area, an extension of the response period beyond the present February 3, 1987 cut off. C.E.Q.A. Section 15105 (a) allows over 90 days in unusual circumstances, and an eight volume EIR is an unusual circumstance. N.E.P.A. Section 40CFR -- 1506.10 (d) also allows the Lead Agency to extend the response period. The reasons for P.R.O.P.P.'s request are as follows:

The lack of public input in the early Agency and Public Scoping meetings is one reason. The California Public Utilities Commission staff has already noted the lack of public input in its comments on the Committee Review Draft of the EIR/EIS. See item D.30 in September, 1986 Comments. To add to this we have been presented no evidence that the Agency and Public Scoping meetings of May, 1985 were advertised or noticed adequately to the public. Per C-OTP's Summary of June, 1985 "Agency Scoping Meeting Contacts," page 1554 T, Appendix C -- the only county agency contacted in Contra Costa was the Contra Costa County Resource Agency Conservation District. Since the entire area south of the river which has alternative routes is unincorporated, the lead agency was and is the Contra Costa County Community Development Department (CCCDD). The appropriate lead agency was not contacted. Further, the CCCDD has a standard notice list which was not used.

The Summary of Alternative Route Workshops dated February, 1986 shows again that efforts to involve the public were minimal and ineffectual. The November, 1985 Alternative Workshops were advertised in the Antioch Ledger, Contra Costa Times, and Tracy and Stockton newspapers. Further, the Ledger-Times advertisement contained a map captioned "Antioch Area." The papers that are most closely

H3 See responses to T-152 B, T-152 C, and T-152 F.

L-309 (continued)

H3 east county papers are the Brentwood News, the Bethel Island Beacon, Discovery Bay Soundings, and the Oakley Gazette. These papers were not used for advertising, nor were they furnished press releases.

In Appendix B of the Summary, page 923AA - "Telephone Networking Contacts," it shows that the Bethel Island Municipal Improvement District was contacted. The chairman of the board of directors, Howard Holmes, assures me that he is aware of no contact until May of 1986 when C-OTP asked to rent the BIMID hall for a public presentation. Since the meetings C-OTP held in east county in May, 1986 and November, 1986 were too late to influence the EIR/EIS or the route alternatives, the public input of the east Contra Costa County Area is almost totally lacking. We must make up for this now in our comments on the Draft EIR/EIS.

Further, although you have given us in excess of 45 days to comment, the communities received the documents one to two weeks into December, rendering us, with the holidays, only approximately 30 days to respond with written comments and 15 days to respond at the scheduled local public hearing.

In summation, due to the lack of meaningful early scoping sessions and workshops in our area, the document is severely flawed. The complexity of the issues require that we retain the specialized expertise of consultants to help us with our responses. The community feels it deserves an additional 45 day extension of the response period.

Very truly yours,

Constance Brady

Constance Brady, chair

cc: California Public Utilites Commission, Mike Burke,
Regulatory and Environmental Coordinator
US Congressman George Miller
State Senator Daniel Boatwright
State Assemblyman Phil Isenberg
Contra Costa County Supervisor Tom Torlakson
Contra Costa County Community Development Department
Office of Planning and Research, Sacramento
California Energy Commission

L-309 (continued)

BURNS ENGINEERING
P.O. Box 761 • Bethel Plaza, Bethel Island, CA 94511 • 415/684-3470

January 13, 1987

Envoronmental Coordinator
California-Oregon Transmission Project
PO Box 660970
Sacramento, CA 95866

13 As district engineer for Reclamation District 799, I have two concerns regarding the Draft EIR/EIS for the C-OTP transmission lines.

The route along Dutch Slough Road in our district crosses over the district's main drainge pump station. These two large pumps are the backbone of an essential system that drains the district, most of which is below sea level. The pump structure rests on piles over a sump reinforced with sheet piles. To relocate the pump station would require rebuilding this substantial stucture as well as extensive regrading of several large drainage ditches.

The other concern I have about these large transmission lines along our levee is that they will impair future access by dredges with long booms for maintenance or emergency repair work.

Sincerely,

Barbara Burns, RCE

13 See response to L-309 01.

L-309 (continued)

January 5, 1987

Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

RE: Project's impact on a reclamation district.

J3 With the preferred route for the powerlines running in a general southeast direction across a floodplain following the eastside of Jersey Island, it crosses Dutch Slough and passes over Reclamation District 799's main Dutch Slough area pmphouse containing two pumps.

These pumps remove water from the District's drainage system that drains all the floodplain acreage from Jersey Island Road east to Sandmound Slough. The pumphouse also is used to store sandbags, oils, a spray rig and supplies for the District.

Since no structures will be allowed under the powerlines, RD-799's main Dutch Slough pumps and the elevated pumphouse would have to be moved. Changing the pumps' location would disrupt an essential drainage system that has been established for over 50 years.

Because the pumps discharge into Dutch Slough, they have to be located near the levee. To find a new location for the pumps in the midst of fully developed, expensive waterfront property would be very costly and probably give cause for condemnation proceedings. Undeveloped waterfront land is priced at about $50,000 to $60,000 per 50-foot lot. The big unknown is the cost of right-of-ways, engineering and grading the drainage ditches for hundreds of acres so the drain water would run to the pumps' new location.

Moving the pumps also brings up the problem of how to placate the new pump site's neighbors. No one wants the pumps to be next door to their property worth well over $100,000. RD-799 is very much aware of the pumps' present neighbor's complaints about the noise the pumps make turning off and on automatically 24-hours a day during times of heavy drainage.

The Board of Trustees of Reclamation District 799 finds the EIR/EIS in Vol. 2A, table 3.4-4 addresses the marshlands of Dutch Slough, but doesn't address the impact on the land's drainage when pumps have to be moved to new sites. This drainage has a definite impact on agricultural, recreational and residentia lands and properties within the three mile corridore studied for the EIR/EIS.

Sincerely,

Robert D. Gromm, Chairman,
Board of Trustees, Reclamation District 799
P.O. Box 447
Bethel Island, CA 94511

J3 See responses to L-267 A and L-267 B.

L-309 (continued)

DELTA MULTIPLE LISTING SERVICE

P. O. Box 383
Bethel Island, CA 94511
(415) 684-2278

January 22, 1987

Committee for Positive Resolution of
the Powerline Problem (PROPP)

TO WHOM IT MAY CONCERN:

K3 We are shocked that with the thousands of uninhabited acres in the area that a power pole path would be selected that runs over the top of homes, business, ranch lands and heavily used recreational areas.

These inhabited and environmentally sensitive areas would be absolutely crushed by this proposed power line.

This power line would have a very negative effect on property values in the area. This is a recreational area and a very fragile market, most of the people visiting and living in Bethel Island are here solely for the fishing, boating, serenity and natural habitat. They certainly would not be interested in an area that has unsightly power lines buzzing over their heads. Less demand in the area would mean diminished property values, prices and taxes.

As it is, many prospective buyers have repeatedly turned down properties along Taylor Road on Bethel Island because their views would be onto Jersey Island and the existing power line towers - which they say is a big turn-off ! ! It is a fact that properties on Taylor Road historically take longer to sell than comparable property in other areas and the existing power lines are most assuredly part of the reason.

It is the request of the Delta Multiple Listing Service that a path for these power lines be located in a less inhabited and environmentally sensitive area.

Respectfully,

DELTA MULTIPLE LISTING SERVICE

K3 See the Draft EIS/EIR, Volume 1, Section 4.1, page 4.1-29 for a discussion of visual impacts and potential mitigation measures in this area. Also, refer to Section 1.1.5 in Volume 1 of the Final EIS/EIR for a list of mitigation measures. See also response to T-82 C.

L-309 (continued)

Community
Development
Department
County Administration Building
651 Pine Street
4th Floor, North Wing
Martinez, California 94553-0095

Phone: 372-2035

Contra
Costa
County

Harvey E. Bragdon
Director of Community Development

February 20, 1987

Mr. Richard A. Olsen
Environmental Coordinator
California-Oregon Transmission Project
P.O. Box 660970
Sacramento, CA 95866

Gentlemen:

L3 Thank you for the opportunity to review the Draft EIS/EIR on the California-Oregan Transmission Project. While the Draft EIS/EIR raised numerous issues worthy of in depth dialogue, our comments will focus on the deficiencies of this document as it relates to the project within Contra Costa County.

The draft goes into great depth on discussing the sensitivity of this project to existing and proposed recreational facilities. The Sacramento-San Joaquin Delta is identified by this County as well as the State of California as an area of unique concern. It is an important existing component of the recreational resources of Contra Costa and adjacent counties. Its recreational potential looms even larger. For this reason, our County is especially sensitive to any project which could negatively impact this resource or its economic contribution to the County. The proposed transmission line raises special concerns in this regard. Recreational facilities are identified on Figure 3.0-7. Both the document text and that figure fails to disclose that the East Bay Regional Park Districts recently adopted master plan proposes the development of a major shoreline park on the southeastern corner of Jersey Island. That proposed park is planned to be one of the major recreational facilities serving the eastern portion of this County and is proposed to be a major recreational high use facility. The preferred alternative does not appear to take this proposal into account or discuss the potential impact between the powerline and that specific proposal. This should be done in depth.

It also needs to be pointed out that while the Clifton Court Forebay is not a designated park, that it does have a strong recreational component. Fishing is a popular use of the site and in the long term improved recreational facilities along its perimeter should be anticipated. The final EIS/EIR needs to address their recreational uses as they relate to the preferred alternative.

A second area of major concern is that any type of new facility being considered for routing through the Delta should be aware of the potential levee failures and should be prepared to be considered a beneficiary of Delta levee protection and therefore participate in any funding of Delta levee improvements. The Draft EIS/EIR does not mention the possible flooding dangers in the Delta areas.

L3 See responses to L-290 A through L-290 N.

L-309 (continued)

L3

Page 4.1-19 (4.1.4.4 Southern Section) refers to the Delta area as diked agricultural areas. This appears to underplay the size of Delta levees and potential flooding impacts. This section should be revised to better indicate the magnitude of flood protection provided by Delta levees. Page 4.1-10 and 11 (4.1.1.4 Southern Section) should include the history of Delta levee failures in the area and how this may impact the transmission line. The California Department of Water Resources could be noted as a source for specific information. Once this concern is raised, a possible mitigation measure could be financial participation with local districts and state and federal agencies for both ongoing maintenance and long-term major rehabilitation of Delta levees. The final EIS/EIR should specify specific mitigation measures which can be utilized to protect the Delta levees should this powerline proposal be approved.

On Page 36-58 of Volume 2A it correctly states that it is this County's policy on siting transmission lines to use existing transmission line corridors wherever possibly. In this fashion existing towers can many times be reconstructed to meet the future needs. Where reconstruction of existing towers is not feasible, the placement of parallel lines concentrates the visual and other impacts to one location rather the spreading the impacts out to new locations. The Draft EIS/EIR suggests that a rationale for utilizing new line locations will spread out the risks of interruption to service in the event of a disaster. The document does not, however, provide any risk analysis on the potential for such a disaster to occur, nor does it equate this potential risk with the environmental consequences of having a powerline located in more pristine areas. An environmental impact/risk analysis is needed to balance these concepts. Absent clear public safety benefits, it would not appear appropriate to create a new powerline which doesn't parallel existing facilities. This point is related to our second area of concern dealing with needs for Delta levee maintenance. If solutions are provided for funding assistance of Delta levees, it should mitigate the need for a new separate alignment through the Delta. On Page 16 of the Summary in Volume I (top of page) it states that flood proof structures will be "totally effective" in mitigating this impact. If so, the need for a separate new alignment is open to question.

On Page 21 of the Summary in Volume I it states that there will be a loss of $2,500 in agricultural production value per corridor mile. Can a similar loss in recreational potential value be calculated; if so what is the dollar impact?

As our comments above indicate we disagree with the statement in the second paragraph on Page 2-1-21 in Volume I that Alternative 8 is the environmentally preferred alternative because it spreads out the impacts of power lines in our County, without justification of the need for separation from the existing intertie.

On Page 5.1-1 in Volume I under the caption Construction Activity Access and Location, item #5 states "All access roads not required for regular maintenance activities will be closed using the most effective and least environmentally damaging methods". This is a very vague mitigation measure. Of specific concern is that construction activities be conducted to minimize this impact on the struggling agricultural economy and that lands be returned to agricultural

L-309 (continued)

L3 production if they aren't required for future maintenance use. This mitigation measure should be made more specific to returning land to productive uses.

On Page 5.1-4 under electrical effects item #3 states that ambient noise surveys will be conducted at selected sites and can be utilized if complaints are received after the project is placed in operation. What criterion will be utilized to select sites? Proximity to residences? Is this an anticipated effect of the project which requires mitigation?

CEQA requires the consideration of several factors which aren't specifically required by NEPA. One important area of discussion required by CEQA deals with growth inducing impacts. I could locate no specific section dealing exclusively with this issue. That discussion becomes important in consideration of the need for the project. As you are aware, the State of California Energy Commission every few years publishes a report on energy needs in this State. The final EIS/EIR needs to relate this project to the assumptions and conclusions of that agencies findings on need for new facilities. For example, if this project is not included within the assumptions of that report and there is a projected surplus of electrical generation capacity, then this project might be deemed growth inducing. The final document needs to have a specific section dealing with growth inducing impacts and discuss the relationship to California Energy Commission policies.

On Figure 4-1G in volume 4A the map of land use is incorrect on the south side of Dutch Slough just southerly of Jersey Island. There is a east-west fringe of urbanization from Bethel Island Road to Jersey Island Road along the levee which is missing from your map. Two of the alternative alignments cross this area including the preferred alignment. The final EIR needs to consider the compatability of the project proposals to these homes.

The aforementioned comments focus on perceived inadequacies in the Draft EIS/EIR. After the final EIS/EIR is completed, I request specific notification of any hearings on public meetings that are arranged to finalize a decision on this project or to finalize the selection of alternatives alignments. Additionally, I would request receipt of a copy of this Notice of Determination on this project within a few days of it being filed.

Sincerely yours,

Harvey E. Bragdon
Director of Community Development

HEB:ed

jwc2/olsen.jc