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UNITED STATES DEPARTMENT OF ENERGY

MEETING OF NATIONAL PETROLEUM COUNCIL

Auditorium
Forestal Building
1000 Independence Avenue, S.W.
Washington, D.C.

Wednesday, December 12, 1979
9:00 a.m.

REPORTER'S TRANSCRIPT

The meeting convened at 9:00 a.m., pursuant to notice, Chairman Charles H. Murphy, presiding.

ALSO PRESENT:

HON. CHARLES W. DUNCAN
Secretary of Energy

HON. R. DOBIE LANGENKAMP
Deputy Assistant Secretary of Energy
Oil, Natural Gas & Shale Resources

ROBERT Y. SELLERS
Chairman, U.S. Petroleum Inventories, Storage and Transportation Capacities

JERRY McAFEE
Chairman, Refinery Flexibility

H.F. HAYNES
Vice Chairman, National Petroleum Counsel

C. JOHN MILLER
Vice Chairman, Materials and Manpower Requirements

I N D E X

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P R O C E E D I N G S

CHAIRMAN MURPHY: Good morning, Ladies and Gentlemen. The Seventy-eighth Meeting of the National Petroleum Council will please come to order.

You have before you a copy of this morning's agenda. You'll note that we have a lot of paper before us. These are the results of the studies requested by the Secretary. I can see from looking around the room that we have a good turnout and in respect to the Secretary's and everyone's time, we'll dispense with the calling of the role, and the record will simply reflect the check-in there.

If you didn't check in, please notify a member of the staff of your presence.

We do have a new member--the Honorable Peter MacDonald, Chairman of the Council of Energy Resource Tribes. And I would ask Mr. MacDonald to be recognized. Welcome to the Council, Mr. MacDonald, and we look forward to working with you.

In respect to the Secretary's time, who has several members of the leadership waiting for him at this moment on the Hill, we'll do other introductions in just a bit and I'll proceed directly to the Secretary himself.

You have seen the dossier on Secretary Duncan. He has a distinguished record. He is a graduate of Rice University, did graduate work at the University of Texas, came

into the family business--the Duncan Coffee Company. After a time this was merged into the Coca Cola Company and he rose to senior positions in Coca Cola, and withdrew as president of Coca Cola some years ago to return to Houston. He was appointed to Deputy in the Department of Defense and made great contributions there, and as you know, in recent months was asked by the President to take over this key and vital role in our government. So much for the record.

Now, I happened to be in the office of dear ol' Sam Israel, the coffee baron of New Orleans when word came through on the broad tape of Charles Duncan's appointment. Sam's secretary handed this to him and he turned and showed it to me and he turned to me and said, "Charlie, do you know this fellow?" I said, "No, I don't." And he says, "Well, I do. And I just want to tell you something. He is able and he's honest." I suggest to you, Ladies and Gentlemen, those are the requisites. The Honorable Charles Duncan, Secretary of Energy.

SECRETARY DUNCAN: Thank you very much for that introduction, which was a little bit too generous. I'm glad to be here this morning and to have a chance to talk with you because the National Petroleum Council, or the NPC as I'll be calling it, is not only a committee with a history of substantial contribution to government energy policy, but it's a committee of particular importance to the Department of Energy

at this time.

When I first became the Secretary of Energy, in fact, even before I became the Secretary of Energy, and when I was moving through the period of transition, I had an opportunity to review a great many documents pertaining to energy matters. And I couldn't help but notice the frequent citation of the NPC as a source of reference. Your study on Enhanced Oil Recovery was a primary reference document in the DOE Commercialization Program that has been developed recently. The NPC study on Strategic Storage provides the reference basis for the Strategic Petroleum Reserve Plan. I've just had a discussion of this again in the last few months.

These reports are of value not only to the public sector, but also to the private sector.

Members of my staff are presently evaluating the need of NPC assistance in studying two very timely topics--artic oil and gas development and exploration, and development in deep ocean waters. As you know better than I, the potential that we have for significant additional and gas production from traditional producing areas in the United States is limited at best. The record drilling activity that we have seen today, the record in the sense of the past few years, is not going to reverse the decline in production in the Lower 48 States. I hope we can arrest that decline, but I've heard from many sources that we should not expect to really get any significant

increases in production in the Lower 48. I'm aware that there is a divergence of view on that.

But whether this reversal occurs or not, there is significant potential for oil and gas production in the remote, untested frontier areas. There are, of course, many technical and environmental problems to be dealt with in the frontier areas, and I may at some point in the near future make a specific request to the NPC to provide an industry perspective on some of these issues.

The former Secretary, Jim Schlesinger, requested the NPC on June 20, 1978 to conduct four specific studies. The purpose of the meeting today is to receive final reports regarding two of these--The Committee on Materials and Manpower Requirements, and the Committee on U.S. Petroleum Inventories and Storage and Transportation Capacities. I'm told that there will also be progress reports that will be presented to this meeting for the studies on Refinery Flexibility and also Production Potential from Unconventional Gas Sources.

The DOE is looking forward to receiving this information. We thank you for your efforts; they're very important. One thing I said this morning that I want to be doing is to be looking at the inventory of work you have done with the view that we could benefit from the updating of some of that. I'll be talking to the Chairman about that in the next several weeks.

I'd like to take a few minutes this morning to talk

about the energy problem and to put it in perspective as I see it. We're faced with a potential crisis that in my judgment is more complicated than any situation this nation has ever faced in peacetime. We're in a time of transition from a social and economic infrastructure that has been built for nearly a century on the premise of cheap, easy, accessible energy, particularly petroleum--a premise that unfortunately is no longer applicable.

We've got to face the issue squarely. Are we going to manage this transition or are we going to respond to a series of crises and then return to complacency in between these crises? There's no choice. We've got to manage this transition or this transition is going to manage us. If we don't manage it, we will be doing a disservice not only to future generations of Americans but to ourselves as well. That's why the President has put forward the most comprehensive energy program that this nation has ever seen. It takes a broad plan like this to move this nation forward to an energy diversified Twenty-first Century.

This is not just an American problem. It's a worldwide problem. And it's a serious concern to the industrialized nations and developing nations alike.

This week in Paris, day before yesterday, the International Energy Agency, which is, as you know, a group of 20 of the leading industrialized nations of the world, took

the unprecedented step of binding national ceilings for imports of foreign oil for 1980 and putting in place a mechanism to monitor national oil supplies and each nation's performance in staying within its ceiling. As a result, these countries will be able in the future to move rapidly to adjust their ceilings and take the necessary actions individually to conform oil imports to oil availability. We plan to meet again in the first 90 days of 1980 to assess the supply and import ceiling balance and to make any adjustments that might be necessary.

This action by the IEA underscores the concern of the member countries about the disarray in the national oil market and the international oil market, and their awareness that the consuming countries must act individually and collectively to adjust their demand to meet the inevitably shrinking supply of liquid petroleum.

We're already seeing in this country signs of recognition of the reality of the problem. The sudden realization that potential oil shortages were to be a way of life in this country was shocking and perhaps even frightening to many Americans. But perhaps that was necessary. Perhaps that contributed to our getting the movement that we're now seeing on some of these programs.

It's encouraging to me, however, that as in the past the American people in every area and in every level of appear today to be gradually building a consensus about how to

use the vast energy resources that we have here at home. From our very beginning, we've been a nation on the move, a nation in transition. We have not been static technically, industrially, socially, or economically. Much of our history has been built on creative transition. We're no strangers to the challenges and the opportunities of new circumstances; we thrive on them. The transition from an oil dependent economy to an oil diversified economy is no more insurmountable challenge than so many challenges we have faced successfully in the past. In my judgment, we're moving positively now, examining every aspect of the way we use energy--in our urban planning, mass transit, automobile design, energy productivity and industry, architecture, building codes--in broadening our scope in the search for new energy sources.

I think there is a growing consensus on the need to provide economic incentives to increase oil and gas exploration and production in this country. We still have substantial reserves of oil in the United States. The Alaskan North Slope and some of our offshore developments are examples of recently found reserves. We also can get more from our existing wells by stripping them of oil that formerly was not economical to produce because of the high cost involved. Enhanced recovery techniques, chemical flooding, gas injections and steam flooding need to be used to the maximum extent possible.

The President is phasing out crude oil controls. The

only widely used products still under control are gasoline, butane, and propane. That is, not under control or in some phase of decontrol. It's my judgment and that of the President that eventually these controls must be removed as well, and that market forces must be allowed to price and allocate these products. Perpetuating an oil pricing policy under which domestic oil prices are held below world prices encourages wasteful oil consumption, discourages development of our oil reserves, and the development of alternative energy sources. And it worsens an excessive dependence on foreign energy imports from potentially insecure sources.

Hardheaded economics, therefore, calls for an energy policy under which domestic oil prices are allowed to rise to world levels on a scheduled basis.

This country must and will make greater use of our vast coal resources. We are accelerating the conversion of electric utilities from oil to coal. We'll examine and develop methods for burning coal directly that will be compatible with our environmental objectives. We will eventually liquefy and gasify coal so that we can use it in these forms in an environmentally acceptable way.

We expect the obstacles facing oil shale development to be overcome in time, and we look to the development of our shale oil, tar sands and other heavy oil resources.

There clearly is a growing consensus among the

American people about the need to stop wasting the fuel that we use. We currently import about 8 million barrels of oil every day. A great percentage of that, unfortunately, is simply wasted through inefficient heating, inefficient insulation, the use of inefficient automobiles, inefficient appliances. We have got to use energy more efficiently.

United States industry has led the way since the first great oil crisis, the embargo of 1973, and has cut its energy consumption dramatically. We've been able, in fact, to break the historical link, the historic correlation between economic growth and growth in energy consumption. The gross national product from 1974 to 1978 was up at a rate of 3.5 percent annually. Energy consumption in the same period grew only 1.9 percent.

Our energy consumption in the industrial sector has actually gone down. The energy savings innovations and industrial processes have been introduced by business because they make good business sense. The American consumer and the American public, faced with rising energy costs, are beginning to take these same actions individually.

We are, in summary, a nation that is rich in energy resources, and rich in the skills needed to develop those resources. There is a national will to build an energetic America on the strength of our huge but so far barely tapped energy resources. The Congress is now moving to provide the

means for us to get the job done.

There is an appropriate role here for the federal government. It's one of direction, management, and the allocation of federal resources and a bringing together of these various elements that I've been discussing. The Department of Energy or the federal government, however, should not be in the energy business. The private sector has the strength, the technology, the skills, the management, and the marketing expertise to do this job. No one in the federal government or any government agency, for that matter, can do it better than the private sector can.

One thing the federal government can provide is leadership. For example, responsible leadership is needed in maintaining a clean environment. The federal government also has to provide a way to cut through the morass of regulation and red tape that has grown up over the last 15 years as we have tried to jerry-rig a procedural system to protect our environment. That's the role of the Energy Mobilization Board which the President has requested and which the Congress is now moving in conference to approve.

Second, after we take care of environmental concerns, we've got to provide appropriate incentives for private enterprise to undertake the huge task, the huge investments, the significant risks in front of us during this transition period. We need tax credits, for example, for those who are successful

in developing oil shale processes so that their oil can compete with crude oil from other sources. We need loan guarantees and price guarantees so that ghose companies who invest billions of dollars in coal and oil synthetics can get the capital that they need from private sources. This is the reason that the Energy Security Corporation is a vital component of a long-term energy program. It's an organization, however, that is not adequately understood, in my judgment. The Energy Security Corporation is not intended to compete with private companies. The primary function of the Energy Security Corporation could be likened to that of an investment banker. Its purpose is solely to assume contingent liabilities, to give appropriate guarantees to the private sector so that they can make the investments in the necessary facilities, investments that might not otherwise be commercially feasible. Without an instrument such as the Energy Security Corporation to provide these incentivies, only the very largest companies in America would be able financially to join in the search for alternative fuels.

We need the broadest possible private sector participation in this endeavor. Our needs are extensive. And with a mechanism like the Energy Security Corporation we can reach the remarkable research and development capacity, the remarkable expertise that American industry possesses.

After dealing with the environmental concerns and incentives for the development of the technologies that we

know have promise, the federal government has a third important role in research into alternatives to oil. We need to know more about coal and oil shale. We need to work vigorously on fusion which will be available to us in the long term. If we invest in research now and we need to develop economical solar devices that can be used widely. The federal government has an important role in providing funds for research and to some extent the laboratory facilities and the personnel to do that research.

I cannot overemphasize the urgency of the situation or the need to move right now. The international oil situation is highly unstable. A realistic assumption has to be that oil production in the United States and that oil production worldwide will decline. Our dependence on imported oil--8 million barrels per day--is going to continue in the immediate future, at least to some extent. We cannot wait three or four years, as we did in 1973, to get these projects started.

What I've tried to discuss with you this morning is a frank and realistic appraisal of what we need to do in America as we see it, as we have to move forward in another phase of this transition, this inevitable transition that we move through as a result of the depletion, the prospective depletion of a finite resource.

I believe the Administration, the Congress, the industry, labor, and American citizens all over the country are

beginning to coalesce and move together on these important initiatives.

Thank you very much, Ladies and Gentlemen.

CHAIRMAN MURPHY: The Secretary has agreed to keep the leadership waiting for a few minutes. He can take a few questions from members of the Council before excusing himself. Who wants to be first?

SECRETARY DUNCAN: If I'm going to get off this light, that's just great.

MR. SELLERS: Mr. Secretary, anything that you could tell us further about what you and your colleagues decided in Paris this week would be most interesting.

SECRETARY DUNCAN: What we decided to do in Paris, and this was a difficult negotiation, there were 20 sovereign nations involved, each of which had its own particular objectives, each of which had its own degree of oil dependence. But what we tried to establish was a conceptural framework that said this: That either we as a group of industrialized nations of the world are going to be able for form our collective demand for oil from the producing countries to a realistic prospect of available supply, or we're going to have to do the alternative, the alternative being to just move through 1980 and the next several years with vigorous price competition and looking at price solely as the determinant of who gets available oil. This has obvious impact not only on the

industrialized countries of the world, but also the less developed countries of the world. It has obvious impact on the OPEC producing countries.

But I felt it was important that we do what we can to establish a mechanism whereby the consuming nations of the world can adjust their collective demand in a way where the methodology is established and agreed upon, in a way which takes into account what individual nations are doing respecting conservation, and takes into account the prospective supply situation.

One thing we don't control is what foreign producers do. What they do respecting price and what they do respecting supply is beyond our control. But to develop a mechanism which can adjust to what they might do, I think is an important initiative. And the fact that 20 major industrialized nations of the world were prepared to agree on the basis of accomplishing that, I think is a step forward.

Now there remains a lot of work to be done. When we meet at a date certain, meaning the first quarter of 1980, to try to talk about a specific allocation of reductions, if necessary, then of course that will be a difficult negotiation. But we have established a framework; we have established a mechanism. And I see that as progress. I think to do nothing in today's situation, to perpetuate the disarray that we have seen develop in the oil market in 1979 without trying to take

some initiative to see if we can't constrain our collective demand to available supply would not have been an appropriate thing to do. And I'm personally pleased that there was great sympathy with that objective and that we did get the specific and tangible progress that we achieved in Paris.

Now, I don't want to suggest it is more than a first step. It's where we take it from here that is going to be significant. But I think we've made a very important forward step. We have taken an initiative that has been agreed to by 19 other sovereign nations and I'm very satisfied with the progress that was achieved in Paris. It actually exceeded my expectations. I think we did very well in that meeting. But there's a lot of work that remains to be done.

Next question?

MR. HARTLEY: Mr. Secretary, I'm certain no one in the room would take exception to the pronouncements you made this morning. I find your statements to be somewhat incompatible with what is going on up on the Hill where we've gone from having an energy bill to a tax initiative of the greatest magnitude in history, I guess, of any different Congress. Numbers are being thrown around now like right out of the sky. It has been arranged now for tax collections to be made over the ten-year period between $155 billion and $270 billion. That's a tremendous range. If industry is going to do the job that you have proposed should be done, it seems to me the

lower number is the one we should be shooting for. Can you give us any indication as to what direction the Administration is trying to direct the tax bill in the compromise committee?

SECRETARY DUNCAN: Well, the House bill is the one at the upper end of that range and the present version of the Senate bill, of course, is at the lower end of that range, and how they will come out of conference on the tax I wouldn't want to anticipate. Of course, what finally has more to do with actual revenue received from the windfall profits tax would be the then price of oil as it develops over the next decade. And I think that these numbers that you've talked about assume something like a 2 percent real growth in the price of crude oil.

I think that when you move from an infrastructure from an economy that has been predicated on cheap energy, the fact that we don't have mass transit systems, the fact that we have houses without insulation, the fact that we unfortunately have not moved to price our energy at replacement cost, and the social implications of that as you make a very rapid adjustment to where the consumer, let's say, in effect, has had a windfall gain over these years and we're now taking that away from the consumer, I think that imposes a lot of responsibilities on government.

The development of alternative fuels is a responsibility of government insofar as providing the incentives,

being the catalyst to cause it to happen. The fact is we don't have a sythetic fuels industry today of any consequence. It's an overriding national priority that we develop this capability and if we don't move today to take these initiatives to see that that happens, I think we will have done a great disservice to future generations of Americans. We have got to get that started and we have to get it started now. But to the extent it's too risky, to the extent it's too involved, to the extent that technology is too risky, or the financial aspects are too risky for the private sector to undertake these investments, then it's in our national interest, in my judgment, that a vehicle such as the Energy Security Corporation be in position to serve the investment banker's function to assume the contingent liabilities that will let some of these ventures move forward.

It is for that reason that you need these funds. It is for that reason that you need some kind of windfall profits tax.

Now, when you talk about a windfall profits, you have to think in terms, and I've already said, your revenue is dependent on the then price of crude oil, I can't tell you what the price of crude oil will be in 1985 or what it will be in 1990, but my expectation is that as you deplete a finite asset and if we continue to be as dependent on liquid petroleum as we are today, and I've seen no projection that doesn't

indicate we'll be dependent for some time to come, many years to come, on liquid petroleum, you can only expect that the price is going to accelerate.

The dangerous thing about that is that that is totally beyond our control. The supply that we have available to us and the price that that supply is available to us is totally beyond our control. So, when you talk about windfall, do you have a situation where economic criteria, market supply relations, supply and demand relationships are going to dictate that price? I say it's a more complicated issue than that. And that the "windfall", whatever windfall is, whatever that windfall may be, is going to be dictated by factors that transcend traditional economic criteria.

So I think given the public requirements of what we're going to have to do, given the necessity of mass transit, given the necessity of automobiles that are more efficient, given the necessity of a massive increase in the conservation in our homes, given all of these things and the overriding neccessity of alternative fuel sources, I think that it is appropriate that some part of that revenue be used to fund those requirements.

Now, that would be just a rather philosophical statement on the windfall profits tax.

MR. HARTLEY: Thank you.

MR. : Mr. Secretary, could you comment on

prospect of a substantial excise tax on gasoline?

SECRETARY DUNCAN: That's one of the options that we're looking at, as you've seen in the newspapers. I think to have available several options which could generate more demand restraint is an important thing for the Administration to have. There's been a great deal of publicity attendant to this. What I said in a news conference last week was effectively this: Where we have a situation today where we don't know really how 1980 is going to develop, and where it is going to develop because of factors that are totally beyond our control, it's important that we do contingency thinking to have various options available in case we had to rachet down demand because of some supply interruption.

I don't know what Iran is going to do in 1980 and I don't know what other countries are going to do in 1980. What I have seen, no projection which indicates that OPEC is going to produce more oil in 1980 than it did in 1979. Given that consideration and given the uncertainty that is attendant to the supply of almost half of our oil, I think we've got to do a lot of contingency planning.

Now one of those plans involves the excise tax on gasoline. I think whether you have an excise tax on gasoline, whether you have mandatory state plans, whether you have gasoline rationing, or all of these various options, I don't know which one we would eventually opt for. The Congressional

reaction, as you've read in the newspapers, has not been positive on the excise tax. I think it's a viable option but it will have to be considered in relationship to all of these others, and I'm not prepared to say which one I think will eventually emerge as the one we should use if in fact we have to use any.

I think whether or not we have to use tough emergency conservation measures will be dependent on what happens to supply in 1980. But in any event, I think we're going to have emphasize strong initiatives to curtail consumption of gasoline. The only thing that I'm concerned about is which is the best one to use.

That's not a direct response to your question, and it is that that is one of many options that we are considering.

There seems to be a great deal of press interest in that. There have been many editorials in the press that favor that plan. The Congressional reaction thus far has been very negative on that plan.

Any further questions? If not, thank you very much for letting me be with you this morning. I appreciate very much the work that you're doing and I look forward to seeing the reports that you're going to be submitting today, and I'll be back in touch with you about some work that I have in mind that I would like very much to have your advise on in the future. Thank you.

End 1-A

CHAIRMAN MURPHY: I'm sure we all benefitted greatly from hearing the views of the Secretary, and he from getting his first exposure to the National Petroleum Council. I'm encouraged to believe that his attitude toward the Council is typified by what you saw this morning. We heard him in the process of saying, "I'm sorry, I simply cannot meet with Senator Byrd. I'd very much like to but he will have to wait because I have an appointment that I intend to keep." I suggest to you that that is a significant turn of events.

We will proceed directly now to the receipt of and discussion of the committee reports. When the Council, after a hiatus, resumed its work, it was called on to conduct three specific studies. The retiring chairman, Collis Chandler, Bill Haynes, the vice chairman, and I appointed who we thought were the best available to lead those studies and we asked from each a commitment that they see to it that nothing short of excellence resulted. I believe you will agree that the reports that are done and that are still in process will stand as landmarks in the work of the National Petroleum Council.

The first of these reports this morning is that of the Committee on Materials and Manpower Requirements to be given by John Miller, the vice chairman of that committee. Mr. Miller.

Committee on Materials and Manpower Requirements

MR. C. JOHN MILLER: Mr. Chairman, Ladies and Gentlemen: Jack Harbin, chairman of the NPC's Committee on Materials and Manpower Requirements, has an unavoidable conflict in his schedule and regrets that he is unable to be with us today. In his absence, he requested that I, as vice chairman of the committee, present for your consideration and action the report, Materials and Manpower Requirements for U.S. Oil and Gas Exploration and Production, 1979-1990.

The Committee on Materials and Manpower Requirements began its study over a year ago. We now have completed our report and this morning I plan to describe the study briefly and recommend that the National Petroleum Council adopt the report.

The study was requested by the Secretary of Energy in a letter dated June 20, 1978 to the National Petroleum Council. The Secretary expressed concern that constraints may appear from shortages of critical materials and trained personnel needed to support increased exploration and production activities required to meet the United States needs as set forth in the President's Energy Initiatives. In requesting the new study, the Secretary specified that it should be "a comprehensive study of the materials and manpower requirements for oil and gas exploration and development. This study should focus on the period 1979-1981, but should also address the

longer term situation. Particular attention should be paid to identifying areas of potential shortages in critical materials and manpower and methods of preventing such shortages. In addition, the impact of federal, state, and local laws and regulations should be explained and appropriate recommendations for changes should be made."

The NPC agreed to undertake the study and with the approval of the Department of Energy established the Committee on Materials and Manpower Requirements. The committee met on October 5, 1978 and agreed on a study plan which included the scope of the study, methodology, organizational structure, and timetable. The committee was assisted by a coordinating subcommittee, an outlook and materials subcommittee, and a government subcommittee.

Under the subcommittees, seven task groups were established--drilling equipment, geological and geophysical services, production equipment, tubular steel, well servicing, business environment, and regulatory impact.

Detailed analyses began late last year and the status of the work was reported to you at the Council meeting last March 8. By fall, the writing of the report had begun, and on November 7 a draft report was mailed to you for review and comment. The committee met on November 28 and approved the draft report for presentation to you this morning.

In adopting the report, the committee made no major

changes, but did approve the incorporation of a number of editorial revisions and some explanatory additions to the report. The committee did suggest the inclusion of a transmittal letter to the Secretary of Energy to be bound in the final report. The purpose of that letter, a draft of which was sent to you, is to provide an overview of the report and the time frame in which the basic analyses were conducted.

You have before you the proposed final report of our committee which contains editorial and explanatory revisions and inside the front cover a draft of the transmittal letter.

I would now like to describe the report, briefly starting with a description of the scope of the study.

The report's primary focus is on the requirements associated with the accelerated development of domestic oil and gas resources in the 1979-1981 period, and the service and supply industry's capability of fulfilling these requirements. However, the longer term, 1985 to 1990, situations are also examined. In addition, the study assesses the impact of the regulatory environment on future activities. While a detailed analysis of future worldwide requirements and capacities is not made, the net effect of the export and import of materials and equipment is examined for domestic impact. The impact of significant oil industry downstream or refining and transportation expansion or large scale syn-fuel development is not addressed. The projected range of possible future drilling

activity is employed in the report for comparison with service and supply capacities as a means of determining possible constraints and is not intended as a forecast of what will occur. No attempt is made to determine the oil and gas reserve additions or producing rates which would result from activity level projections in this report.

The conclusions in this report are based on the judgment that the activity projections provide a sufficiently broad range against which to test availability of materials and manpower, although somewhat higher or lower activity levels could occur.

With those caveats as to scope, I would now like to address the methodology employed in the study.

The 1974 National Petroleum Council study, "Availability of Materials and Manpower and Equipment for the Exploration Drilling and Production of Oil, 1974-1976" focused almost entirely on the near-term years indicated in the title. The approached utilized in the 1974 study was to establish an industry activity level by assuming that all available drilling rigs would be employed to their maximum capacity. Other industry segments were then tested for potential constraints at that activity level.

In discussing the request for the current study, the Department of Energy indicated that use of the methodology in the 1974 study would be acceptable, but asked for sensitivity

analyses to be done for activity levels at other than the projection derived through that methodology. The desire for sensitivities appropriately reflects the practical impossibility in developing a single projection of our activity which would by itself provide an adequate test for manterials and manpower constraints. Any such projection is by necessity based on judgment. Therefore, opinions as to the proper level would vary greatly. Any conclusions from the study would consequently be subject to challenge.

With this as background, the subcommittee formulated an approach intended to minimize the difficulty in reaching broad agreement upon a single projection and one which potentially would provide more useful information to those using the results of the study.

The approach employed was to segment the issue into two separate and somewhat independent areas of investigation.

(1) Projected capability of the manufacturing, supply and services industries to support the petroleum industry in exploring for and developing domestic and gas resources.

(2) A projected range of possible industry drilling activity based on public and private forecasts and on judgments regarding factors which tend to increase or decrease activity levels.

These two projections were then compared to determine the extent to which industry activity levels might be

constrained by the availability of materials or manpower. Concurrent with but separate from the above effort, an examination was conducted of the impact of laws and regulations and changes thereto on future exploration and production activity and service and supply capability. As a matter of practicality, it was decided to limit this analysis to the area of federal laws and regulations.

An early decision in the study effort was the desirability of conducting surveys to obtain data which would assist in analyzing the capacities of the individual segments of the manufacturing supply and service industries. It was also decided to use the survey approach to aid in identifying the impact of government regulations and the future business environment on activity levels. In order to obtain such information for both of these efforts, 34 questionnaires were prepared. In total over a thousand exploration and production companies, associated manufacturing supply and service firms, banking organizations and academic institutions received one or more of these questionnaires. These surveys were conducted throughout the first half of 1979 and thus the responses reflected perceptions at that time.

The responses to these surveys were most helpful in preparing this report, and the committee wishes to acknowledge this cooperation and to thank the respondents for their time and thoughtful consideration of this matter.

The Certified Public Accounting firms of Arthur Young and Company and Arthur Anderson Company were retained by the National Petroleum Council to receive and aggregate the responses of the various surveys. The public accounting firms were instructed to treat all responses in strictest confidence and release no identifiable individual respondent data. They were also instructed not to release any aggregated data element unless the responses of at least three organizations were included.

Through these procedures the public accounting firms assured that no identifiable individual respondent data were made available to study participants or others. Nor can such information be derived from the data presented. While there is a great deal in the way of detailed findings presented in the report, in the interest of time, I will now turn to the principal conclusions and recommendations resulting from this study.

It is the committee's judgment that the availability of equipment, materials and services necessary for domestic exploration and production of oil and natural gas is unlikely to be a constraint to future industry activity levels. It is also the committee's judgment that although professional and skilled personnel are currently in tight supply, the manpower required for exploration, drilling and production, including that required for well servicing and equipment manufacture,

will be adequate to support substantial increases in activity. Although the committee believes there will be capacity to support an important and necessary increase in activity, this study did identify a number of areas where capacity would be tight and where constraints could develop, especially with a substantial increase in activity.

The most significant concerns appear in the general area of iron and steel. Because of the concerns in this area the committee recommends that the Council approve the reproducing and making available of the Tubular Steel Task Group's report. This work was the basis of and covers the same topics as Chapter 4 of the committee's report, but in greater detail.

For the conclusions in the overall report to occur, the committee feels that it is essential that the following principal recommendations of the study be implemented.

The President, Congress, Department of Energy and other federal agencies should continue to promote the development of domestic energy resources, including the extraction of oil and gas. To this end, they should strive to establish a stable and predictable business climate conducive to accelerated expansion of investment, drilling activity and support capacity. The creation of such an environment will entail a review of federal laws and regulations relating to leasing, price controls, taxation, and environmental preservation with the objective of enhancing capital formation and exploration

and production activity.

The federal government should create an environment which promotes the reestablishment of a strong and competitive domestic steel industry vital to the development of U.S. energy supplies and other critical areas of our nation's economy. This environment should encourage the expansion of domestic pipe mill capacity. Such will require the review of laws and regulations on steel imports, environmental controls, and taxation to allow generation of capital for modernization to improve the steel industry's productivity and competitiveness.

A report like this on a technical subject cannot be assembled without the contribution of time and professional skills by many people. The committee would like to acknowledge the outstanding work of the subcommittees and task groups as well as the assistance of the Department of Energy staff. I would like to give my personal thanks to all of them for their fine effort and a thorough report.

In conclusion, Mr. Chairman, the committee believes that the proposed report is excellent and is a suitable response to the Secretary's request. The committee recommends that it along with the reproduction of the work on tubular steel be approved by the National Petroleum Council, subject to final editing, and I so move.

CHAIRMAN MURPHY: Does the Chair hear a second?

MR. : Seconded.

CHAIRMAN MURPHY: The matter is before the house for discussion, Gentlemen. Do you have questions for Mr. Miller?

MR. ROSAPEPE: I'd like to ask a question and make a comment. The question I would address to Mr. Miller is I noted in reviewing the list of participants of the committee, the coordinating subcommittees and task groups that unlike the three other current committees of the Council that are submitting reports or preliminary reports today, so far as I could tell there were no members of those groups of your committee and subcommittees and task groups that represented environmental, consumer, or labor nonindustry supply or producing industry backgrounds, and a number of people will be asking the question when they get this report. I just wondered why that was or how that happened to be, or did I miss something?

CHAIRMAN MURPHY: Mr. Miller, I'll respond to that comment. You will recall that these studies were well advanced when the present incarnation of the Council was appointed. At that time, as Chairman of the Council, I moved immediately to add new members, particularly those from the non-petroleum sector to the standing committees of the Council. I also asked the new members which, if any, of the studies well advanced they wished to join in even at that late date and received no volunteers to pitch in on this particular effort.

MR. ROSAPEPE: Thank you, Mr. Chairman. The comment

I wanted to make is directed towards recommendations of the committee. In reading the report, as indicated, Mr. Miller, the report falls into two categories. One is collection of a lot of very useful data and a lot of very useful analysis, I think, of the capabilities of supply, service and manufacturing sectors to respond to increases in drilling exploration activities. The second section that deals with recommendations deals with government policy.

Given that the conclusion of the committee was, I think based on crude evidence included in the report, that the supply sectors would be able to meet the increase expansion drilling exploration, I found the recommendations inconsistent. I've been partial to the adage that if it ain't broken, don't fix it. And it seemed to me that the conclusion was it is not broken, our supply industries can meet the need, yet the recommendations the committee outlined are designed to deal with problems which, I thought the committee's conclusion, don't exist.

Secondly, I found the recommendations not particularly not particularly consistent with the data in the report. In the area of questionnaires, there was an effort by the committee as I read in the appendices to survey the supply sectors and the producing sectors to determine the impact, particularly regulation. The response as it is described in the report is that the companies who responded in general were unable to

specifically identify which regulations produced which kind of constraints. I wouldn't argue that that concludes there are no constraints, but I would think it is somewhat like drilling for oil--if you drill a hole and it turns out dry it doesn't prove there may not be oil next door, but it certainly doesn't prove that there is oil.

And it did not seem to me that having done a survey and gotten the results back that did not indicate the kinds of constraints these regulations would impose, the committee's conclusions were based on the evidence it collected.

I guess third in one specific area of capital formation, particularly in the current environment, it is difficult for me to, as a member of the Council, associate myself with the conclusion that capital formation in the oil industry is an overwhelming constraint. I might be able to be convinced of that. It's difficult in the current environment to convince me of that. I don't think that argument is developed in the report in a way that is persuasive.

Those are my comments, Mr. Chairman.

MR. MILLER: Thank you for your comment. I would be most happy to address your concerns and your comments individually at some greater length, as I have some very definite opinions on the comment that you are making. I don't know that this is particularly the forum for that, particularly in the view that I think these are the same comments that you expressed

at the November 28 meeting, and I believe that your comments and concerns were taken into account by the entire committee as they prepared the recommendation for the Council. So I would thank you again for your observation.

Is there another?

CHAIRMAN MURPHY: Gentlemen, we've been asked for a five-minute break here to get some of the mechanical work done. There will be a short recess.

(A brief recess held.)

Tape 2-A

CHAIRMAN MURPHY: The apparatus spill cleanup is complete, Gentlemen. If you will resume your seats, we will continue consideration of the committee report.

The next question for Mr. Miller; or comment.

MR. SNYDER: I'm Ted Snyder, President of the Sierra Club. In the first recommendation propose that there be a review of federal laws and regulations relating among other things to environmental preservation with the objective of enhancing, I assume at this stage, exploration and production activities.

I worked through the appendix very meticulously to see if there was any support for that with facts and figures and can find none except for the alleged scenario which only had that conclusion in it. I find no facts and figures showing the size, area and location of the places proposed for environmental preservation. I find no statistics on the estimated

amount of reserve of any sort in the areas under consideration for environmental preservation. Therefore, I believe that that portion of the recommendation is totally without support in any factual matter in the report.

Because of that, I move an amendment as follows. I move that the first recommendation be amended by inserting the word "and" between "price controls" and "taxation", and that the words "environmental preservation" be deleted therefrom.

CHAIRMAN MURPHY: Does the Chair hear a second?

MR. : Second.

CHAIRMAN MURPHY: We will discuss the amendment to the report. Is there discussion?

MR. : Mr. Chairman, would you identify where the words are?

MR. MILLER: Page 7 of the -- Maybe my pages are numbered differently.

CHAIRMAN MURPHY: Page 6?

MR. MILLER: Yes, page 6. It's numbered different from the one you're using. It is in the first recommendation. The latter part of the first recommendation. Let me see if I have now what you've said.

The closing sentence--not sentence--starting with: "The creation of such an environment will entail the review of federal laws and regulations relating to leasing, price controls" and you are suggesting "and taxation" and you are

suggesting deleting the words "environmental preservation". Is that correct?

MR. SNYDER: Yes, Sir, that's correct.

MR. MILLER: "With the objective of enhancing capital formation and exploration production activity."

MR. SNYDER: Yes, Sir.

MR. MILLER: Do you have that, Ken?

MR. MONTAGUE: Yes.

CHAIRMAN MURPHY: All right, do the members of the Council follow this now and know what is before the house? Is there a discussion of the resolution? Yes, Sir?

MR. EVANS: Mr. Chairman, I'm James Evans, the president of the Union Pacific Corporation and a member of the Council. I also have the privilege of being the chairman of the Environmental Task Force of the Business Roundtable. I would take strong exception to this recommendation in view of the fact that I think we do need to review all of the environmental matters regarding environmental preservation and all of those environmental matters which may impede the development of domestic energy resources.

If I do understand what the proposal is, and I believe I do.

CHAIRMAN MURPHY: Thank you, Mr. Evans. Mr. Montague.

MR. MONTAGUE: Mr. Chairman, I'm subcommittee chairman of the Government Regulations Subcommittee that developed

these data. And while it is true, and the report clearly points out, that we were unable to pinpoint the exact quantitative constraint of each of the various areas of potential constraint of environmental regulations and other price control and other forms, the size of this task, the magnitude of the questionnaires themselves were adequate testimony to the constraints of the government control mechanism.

Now remember, we only are concerned with the federal controls--not the state or the local controls. And while we were unable to pinpoint the exact magnitude of environmental controls, there was no question but this was a major issue. And it's not a question of the desirability or the undesirability of environmental control. It's a question of areas of constraint.

I would also take exception and also point out that in my judgment the data does support these words.

CHAIRMAN MURPHY: Thank you, Mr. Montague. Is there another comment? Yes, Mr. Masselli?

MR. MASSELLI: I'm loathe to get into a situation where we begin having the 70 or so members of the industry and public members lining up on the opposite side to a series of questions. I think the concern here that Ted (Snyder) has outlined and the one that I felt somewhat, is the worry about the breadth of these statements.

I believe, for example, that in the report on

refinery flexibility we reached what I think was a very workable compromise in which we said, we looked at refineries, and we said, how long is it going to take you to get permits? What time? We reported in some detail the exact responses and everyone went away from that I think fairly happy.

The worry I believe that Ted has raised and that some of the rest of us feel are general statements that do not seem to flow specifically from what is in the material. I think if the material makes a case--I recognize that these laws did not come down on tablets, that there are ways to change them somewhat--but if the material makes a specific case that A or B or C caused problems or that 37 percent of the respondents said that something was just driving them up a wall, that should be noted. And then the readers of the report can draw the conclusions that they wish from that.

But I think we tend to be a little sensitive to somewhat broader statements that are just out there in the air. I that Mr. Montague's remark indicates that, yes, there was something in the air there but that they weren't quite able to pin it down. I would recommend to the Council that it is probably best where something can't be pinned down to treat it very delicately and that it not be put up front. Because I think that some people will read this report--get to line, get to page 6, and say here's a report on manpower requirements and all of a sudden they're talking about leasing and they are

talking about environmental constraints across the board. What does that have to do with the subject matter of the report?

I think that having a chance to go over this report again, we might be able to rephrase the language along the lines of what Mr. Montague said, but not doing that, I suggest that no language is better than broad language which I think will create some very bad reactions.

MR. MILLER: Mr. Chairman, may I speak to that?

CHAIRMAN MURPHY: Please do.

MR. MILLER: I think that the challenge to the committee was sufficiently broad to require our comment on this particular subject. And I can tell you as one of the people receiving the questionnaire and then having also been the recipient of a number of comments from others that received the questionnaire, that it in itself is a blanket indictment of the over-regulation that the industry faces at this time and of the environmental concerns that are evident.

I would not have had the ability within the time frame even to this date to have provided all of the answers that I would like to have provided to put back in, and if I had, no one could have necessarily assimilated the information and put it into a specific answer.

This area of dealing with the constraints and talking about the potential of development of oil and gas in the nation does not lend itself to where you can identify a particular

area and say the environmental constraint in the southeast quarter of section so-and-so in a certain county in Wyoming or Michigan or someplace else; it is the broad view of the constraints that the industry will face and in fact that the nation will face as we try to go forward and develop the supplies and respond to the challenge that this committee has been given by the Secretary.

And I feel that the language is remarkable in its restraint and I think that it ought to be, that the motion or amendment should be defeated.

CHAIRMAN MURPHY: Are there other comments? (None) Before calling for a vote here, I'll comment that in studying this report I found no sweeping assertions. Now, I confess that I wasn't particularly looking for them and perhaps if reread some things would stand out that didn't come through at the time. But I found no sweeping assertions.

Now in a search for accomodation here, and remembering that the chairman rendering this report said that certain editing is still necessary, do you feel that in editing, not to change the substance and I don't venture to suggest that at all, but in the manner of expression, do you feel, Mr. Chairman, that the language could be modified in such a way as to make it acceptable to the objectives here?

MR. MILLER: Not knowing what would be in the nature of acceptable to them, I would hesitate to speak to that,

Mr. Chairman. My concern would be that if we delete addressing the problem of the environmental situation, then in effect we remove a large section of the entire challenge to the committee because the whole thing is put together and the and the assumptions are made and the responses have been made on the basis that certain things would occur.

Now if, in effect, those things cannot occur because of a lack of the environmental situation being addressed, then I think it negates the entire report. So I would not be agreeable to deleting the --

CHAIRMAN MURPHY: The Chair is quite sympathetic to that and the Chair agrees the deletion would amount to refusal to respond to the Secretary's request in this matter. My own probing here is to whether any accomodation in style rather than substance might accommodate the matter.

MR. MILLER: If I understand the procedure correctly, if the position that is being expressed is sufficiently indepth that they choose to, I guess they can make a written recommendation to you, I believe; is that correct?

CHAIRMAN MURPHY: If you would care to address me as Chairman with copies to the chairman of the committee, why, that will be taken into consideration in final editing of report, whether your motion succeeds or fails.

Are there any further comments or discussions of the resolution? The resolution would amend the report in the

manner described by reference to page 6. We're going to have a show of hands. Those who favor adoption of the resolution, raise your right hand.

(Hands raised: 5)

Those opposed to adoption of the resolution, raise your right hand.

(Hands raised: ?)

That's an overwhelming majority. The motion fails. Thank you, Mr. Chairman. Your report is adopted.

MR. MILLER: Thank you.

CHAIRMAN MURPHY: I beg you pardon. I'm sorry. We were acting on the amendment to the report which has failed. We now turn to the committee recommendation, and this is before the house properly, that the report be adopted. Those who favor adoption of the report, raise their right hands. (Show of hands.) Those who favor rejection of the report, raise their right hands. All right. There is one no vote. Thank you very much, Mr. Chairman.

(The report was adopted.)

The Council will now turn to the report of the Committee on Refinery Flexibility. This is an interim report. Mr. McAfee of Gulf has led this effort.

Committee on Refinery Flexibility (Interim Report)
Jerry McAfee, Chairman

MR. McAFEE: Mr. Chairman, Ladies and Gentlemen:

Before beginning my report this morning I simply must take a moment to acknowledge and comment briefly on the strong and encouraging statement that we heard a few minutes ago from Secretary Duncan. It seems to me that one of the few bright spots in our present domestic energy picture is the fact that in Secretary Duncan and some of his principal associates we have some strong dedicated people who indicate their continuing concern and their dedication to some of the things that most of us can agree are essential to bringing us out of this present very, very serious situation that we find ourselves in.

Now some of us in this room and others have some very, very serious matters of dispute with the Department which Secretary Duncan heads. In spite of that fact, and in spite of the fact that many of us have very serious disagreements with some of the positions taken by the present government with respect to financing, some of the things that need to be done, and while many of us take serious issue as to who in the present situation can make best use in the national interest and the interest of the people of this country of the additional funds which will be made available by the decontrol to which the Administration is dedicated, I say that we must in the national interest that the national interest demands, that we

rise above these differences and continue to dedicate ourselves enthusiastically and wholeheartedly to assisting the government in their constructive efforts to deal with this extremely serious situation we face.

One of our effective means for accomplishing that is the National Petroleum Council. Therefore, I urge that we continue our enthusiastic, wholehearted and effective support of the efforts of the Council. And that's why I'm here today.

By a letter dated September 18, 1978, Mr. Chairman, the National Petroleum Council was requested to prepare an analysis of the factors which affect the ability of the domestic refining industry to respond to demands for essential petroleum products.

Specifically, the Secretary of Energy requested the Council to prepare a comprehensive study of the historical trends and present status of the domestic refining industry sources of crude oil and its capabilities to process these crudes into marketable petroleum products. He further asked that the study analyze factors affecting future trends in crude oil availability, refining capability, and the competitive economics of small, medium and large refining operations through the year 1990.

Finally, the Council was asked to include in its study an examination of industry's flexibility to meet dislocations of supply.

As I reported to you at the March 8 meeting of the Council, three groups are assisting the committee in the preparation of a suitable response to the Secretary's request. The refining capability task group, chaired by Mr. John Hall, vice chairman and chief operating officer of Ashland Oil; the oil supply demand and logistics task group, chairmed by Stu Waterson, corporation manager, tanker and distribution planning staff of Standard Oil Company of California; and the coordinating subcommittee chaired by Mr. Warren Davis, chief economist of Gulf Oil.

As you will recall, the report is being prepared in two sections. First, the first segment deals with the current capabilities, and the second segment deals with the future requirements. An early decision of the committee was that for both of these segments it was mandatory to have a comprehensive data base of the United States refining industry. And extensive literature search revealed that no existing data base was sufficiently current or sufficiently detailed for the purposes of this study.

We were, therefore, required to prepare a new data base through an extensive survey submitted to all United States refineries. While our study is only about two-thirds completed it is the opinion of the committee that these new data are of such significance that they should be published in advance of the completion of the final report.

The committee met on November 21 and approved an interim report which includes the results of this survey. The two volumes of the interim report were mailed to you on November 28 and an additional copy of Volume 1 was distributed to you today. Volume 2, which roughly approximates the Washington telelphone directory, contains nearly 1,000 pages of supporting computer printouts and other data. The first three chapters of Volume 1 report the results of the refinery capability survey. The response to this survey was most gratifying, with data reported on 16.9 million barrels per day or about 98 percent of all United States refining capacity.

I'm sure that the resolve of you, the members of the National Petroleum Council, to provide the Secretary with the best information possible is largely responsible for the high level of response, and all of us who are involved in this study are most grateful for the efforts which you and your colleagues and others not represented here today have put forward in providing this exceedingly crucial, vital, essential information.

A second early decision of the committee was that in order to provide projections of facility requirements to 1990 it would be necessary to have available a detailed supply and demand balance and that it would be necessary to obtain such a balance through a survey of current projections. A list of 32 institutions in the United States and abroad was prepared

in an attempt to solicit forecasts from all organizations thought to have or to be capable of preparing supply and demand data in the detail needed. A total of 20 responses was received, 14 of which were from firms in the petroleum industry and the other 6 represented a mix of consulting and research firms and United States and foreign governmental agencies.

The data aggregated from this survey are summarized in Chapter 4 of the interim report. Since this draft is a compilation of the data received from the surveys and does not represent any analysis of the data, I will not review the results with you this morning. I would, rather, like to review with you briefly our plans for the completion of the final report which will address the three main areas of the Secretary's request.

The first main area is the preparation of projections of future crude oil availability and quality and refining capability. In the course of this phase of the final report the refining facilities in place will be tested with various possible future crude slates to determine the effect of crude quality on product yields. Concurrently, the requirements for new process facilities will be estimated under varying crude quality assumptions.

The second facet of the final report will deal with the competitive economics of small, medium and large refining operations in the United States and their relative position,

vis-a-vis, foreign refining operations. We also plan to make some qualitative observations about the effects of crude quality and product specifications on competitive economics.

Finally, the report will address the Secretary's question regarding the industry's flexibility to meet dislocations of supply.

In the course of preparation of the final report the supply and demand data presented in the interim report will be expanded for two reasons. The first is to provide a reasonable range of crude oil availability and product requirements that refiners might expect to be faced with during the 1980's. The second reason for expanding on the current supply and demand data is based on the currency of the data contained in the interim report. Responses to the survey on which those data were based were received in the spring and summer of 1979. The individual forecasts were almost all prepared in late 1978 or very early in 1979, and thus they do not reflect the political and economic events which have occurred in 1979.

The committee feels that because of the significance of these events most of the individual respondents to the survey would materially change their responses if the same questions were asked today. The committee therefore decided to instruct the oil supply, demand and logistics task group to resubmit its survey in an abbreviated form to all respondents of the previous survey. Mr. Waterson sent that survey out

last Friday and some of you may have received it before you came to Washington. (December 7, 1979)

I would like to underscore the importance of your responding to this new survey. As we all know, domestic and international events affect forecasters perceptions of future supply and demand patterns and are changing almost daily.

However, to provide the Secretary with a final report which is as current and comprehensive as we could possibly make it, it is imperative that you provide your latest data to the accounting firm for aggregation and use in the final report. And we will greatly appreciate your continued cooperation in this effort.

I'd like to acknowledge the contributions of everybody who has been involved in this endeavor, but obviously time makes that impossible. Let me specifically mention the contributions of Mr. Hall and Mr. Waterson and the members of their task groups, and of course Mr. Davis and members of the coordinating committee. I would also like to acknowledge the very significant contributions of the NPC staff, espectially Mr. Ray Whitson. These task groups and the NPC staff have handled an amazing amount of complex data and to turn out the surveys which are before you and which will be considered in the final report, we'll put together a valuable reference work which can be of great use to the Department of Energy and to the government and to the industry we think for years to come.

In this effort also we should acknowledge the efforts of the accounting firm which served so well in keeping the individual interests under proper surveillance.

Mr. Chairman, this completes the report of the committee. I move that this draft report be adopted and submitted to the Secretary of Energy as an interim report of the Council. Thank you.

CHAIRMAN MURPHY: Does the Chair hear a second?

MR. : Second.

CHAIRMAN MURPHY: All right. The matter is before the house for discussion. As Mr. McAfee has made clear, this is an interim report; however, the significance of the data is such that it is felt that it should be formalized and dignified by action by the Council this morning. Are there questions of the chairman of the study committee? Comments on the report?

Those who favor its adoption and rendition to the Secretary, let it be known by saying aye.

(A chorus of ayes.)

Opposed? (No response)

Thank you, Mr. McAfee. A job well done. So far.

We turn now, Ladies and Gentlemen, to the report of the Committee on U.S. Petroleum Inventories, Storage and Transportation Capacities; Mr. Robert V. Sellers, Chairman.

Committee on U.S. Petroleum Inventories, and Storage and Transportation Capacities
Robert V. Sellers, Chairman

MR. SELLERS: Thank you, Mr. Chairman. Ladies and Gentlemen. The National Petroleum Council Committee on U.S. Petroleum Inventories, and Storage and Transportation Capacities met on November 6 and unanimously approved the draft report of the committee which is under consideration today. Minority views on certain aspects of the report have been submitted by Mr. James Rosapepe.

On June 20, 1978 former Secretary Schlesinger requested the National Petroleum Council to update its 1974 storage study and its 1967 transportation study. These subjects have been examined by the Council periodically since 1948, but for the first time the Council decided to combine these two studies into a single effort.

The committee first met on September 6, 1978 to determine the scope and guidelines of the study. The coordinating subcommittee and five task groups were established to assist the committee in its work. The coordinating subcommittee began work on October 10, 1978 and in December 1978 the committee met again to review and approve the proposed methodologies of the task groups.

Four of the five task groups used questionnaires to develop at least a part of the data in the report. Other data sources were reviewed and updated for inclusion in the report.

The draft report underwent extensive review by the task groups, coordinating subcommittee and the main committee before becoming the final form before you this morning.

At this point I would like to express my appreciation for the valuable time and dedicated effort that was put into this work by the heads of the task groups: Larry Hanna in the case of the natural gas; Gordon Kirk in the case of the petroleum pipelines; Charles Luellen in the waterborn; Bill Midar in the inventory and storage; and Walter Smith in tank truck and tank car.

The coordinating subcommittee was chaired by Scott Van Dyke. All of these people did an outstanding job. I would also like to express our appreciation for the cooperation of the people in the Department of Energy.

I've mentioned that this is the first time the Council has combined its storage and transportation studies, reinforcing the interrelationship between these two components of petroleum supply. Other aspects of the study have been undertaken in this report for the first time by the National Petroleum Council.

At the organizational meeting of the main committee the government co-chairman stated that the report would be more useful to the government personnel using it if descriptive text regarding industry operations were included with the data. A primer for description of industry operations and a glossary

of technical terms used in the report are included. With respect to the inventory and storage volume of the report, in an effort to reinforce the NPC estimate of minimum operating levels, companies were surveyed for their individual company minimum operating inventories and their estimate of the industry minimum operating inventory. These data and others were then used to develop the NPC estimate.

In the petroleum pipeline volume area maps indicating interconnections of pipelines in the vicinity of major refining and pipeline centers have been prepared. These maps expand on the general location and direction information provided on the U.S. maps for such areas as Cushing, Oklahoma and Beaumont, Texas by presenting details of interconnections to storage terminals, distribution terminals, and other pipeline facilities. The report also includes gravity and viscosity information as it relates to the capacity data for crude oil pipelines, reports the capacity for all refined product systems on a consistent basis which is for number two fuel oil and for most pipelines lists capacity information for transporting gasoline and the normal average product mix.

The report also presents a geographic analysis of tank car locations based on ICC statistics.

With respect to waterborn transportation, the previous study was restricted to equipment. The report before you provides a representative listing of u.S. coastal and

inland petroleum receiving facilities, the major Puerto Rico, Virgin Islands coastal petroleum receiving facilities, and the U.S. inland waterways permanent navigation facilities.

The gas and petroleum pipeline volumes of the report include maps indicating the general flow of oil and gas throughout the country.

The highlights of the report are included in the Executive Summary which you have before you. I will mention a few of them.

The minimum operating inventory for crude oil and principal products has increased to 720 barrels, an increase of approximately 95 million barrels since the last NPC survey in 1973. Forty-one crude oil and product pipeline expansion projects planned or under construction as of the end of last year will add approximately 6.6 million barrels per day of capacity to the crude oil pipeline network, and 2.6 million barrels per day of capacity to the product system.

Although many older tank cars and trucks are still in service, the U.S. fleets are becoming newer with larger capacities. A four-fold increase in the capacity of tank vessels has occurred since the 1967 study. The greatest increase is in the capacity of tank ships. The most significant development in petroleum receiving facilities is that of a deep water port facility under construction off the gulf coast capable of handling larger tankers.

The major natural gas pipelines in the United States were utilized at approximately 67 percent of designed capacity on a daily average basis in 1977. While the utilization has increased somewhat since then, the data indicate that significant spare capacity exists within the system. This in part, however, is seasonal capacity.

Mr. Chairman, this completes the report of the NPC committee on U.S. Petroleum Inventories, and Storage and Transportation Capacities. Before making a motion I would like to mention two things. I believe you have in your folders a sheet which contains some thoughts which were submitted by Jim Emison with respect to the introduction to our report. It is our intention in editing to attempt to include those thoughts in the introduction as they are appropriate.

I believe you have also received a copy accompanied by a letter from Mr. Murphy of Jim Rosapepe's statement.

Mr. Chairman, I move the draft report of the committee to be adopted as submitted, subject to final editing, that reference be made in the introduction to the minority views and that the minority views be included in the Executive Summary publication as Appendix D.

CHAIRMAN MURPHY: Does the Chair hear a second?

MR. : Second.

CHAIRMAN MURPHY: The matter is before the house, Ladies and Gentlemen. Anyone wish to orate concerning this

report? Mr. Hefner.

MR. HEFNER: It says on page 41 that--this is in the natural gas section--future projects which will affect supplies and possibly flow patterns are the Alaskan Rocky Mountain Projects, increases in Canadian and Mexican imports, LNG, imports in coal gasefication plants.

I think based on the potential gas supplies committee reports and the Natural Gas Policy Act which includes the deregulation of deep gas which -- traditional suppliers, that such areas in addition to the Rocky Mountains as the Tuscaloosa and should be included if any specific mention is made to various provinces.

MR. SELLERS: I think the intention in this paragraph, Bob, was it was not intended to refer to the existing gas-producing areas, the normal gas-producing operations. It was intended to address more or less the things that are externals, that are sitting out there that we don't know when or how they are going to develop. The reference was not intended to be to conventional production in the Rocky Mountains. Does that give you a problem?

MR. HEFNER: I always like to see the basin and other deep drilling included in anything that is printed.

MR. SELLERS: I understand that.

MR. HEFNER: I guess it does, but that wouldn't

keep me from --

MR. : Does anyone want to make a speech for Texas?

CHAIRMAN MURPHY: Those who favor adoption of the report, let it be known by saying aye.

(Chorus of ayes.)

Overwhelmingly adopted. We thank you and commend you and your committee, Mr. Sellers.

MR. SELLERS: Thank you.

CHAIRMAN MURPHY: Yes, Sir?

MR. ROGERS: Don Rogers, International Brotherhood of Teamsters. I served on that committee with Chairman Sellers. I wish at this time, I don't usually do this, but I want to congratulate him for one thing. We were at a point in that committee where a minority report, I suppose the temptation would have been to vote it down because there were so few people involved, etcetera, but I think we have taken the right road particularly in advisory groups that the minority view not be voted out or smothered but be included as the chairman suggested and has come about. I want to compliment him on that.

MR. SELLERS: Thank you for those generous comments, Mr. Rogers.

The Council will now proceed to consideration of an interim report on exotic gas, Mr. Nelson reporting for Mr. Bookout.

Tape 2-B

Committee on Unconventional Gas Sources (Progress Report). Richard F. Nelson, Chairman, Coordinating Subcommittee.

MR. NELSON: Mr. Chairman, Ladies and Gentlemen: The Committee on Unconventional Gas Sources was established to assist the National Petroleum Council when responding to a request from the Secretary of Energy for a study of the potential natural gas recovery from Devonian shale, coal seams, geopressured brines, and tight gas reservoirs. The Committee is chaired by John F. Bookout of Shell Oil Company, and is co-chaired by John Deutch of the Department of Energy. A Coordinating Subcommittee of which I'm chairman and four task croups by source were formed to aid in the analyses.

At the last NPC meeting on March 8, 1979, a progress report was presented outlining the organization and methodology for the study and the initial work of the task groups. At that time we had hoped that we would have a final report for NPC review at this meeting. However, as the task groups progressed in their analyses, it became apparent that the scope of their assignments was greater than originally thought. With the objective of presenting a thorough and complete study for NPC consideration, we extended our schedule and a spring completion is now expected.

The Committee visualizes its report as being composed of five volumes. We will have an executive summary and then a detailed report on each of the four sources. Reserve

additions and producing rates will be calculated at five gas prices, three rates of return, and two levels of technology. The task groups are at various stages of completion in their work, with three having now completed draft reports and the fourth making satisfactory progress. These studies are very thorough, they're factual, and we believe well documented. As they receive final task group and Coordinating Subcommittee review, the drafts will be sent to the Committee for review and comment.

The following are status reviews of the work on each source. The estimated reserve additions to the year 2000 presented are preliminary and subject to revision as the result of ongoing work and final reviews. In fact, the current estimates, which are based on varying assumptions, are not necessarily comparable at this stage and are presented at this time only to indicate the orders of magnitude of potential recover. These data have not been reviewed by the NPC and should not be considered estimates of the NPC.

Devonian Shale. The DEvonian Shale Task Group, chaired by John L. Moore of Consolidated Natural Gas Service Company and co-chaired by Jeffrey B. Smith of the Department of Energy, has completed a final draft of their work. This draft has been forwarded to the Committee for comment.

The draft contains an estimate of the resource bases in the Appalachian, Michigan, and Illinois basins. However,

estimated recovery of gas and economic projections were confined to the Appalachian basin. Although similar projections could have been made for the Illinois and Michigan basins, such estimates based on the very limited data available would be very speculative. Since the Appalachian basin has probably the greatest potential of the three basins and already has significant production from several thousand wells, in the near-term it is more likely that expanded development of Devonian shale will occur in that area. Preliminary estimates of reserve additions to the year 2000 at a 10 percent rate of return and under current technology are 7 Trillion cubic feet at $2.50/Mcf, 20 Tcf at $5.00/Mcf, and 27 Tcf at $9.00/Mcf. These projects do not include the cost of compression which is estimated to add $0.50-$0.70/Mcf.

Coal Seams. The Coal Seams Task Group is chaired by William N. Poundstone of Consolidation Coal Company and co-chaired by Troyt York of the Department of Energy. The group has just finished its latest draft report which will be sent to the Committee in the near future.

Most studies on the coal seam gas resource have focused only on the total resource base not on the gas that is economically recoverable. This Task Group has made a qualified and educated guess as to potential recovery based on limited data on gas content of coals in place on the few gas recovery projects to date. Much of what is available pertains only to

mineable eastern coal. The results should, therefore, be viewed as an order of magnitude projection based on current information. A concerted effort will have to be made to collect much more information and to acquire much more experience before reliable estimates could properly be projected. With these qualification in mind, the study has projected quantities of economic reserves of coal bed gas for the case where the raw gas as produced could be used on site at relatively low pressures. Possible reserve additions to the year 2000 at a 10 percent rate of return and under current technology are 5 Tcf at $2.50/Mcf, 25 Tcf at $5.00/Mcf, and 45 Tcf at $9.00/Mcf. These projections do not include cost of compression, scrubbing, or connection to a gas transmission line which would add a possible $0.60-$2.00/Mcf. I mention that the estimate was made on the basis that the gas would be used on site or near site.

Geopressured Brines. The Geopressured Brines Task Group is chaired by Thomas W. Stoy, Jr. of Union Oil Company and co-chaired by Don C. Ward of the Department of Energy. The group's first draft of their report is now receiving comments from the Task Group itself and the Coordinating Subcommittee. After revision, it will be sent to the Committee, probably in January.

Past studies on this resource have presented varying estimates of the resource base whereas the task group

concentrated its efforts on examining reservoir and well performance, well design, costs, and economics. They also studied the recovery of hydraulic and geothermal energy from the geopressured brines. While there are no long-term production data on this resource, much is known about reservoir locations and characteristics due to the thousands of wells that we have drilled into or through geopressured brines in the Gulf Coast area. Preliminary reserve additions to the year 2000 at a 10 percent rate of return and under current technology are zero at $2.50/Mcf, 0.1 Tcf at $5.00/Mcf, and 0.6 Tcf at $9.00/Mcf. These projections include the cost of compression to 800 psi. The gas compression adds about five percent to total capital and comsumes about one percent of the produced gas.

Tight Gas Reservoirs. The Tight Gas Reservoirs Task Group is chaired by C. Ovid Baker of Mobil Research and Development Corporation and co-chaired by Lucio D'Andrea of the Department of Energy. The scope of this group's work is the largest and most complex. It covers many different basins, and each of the basins have unique geological and performance characteristics. The Task Group plans to complete the first draft of its report by February.

The group has identified 24 major tight gas basins and plans to analyze the potential recovery from 10 of these in detail. To date, very tentative estimates on reserve additions have been calculated on 7 of the 10 basins. It was

assumed that only 25 percent of these potential reserve additions would be developed by the year 2000, and this results in an estimate of 15 Tcf at $2.50/Mcf, 20 Tcf at $5.00/Mcf, and 25 Tcf at $9.00/Mcf at a 10 percent rate of return and uncer conventional technology. These estimates include the fuel cost of compression but not gathering systems costs, investment costs of compressor stations, nor certain other operating costs. These reserve addition estimates will most likely increase significantly with the inclusion of the three additional basins and with further analyses and consideration of the basins presently included.

Now, I would like to repeat the qualification I made on all four of these items I've covered here. The data have not been reviewed by the NPC and, as I have mentioned, are in varying states of review by the task forces, the subcommittee and committees, and they are not estimates of the NPC.

Mr. Chairman, this concludes the progress report of the Committee on Unconventional Gas Sources.

CHAIRMAN MURPHY: Thank you, Mr. Nelson. Now, do we understand, Mr. Nelson, that unlike the Refinery Flexibility Interim Report you feel it inappropriate for the Council to take action at this time?

MR. NELSON: Yes, Sir, Mr. Chairman. I view this as a progress report rather than an interim report.

CHAIRMAN MURPHY: Such being the case, the record

will reflect that the Council has received the report. Are there questions or comments to be addressed to Mr. Nelson? Yes, Sir?

MR. HARTLEY: I'd like to ask Mr. Nelson, after tax and cost of money now between 6 and 10 percent, how would anyone start working on the problem here as you've described here with a rate of return of 10 percent as the criteria? It seems to me that criteria would be at least 15 percent and the price per thousand feet be expressed in relation to that 15 percent rate of return.

MR. NELSON: Yes, Sir, Mr. Hartley, that 10 percent is a real rate of return after tax.

MR. HARTLEY: Yes, I understand that.

MR. NELSON: That's still real rate of return, not nominal. In other words, inflation plus 10 percent. So we would be looking at, if our inflation rate was 10, that would indeed be looking at it at 20, 25, and 30 nominal rate of return. We thought it was adequate, given the after tax and the real, viewing it as a real rate.

CHAIRMAN MURPHY: Does the text make that clear, Mr. Nelson?

MR. NELSON: Yes, it will.

CHAIRMAN MURPHY: Thank you.

MR. HARTLEY: It might also make it confusing to the typical reader who isn't used to thinking of the rate of

return in two pieces.

MR. NELSON: That was one of our major problems getting started on what were economic bases. We actually lifted those from the previous NPC report on enhanced recovery, and felt that they addressed the question adequately, so we did indeed adopt them for this. But we will explain them thoroughly in the text.

CHAIRMAN MURPHY: Yes, Mr. Rosapepe?

MR. ROSAPEPE: Mr. Hartley's question could be an overly monumental task to include some bit of sensitivity data as between this 10 and the 12 of 15?

MR. NELSON: Yes, Sir, that will be included in there.

MR. ROSAPEPE: It will?

MR. NELSON: Yes, it will.

CHAIRMAN MURPHY: Thank you. Other advice or comments? There being none, the report is accepted for interim purposes. Thank you for a job well done, Mr. Nelson.

Ladies and Gentlemen, that completes the consideration of study matters requested by the Department of Energy. We will now turn to administrative affairs and hear from the Committee on Finance. Mr. Montague.

Report of the Finance Committee

MR. KENNETH E. MONTAGUE, Chairman: Mr. Chairman, your Finance Committee met yesterday to review the financial status of accounts and I'm pleased to report to you that

the financial condition of the Council continues to be excellent. At our meeting yesterday the Committee reviewed 1979 expenditures and considered a proposed budget for 1980 which will provide funds to wrap up the Storage and Transportation and Materials and Manpower studies presented to you earlier for approval.

The 1980 budget also includes funds for completion of the Refinery Flexibility and Unconventional Gas studies plus funds which we believe to be adequate to undertake two new studies if requested by the Secretary.

Based on this review, the Committee concluded that a budget of $1,650,000 will be required to cover the Council's operating costs for 1980. In keeping with our past practices, letters with recommended contributions will not be sent until May or June of 1980.

Mr. Chairman, the Finance Committee recommends and I move that the Council Membership approve an annual budget for calendar year 1980 in the amount of $1,650,000.

CHAIRMAN MURPHY: Is there a second?

MR. : Second.

CHAIRMAN MURPHY: The chair arrogates to itself for the first comment concerning the Committee recommendation. It must be clear to the Council from the remarks of the Secretary (of Energy) early on in this meeting that extensive additional studies and supplements to studies already done may be

requested. The Vice Chairman and I met yesterday afternoon with Dr. Davis and quite early this morning with Secretary Duncan and they were somewhat more explicit in giving forewarning to the Council officers that they expect a job of work to be done here and we may find that we will be engaged in studies in mid-1980 that would require supplements to the budget. I hope that such will not be the case, but I believe that the members would agree that the Council is duty bound to be responsive to requests of the government for help in some of these very thorny matters facing our nation.

So this is a forewarning that it may be necessary to follow up. If that is not necessary, it most likely would arise from the hope that future studies would not require the very extensive and expensive work on the part of certified public accounting firms to aggregate and to classify data. Whether that is necessary will depend naturally on the nature of the studies that may be requested.

Now I will throw the budget open for general discussion.

MR. : Mr. Chairman, it may be useful if Mr. Montague would, purely for the purpose of comparison, state what the 1979 budget was. Most of us may have forgotten.

MR. MONTAGUE: The 1979 budget was approximately $300,000 above this budget. This is not anticipating a great deal less workload, but it does anticipate a great deal less

outside consultation load. The split of that $1,950,000 was roughly half staff and half outside. We're not projecting that much outside this year. But this is a matter, as the Chairman just explained, that is somewhat beyond our control at the moment.

CHAIRMAN MURPHY: Are there other questions?

MR. ELLER: Charles Eller. Does the policy prevent us from getting a windfall from the Department of Defense or Department of Energy since they are going to be rather highly endowed with a lot of windfall tax money? At least on a 50-50 basis.

CHAIRMAN MURPHY: Put your application in writing.

MR. ELLER: You must remember, it's our money.

CHAIRMAN MURPHY: Well said. Other comments on the budget? (None) Those who favor adoption of the budget, and remember that your affirmative vote carries with it the implied commitment to support the budget--those who favor adoption of the budget, let it be known by saying aye.

(Chorus of ayes.)

Opposed, no? (None)

(The budget adopted)

CHAIRMAN MURPHY: We have two matters of senior staffing concerning the membership. It will be recalled that when Ken Belieu retired as Executive Director, we asked Carter Perkins to accept the Executive Directorship and

promised him a relatively short tenure so that he could go forward with his plans to retire to Florida. Carter has asked that he be relieved effective January 1, and with the concurrence of the Appointments Committee, I, as Chairman, have appointed Marshall Nichols who is well known to you to succeed him as Executive Director.

Marshall is a graduate of Georgetown. He has been eight years with the Council. He served as Director of Committee Operations, and most recently has been the Deputy Executive Director.

This appointment has been made and I simply am confirming to you what has been distributed to you through normal channels. I ask that each of these gentlemen stand and that we thank Mr. Perkins for a job well done. And we welcome Mr. Nichols and make it plain to him that we expect a fine result from him.

MR. PERKINS: Mr. Chairman, may I thank you and the chairmen and all the members of the Council for the experience that I've had this past year. I'm deeply grateful to all of you for this association. May the Council continue its significant and substantial contributions for this nation's sake for answers to its energy problems. Thank you.

CHAIRMAN MURPHY: Thank you very much. Is there further business to come before this august body? Any comments from the audience? There being none, this meeting is adjourned.

(WHEREUPON, at 11:05 a.m., the meeting adjourned.)

REPORTER'S CERTIFICATE

DOCKET NUMBER:

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HEARING DATE: December 12, 1979

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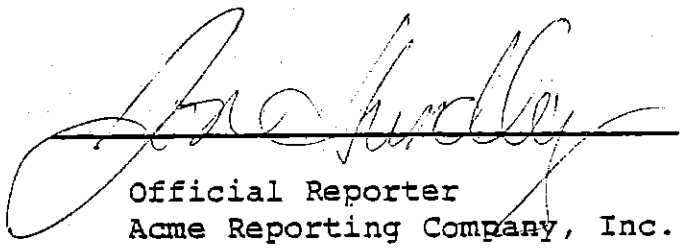
I hereby certify that the proceedings and evidence herein are contained fully and accurately in the notes taken by me at the hearing in the above case before the

U.S. Department of Energy

and that this is a true and correct transcript of the same.

Date: December 12, 1979



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