Port Angeles-Juan de Fuca Transmission Project

Final Environmental Impact Statement

DOE/EIS-0378

October 2007

BONNEVILLE POWER ADMINISTRATION

Port Angeles-Juan de Fuca Transmission Project

Final Environmental Impact Statement

DOE/EIS – 0378

Department of Energy

Office of Electricity Delivery and Energy Reliability
and
Bonneville Power Administration

October 2007

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Responsible Agency: U.S. Department of Energy (DOE): Office of Electricity Delivery and Energy Reliability (OE) and Bonneville Power Administration (BPA)

Title of Proposed Project: Port Angeles-Juan de Fuca Transmission Project

State Affected: Washington (WA)

Abstract: Sea Breeze Olympic Converter LP (Sea Breeze) has applied to DOE for authorizations and approvals necessary to construct the United States (U.S.) portion of an international electric power transmission cable. Sea Breeze's proposed cable would extend from the greater Victoria area (View Royal), British Columbia, Canada, across the Strait of Juan de Fuca to Port Angeles, Clallam County, WA, U.S. The U.S. portion is called the Port Angeles-Juan de Fuca Transmission Project. Sea Breeze has applied to DOE/OE for a Presidential permit to construct, operate, maintain, and connect the proposed cable across the U.S.-Canada international border. Sea Breeze has also submitted a request to DOE/BPA for interconnection into the federal transmission system.

The Proposed Action would install a ±150-kilovolt direct-current (DC) transmission line cable, which could carry up to 550 megawatts of power. About 10.5 miles (16.9 km) of marine cable would be trenched in the sea floor from the international boundary to the Port Angeles Harbor. The cable would transition from the marine environment in the Harbor to land through a horizontal-directionally-drilled hole. The DC cable would then proceed underground through city streets for about 0.8 mile (1.3 km) to a new converter station. The converter station would convert power from DC to alternating current (AC) and visa versa. A 1,000-foot (305-m) long underground AC cable would then connect into BPA's Port Angeles Substation. BPA would expand its Port Angeles Substation to accommodate the interconnection of power into the federal transmission system.

Sea Breeze would construct and own the proposed cable project. Sea Breeze intends to sell capacity on the cable to interested utilities or generators (through open access), with power flow possible both north and south between the U.S. and Canada. Because the proposed project does not include improvements that would increase the capacity of BPA's transmission system, power flow to and from the proposed interconnection with BPA's system would be subject to existing power transfer limits and transmission constraints.

DOE released a Draft EIS in March 2007 for public review and comment. DOE considered all comments received to prepare this Comment-Response Addendum which, together with the Draft EIS, constitutes the Final EIS [40 CFR 1503.4(c)].

The EIS addresses the environmental impacts of the Proposed Action (DOE's preferred alternative), the No Action Alternative (Sea Breeze's requests would be denied, and the project would not receive a Presidential permit and could not connect to the federal transmission system), and two short AC cable routing options (Option A [DOE preferred] and Option B). DOE expects to issue Records of Decision on the proposed project in December 2007.

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For additional hard copy or CD copies of the Final EIS (Comment-Response Addendum and Draft EIS), please call 1-800-622-4520 and ask for the document by name or access our web site at http://www.efw.bpa.gov/environmental_services/Document_Library/PortAngeles/.

You may also request copies by writing to: Bonneville Power Administration, ATT: Public Information Center-CHDL-1, P. O. Box 3621, Portland, Oregon 97208.

For additional information on DOE NEPA activities, please write to Carol M. Borgstrom, Director, Office of NEPA Policy and Compliance (EH-42), U.S. Department of Energy, 1000 Independence Avenue, SW, Washington DC 20585-0119; call 202-586-4600; leave a message at 1-800-472-2756; send an e-mail to askNEPA@eh.doe.gov; or visit the DOE NEPA Web site at www.eh.doe.gov/nepa.

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1.0 Introduction

This Comment-Response Addendum presents the comments (and associated responses) received on the Draft Environmental Impact Statement (EIS) for the Port Angeles-Juan de Fuca Transmission Project (DOE/EIS-0378), which was published in March 2007. Consistent with the Council on Environmental Quality's National Environmental Policy Act (NEPA) regulations, this Comment-Response Addendum and the Draft EIS compose the Final EIS for this project because changes in the EIS, in response to comments, are minor (40 C.F.R. 1503.4(c)). For readers of this Comment-Response Addendum who do not already have a copy of the Draft EIS, copies of the Draft EIS may be obtained by several means:

- Calling Bonneville Power Administration's (BPA) document request line at 1-800-622-4520
- Sending an e-mail to Stacy Mason, Environmental Coordinator at slmason@bpa.gov; or
- Accessing the document on BPA's Web site at http://www.efw.bpa.gov/environmental_services/Document_Library/PortAngeles/.

The remainder of this chapter provides a summary of the Proposed Action and No Action Alternative, a description of the comment period for the Draft EIS, and a list of the key changes to the Draft EIS. Chapter 2 identifies the specific changes that have been made to the Draft EIS. Chapter 3 presents comments received on the Draft EIS (organized by the chapters and sections of the Draft EIS), and agency responses to these comments. Chapter 4 contains all the comment letters, e-mails, and phone call logs received on the Draft EIS, and notes and transcripts from the public meeting held to accept comments.

1.1 Summary of Proposed Action and No Action Alternative

1.1.1 Proposed Action

Sea Breeze Olympic Converter LP (Sea Breeze) has applied to the Department of Energy (DOE) for authorizations and approvals necessary to construct the United States (U.S.) portion of a proposed international electric power transmission cable. Specifically, Sea Breeze has applied to the Office of Electricity Delivery and Energy Reliability (DOE/OE), an organizational unit within DOE, for a Presidential permit for the international border crossing of its project. Sea Breeze has also submitted a request to BPA, another organizational unit within DOE, for interconnection into the federal transmission system.

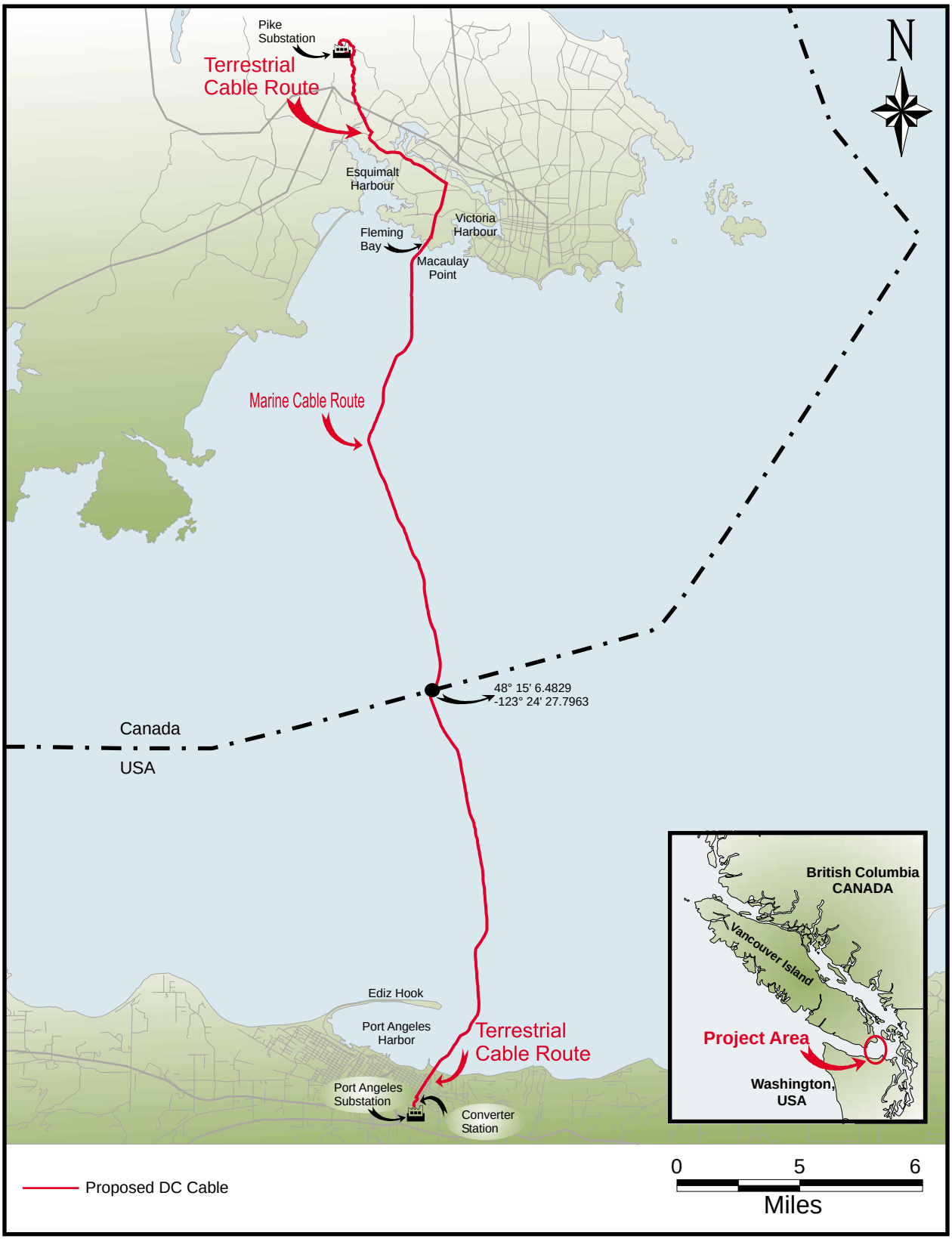
DOE/OE's Proposed Action is to grant Sea Breeze a Presidential permit to construct, operate, maintain, and connect the proposed electric transmission facilities across the U.S.-Canada

international border. DOE/BPA's Proposed Action is to allow the proposed cable to connect into the federal transmission system at BPA's Port Angeles Substation. The interconnection would allow power flow over BPA's system to the extent that capacity on the system is available. However, Sea Breeze has requested interconnection of its proposed project to BPA's transmission system, and has not requested transmission service over BPA's system. Accordingly, DOE/BPA's Proposed Action is only for interconnection of Sea Breeze's project without transmission service.

With federal approvals granted (and appropriate permits granted by other regulatory agencies), Sea Breeze could construct the portion of its proposed cable project that would be located in the U.S., i.e., the Port Angeles-Juan de Fuca Transmission Project. The proposed project involves the installation of a ±150-kilovolt (kV) direct-current (DC) transmission line cable, which could carry up to 550 megawatts (MW) of power. The cable would extend about 32 miles (52 kilometers [km]) from a new converter station in the greater Victoria area (View Royal), British Colombia, Canada, to a new converter station adjacent to BPA's existing Port Angeles Substation in Port Angeles, Washington (see Figure 1). The cable would cross both land and sea under Canadian and U.S. jurisdictions.

The proposed project evaluated in the EIS is the portion of the cable that would be located in U.S. jurisdiction (see Figure 2). There are six main components of the Proposed Action as described below.

- Marine DC cable – about 10.5 miles (17 km) of cable trenched in the sea floor from the international boundary to the Port Angeles Harbor. Sea Breeze would use a sea plow, hydro-jetting machine, or hydroplow to trench into the sea floor, and a specialized cable-laying ship would be used to install the marine cable in the trench. The proposed trench would typically be 3 to 5 feet (1 to 1.5 meter [m]) deep and about 4 feet (1.2 m) wide for most of its length across the Strait.
- Horizontal Directionally Drilled (HDD) hole – a 3,300-foot (1.0 km) long hole to transition the cable from the marine environment in the Harbor to land. The HDD hole would extend generally southwest from a point about 1,340 feet (408 m) offshore in Port Angeles Harbor, under the shoreline and bluff, to a point along North Liberty Street just south of Caroline Street in Port Angeles. All drilling for this hole would take place at the land-end of the hole on North Liberty Street.
- Terrestrial DC cable – about 0.8 miles (1.3 km) of cable trenched from the Liberty Street HDD hole to the proposed converter station site near BPA's Port Angeles Substation. This cable would be placed in a trench under Liberty Street. The trench would be about 4 to 8 feet (1 to 2.5 m) deep and about 6 feet (2 m) wide at the surface. Standard utility trenching methods would be used to dig the trench, and Liberty Street would be repaired and repaved following cable installation.
- Converter Station – a 3.8-acre (1.5 hectares [ha]) station, located on about 5 acres (2 ha) of land owned by Clallam County Public Utility District across East Park Avenue from BPA's Port Angeles Substation, to convert power from DC to alternating current (AC). This converter station would include a building about 100 feet (30 m) wide, 200 feet



Source: Sea Breeze 2006.	Port Angeles - Juan de Fuca Transmission Project	Figure 1 Project Location

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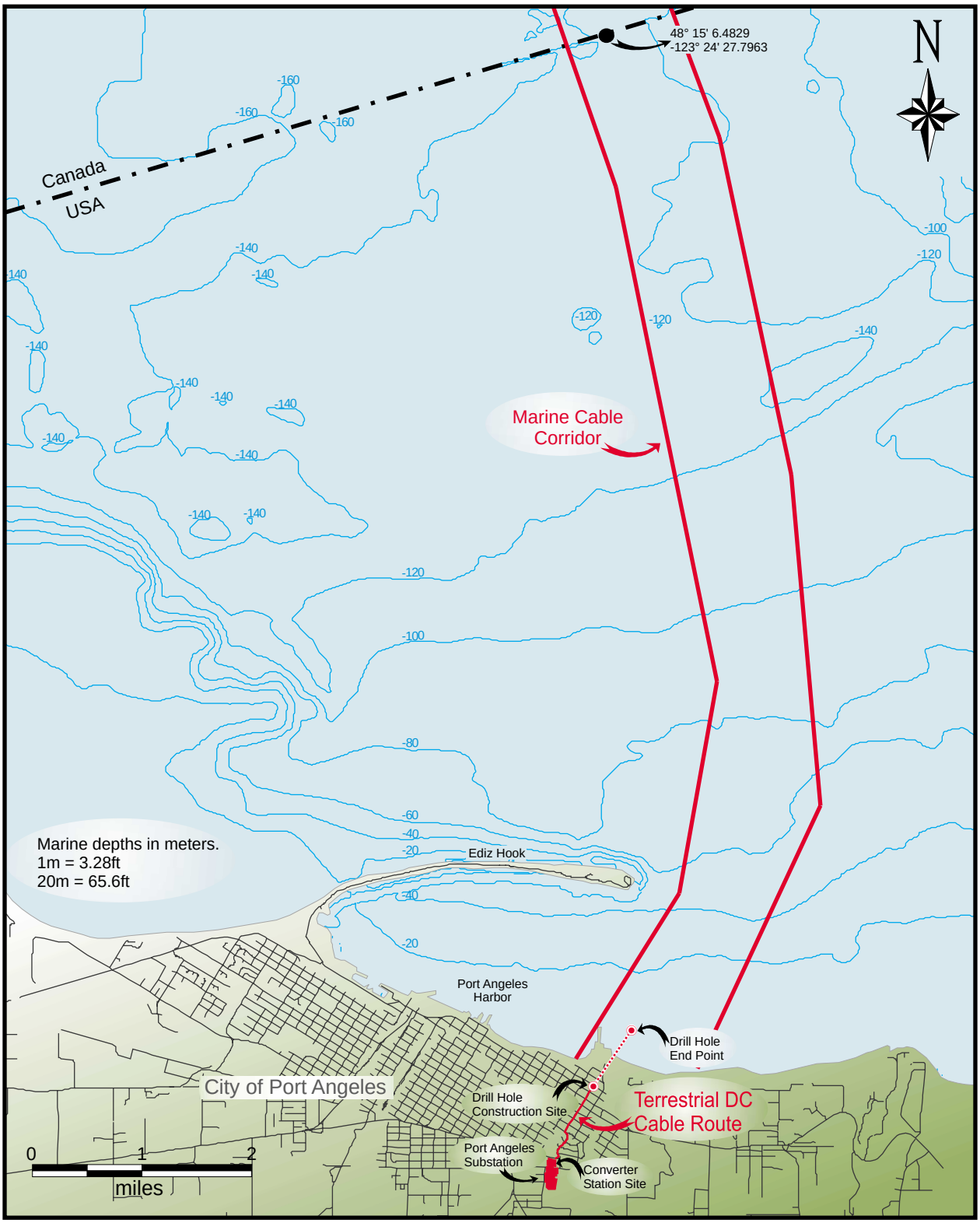

Source: Sea Breeze 2006.	Port Angeles - Juan de Fuca Transmission Project	Figure 2 Marine Corridor for Proposed Action

02/02/07, 10:002118.SB02.04\fig 2-1.cdr

(60 m) long, and 40 feet (12 m) tall, and an electrical yard, with a combination of decorative and chain-link fence enclosing the property.

- AC cable – a short underground 230-kV AC transmission cable trenched under Porter Street from the converter station to BPA's Port Angeles Substation. Two routing options (A and B) have been proposed for the AC cable entrance into BPA's substation. On BPA property, each routing option would require removing trees along the route of the AC cable. Trench dimensions and construction methods would be largely the same as those for the terrestrial DC cable.
- Interconnection at BPA's Port Angeles Substation – a 2-acre (1-ha) expansion of the existing electrical yard, a new relay house, and realignment of an existing 115-kV transmission line on BPA property. The expansion would occur south of the substation's existing fence line on an undeveloped portion of BPA's substation property.

If DOE decides to grant the necessary permits and approvals to Sea Breeze and Sea Breeze is granted appropriate permits required by other regulatory agencies, Sea Breeze could construct the U.S. portion of its proposed project. Construction could likely start sometime in 2008 and would be expected to be completed in about 12 to 15 months.

Sea Breeze or its successors in interest would be responsible for operating and maintaining all aspects of the proposed project except for the Port Angeles Substation equipment, which would be operated and maintained by BPA. Operation and control of the cable and converter station by Sea Breeze would be conducted primarily from a remote site, but there would be regularly scheduled site inspections and maintenance activities. For the proposed substation equipment, BPA would perform periodic maintenance and emergency repairs when necessary.

Because the Proposed Action is only for interconnection of Sea Breeze's project, without transmission service, BPA and DOE/OE would need to make separate decisions on any subsequent future request for transmission service related to Sea Breeze's proposed project. The future decisions would include appropriate NEPA considerations. In addition, Sea Breeze has proposed that its project be connected to BPA's transmission system without any improvements made to this system, and Sea Breeze would accept restrictions on transmitting power across the system to maintain reliability. These restrictions would include limiting power flow to or from the new interconnection through the BPA transmission system on the Olympic Peninsula at certain times of the day and year. Any transmission service that is provided without system improvements would reflect these restrictions.

The Proposed Action, with routing Option A for the AC cable, is the DOE preferred alternative.

1.1.2 No Action Alternative

Under the No Action Alternative, DOE would deny Sea Breeze's request for a Presidential permit or deny the request to connect to the federal transmission system, or both. In either case, the Port Angeles–Juan de Fuca Transmission Project would not be constructed as described and the potential environmental consequences due to the proposed project would not occur. The No Action Alternative would not have any impacts and is the environmentally preferred alternative.

1.2 Draft EIS Comment Period

DOE took several steps to make the Draft EIS available and ensure opportunities for public review and comment. In early March 2007, DOE made three separate mailings regarding the Draft EIS to about 750 potentially interested or affected governments, agencies, organizations, and individuals:

- One mailing included a hard copy of the Draft EIS, a CD with an electronic copy of the Draft EIS, a cover letter, and a comment form.
- A second mailing included the CD only, sent to people requesting the document in an electronic format.
- A third mailing included a letter informing people that the Draft EIS was available and how they could receive a copy.

Approximately 130 Draft EISs were distributed. DOE also filed the Draft EIS with the U.S. Environmental Protection Agency (EPA), which published a Notice of Availability of the Draft EIS in the Federal Register (72 FR 10749) on March 9, 2007. In addition, DOE posted the Draft EIS on the BPA and DOE web sites; published notice in the Peninsula Daily News announcing a public hearing and the availability of the Draft EIS and how to request a copy; and published a notice in the monthly *BPA Journal* that was mailed to customers and others interested in BPA's work.

On April 10, 2007, DOE held a public open house and hearing at the Port Angeles Public Library in Port Angeles, Washington. Prior notice of this meeting was provided in the public letters and published notices for the Draft EIS described above, as well as on the BPA web site. Thirteen people from the community attended. Notes and a transcript from the open house and hearing are provided in Chapter 4 of this Final EIS Comment-Response Addendum.

The Draft EIS was sent to 23 potentially affected tribes in the area. Government-to-government consultation meetings to discuss the EIS were offered to the Lower Elwha Klallam Tribe, Suquamish Tribe, and Jamestown S'Klallam Tribe; as of this writing, no meetings have been requested.

The comment period for the Draft EIS officially closed on April 24, 2007. All comments received during the comment period can be found in Chapter 4 of this Final EIS Comment-Response Addendum.

1.3 Key Changes to the Draft EIS

The following summarizes the primary changes that have been made to the Draft EIS. For a complete description of all changes to the Draft EIS, please see Chapter 2.

- Identified the DOE preferred and environmentally preferred alternatives.
- Updated text to reflect that the City of Port Angeles removed trees from City property adjacent to the converter station site since the release of the Draft EIS.
- Updated mitigation measures for sediment and contaminated sediment control in the marine environment based on public comment.
- Provided additional information on potential impacts of elevated sediment temperatures, exposed cable temperatures, and magnetic fields on marine species.
- Updated a mitigation measure requiring agreements for geoduck mitigation to include negotiations with three tribes.
- Updated text to reflect the delisting of the bald eagle (Endangered Species Act) and changed the listing status of the Puget Sound Steelhead from proposed threatened to threatened.
- Updated information regarding the biological assessment for the project and consultations with the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration and the U.S. Fish and Wildlife Service of the U.S. Department of the Interior.
- Updated text and mitigation measures to reflect examination of sonar data for the marine cable north of the Port Angeles Harbor to the international border. No potential cultural resource sites were found.

2.0 Changes to Draft EIS

This chapter identifies the specific changes made to the text of the Draft EIS. Text changes are organized by the chapters and sections of the Draft EIS. For each change, the location of the change is identified by page and paragraph number of the Draft EIS. Where text has been modified, deleted text is indicated in "strikethrough" format and new text is underlined.

2.1 Summary

Page S-5, paragraph 7 has been modified as follows:

Construction of the proposed converter station would require grading and soil excavation, as well as some tree clearing. Clallam County PUD cleared trees on about one third of the property in 2004 when a 115-kV line was built. An additional 2 acres (0.8 ha) of trees of various sizes would be cleared on the site for the station. On the west side of the property, Sea Breeze plans to leave a 100-foot (30-m) wide buffer of trees and other vegetation, although large trees that would pose a potential wind fall hazard would be removed in this buffer area. ~~Sea Breeze also intends to leave the existing tree buffer on the east side of the converter station site next to South Liberty Street.~~ After construction, Sea Breeze would landscape the area surrounding the converter station.

Page S-9, last paragraph has been modified as follows:

The 5-acre (2-ha) converter station property has a mix of vegetation. A little over a third of the site was cleared of trees and vegetation in 2004 and is now a field dominated by white clover and various grasses. A portion of the site has shrubs (willow, snowberry, and salal) and young trees (red alder and Douglas fir trees about 20 feet [6 m] tall) that are maintained to keep from growing into overhead transmission lines that cross the property. The west side of the property consists of relatively mature trees (Douglas fir, western red cedar, red alder, big leaf maple, western hemlock, and Indian plum, with the taller trees reaching 70 to 100 feet [21 to 30 m] tall) and understory vegetation. ~~Another tree buffer is on the east side, just outside the property boundary next to S. Liberty Street.~~ Scotch broom, a Class B noxious weed in Clallam County, is prevalent along the northern property boundary.

2.2 Proposed Action and Alternatives (Chapter 2)

2.2.1 Horizontal Directional Drill Hole

Page 2-9, paragraph 5 has been modified as follows:

The HDD hole drilling machinery would operate continuously for about 23 days, 24 hours a day, seven days a week. Continuous operation would be necessary in order to maintain hole stability and to prevent damage to the specialized equipment needed. If casing pipes are required, pipe ramming to install the pipes could take up to 3 days of work. Pipe ramming would be carried out between 7 a.m. and 7 p.m. The entire HDD hole operation including mobilization and demobilization would take about 32 days.

2.2.2 Converter Station

Page 2-12, paragraph 4 has been modified as follows:

Construction of the proposed converter station would require grading and soil excavation, as well as some tree clearing. Clallam County PUD cleared trees on about one third of the property in 2004 when the 115-kV line was built (see Figure 2-11). An additional 2 acres (0.8 ha) of trees of various sizes would be cleared on the site for the station. On the west side of the property, Sea Breeze plans to leave a 100-foot (30-m) wide buffer of trees and other vegetation, although large trees that would pose a potential wind fall hazard would be removed in this buffer area. ~~Sea Breeze also intends to leave the existing tree buffer on the east side of the converter station site next to South Liberty Street.~~

2.2.3 Summary of the Impacts of the Proposed Action and No Action Alternative

Page 2-22, Table 2-2 has been modified as follows:

Table 2-2 Summary of Impacts of the Proposed Action and the No Action Alternative

Proposed Action		No Action
Potential Impacts	**Mitigation Measures**	**Potential Impacts**
Water Resources		
• Temporary sedimentation would occur in the Strait and Harbor due to trenching, excavating around HDD hole end point, and propeller wash from ship work in shallow waters. Between 2,200 to 29,000 yards^3 (1,700 to 22,000 m^3) of sediment would disperse within the Strait and about 8,600 yards^3 (6,500 m^3) of sediment within the Harbor. Coarse sediments would settle closer to the trench, fine sediment would disperse up to 0.5 miles (0.8 km) on either side of the cable or down current. • Turbidity levels would not likely rise more than 5 NTU above background levels and would likely be within Washington state requirements. • In the event of an accidental oil or fuel spill, contamination of the marine environment, ground water, or Ennis, White, or Peabody Creeks could occur. • Sea floor work in the Harbor would suspend existing low-level contaminated sediments. • Operation of the cable in the marine environment would increase water temperatures within 4 inches (10 cm) of the sediment surface by less than 1.8°F (1°C). • During punch through of the HDD hole into Harbor and in the event of an accidental bedrock fracture, drilling fluids/cuttings would be released into the Harbor. • Water would be used during drilling operations and would need disposal. • Terrestrial construction has the potential to create stormwater run-off impacts to nearby waterways of Ennis, White or Peabody	• Institute control measures on the cable vessel to prevent the potential risk of an accidental release of any hazardous materials. (Mitigation measure also listed in Marine Habitat and Wildlife Section.) • Use oil-adsorbent materials, maintained on the construction vessels, in the event of a petroleum product spill on the deck and/or if any sheen is observed in the water. (Mitigation measure also listed in Marine Habitat and Wildlife Section.) • Use the following measures to lessen impacts of HDD: ➢ Determine the optimal HDD trajectory to minimize the chance of bedrock or soil fractures using a geotechnical evaluation of the geologic formations to be drilled. ➢ Install a casing through near surface formations susceptible to fracturing (e.g., highly permeable unconsolidated materials) during drilling to seal off permeable formations. ➢ Monitor losses of drilling mud. If a loss of drilling mud volume or pressure is detected, slow drilling to assess whether a fracture to the surface may have occurred. ➢ Visually monitor the ground surface and surface waters to facilitate quick identification and response to a fracture. ➢ If a fracture occurs, decrease amount of drilling muds lost by, for example, increasing the viscosity of the drilling mud to seal fractures and stabilize the borehole. ➢ Contain any release of drilling mud onto the ground surface using BMPs (which could include the use of silt fences, sand bags, straw	No Impact

Proposed Action		No Action
Potential Impacts	**Mitigation Measures**	**Potential Impacts**
creeks.	bales, or booms) to reduce the possibility of muds reaching surface waters. ➢ Contain any potential drilling mud releases to Ennis Creek or Port Angeles Harbor above the high tide line with sand bags, and collect for disposal. ➢ Use a forward-reaming drilling method, if practicable, to reduce volumes of drilling mud and drill cutting discharges. ➢ Flush the drilling mud and cuttings from the borehole, if practicable, prior to the final drill out during a forward-reaming process. ➢ Excavate a containment area at the HDD hole end point to collect and contain drilling muds and cuttings. • Follow all mitigation measures required by the Department of Ecology for water quality and contaminated sediments. Measures could include pre-construction sediment sampling near the HDD end point and cable trench in the Harbor, sediment dispersion modeling, sediment monitoring to ensure turbidity levels are not raised more than 5 NTU above background levels, and sediment control measures. (Mitigation measure also listed in Geology and Soils Section.) • Develop and implement a Spill Prevention, Control and Countermeasure Plan to minimize the potential for spills of fuels, oils, or other potentially hazardous materials to reach the shallow perched groundwater or surface water bodies. • Develop a dewatering plan for trenching activities in consultation with the City of Port Angeles. (Mitigation measure also listed in Terrestrial Fish and Wildlife Section.) • Keep vehicles and equipment in good working order to prevent oil and fuel leaks. • Limit site disturbance to the minimum area necessary to complete construction activities to the extent practicable. (Mitigation measure also listed in Geology and Soils Section.)	

Proposed Action		No Action
Potential Impacts	**Mitigation Measures**	**Potential Impacts**
	• Prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) to lessen soil erosion and improve water quality of stormwater run-off. (Mitigation measure also listed in Geology and Soils Section.) • For the SWPPP, use management practices contained in the most current addition of the Storm Water Management Manual for Western Washington found at http://www.ecy.wa.gov/programs/wq/stormwater/manual.html (e.g., use silt fences, straw bales, interceptor trenches, or other perimeter sediment management devices, placing prior to the onset of the rainy season and monitoring and maintaining until disturbed areas have stabilized). (Mitigation measure also listed in Geology and Soils Section.) • If needed, develop temporary retention pond (a vegetated swale, a shallow excavation, or a combination of detaining systems) to contain turbid stormwater during construction at Port Angeles Substation. (Mitigation measure also listed in Geology and Soils Section.) • Seed or plant exposed areas as soon as practicable after construction, or as called for by permit, at the converter station site and Port Angeles Substation to reduce the potential for short and long-term erosion. (Mitigation measure also listed in Vegetation and Wetlands, Geology and Soils, and Air Quality sections.) • Provide appropriate long-term stormwater detention or control facilities at the converter station site as required by the City of Port Angeles. (Mitigation measure also listed in Terrestrial Fish and Wildlife Section.)	
Vegetation and Wetlands		
• About 5 acres (2 ha) of marine vegetation (primarily brown algae, at depths shallower than 100 feet [30 m]) would be removed with expected re-colonization within one to two seasons. • Terrestrial vegetation on converter station site property and BPA property would be removed: a total of about 3.8 acres (1.5 ha) of grasses, 1.3 acres (0.5 ha) of young trees	• Assess impacts to nearshore habitat at the HDD hole end point and trenching to a depth of 70 feet (21 m) within two weeks after cable installation is completed and again after 1 year during the growing season (June 1 through October 1). If the marine vegetation has not recovered to 80 percent of the density of adjacent areas within 3 years of monitoring, develop a mitigation plan in consultation with WDFW. (Mitigation measure also listed in Marine Habitat and	No Impact

Proposed Action		No Action
Potential Impacts	**Mitigation Measures**	**Potential Impacts**
and shrubs, 4.5 acres (1.8 ha) of trees, and select trees within vegetative buffer areas on the east and west sides of converter station site. • Noxious weeds would likely colonize disturbed areas. • No T&E plant species or wetlands would be impacted.	Wildlife Section.) • Cut or crush vegetation, rather than blade, in areas that will remain vegetated in order to maximize the ability of plants to resprout. (Mitigation measure also listed in Geology and Soils Section.) • Seed or plant exposed areas as soon as practicable after construction, or as called for by permit, at the converter station site and Port Angeles Substation to limit the potential for colonization by noxious weeds. (Mitigation measure also listed in Water Resources, Geology and Soils, and Air Quality sections.)	
Marine Habitat and Wildlife		
• The cable laying vessel, trenching equipment, and HDD containment area excavation would have direct contact impacts to marine benthic species within about 38 to 46 acres (15 to 19 ha), incidental contact with fish, and unlikely contact with marine mammals. • Turbidity would impact benthic or slow moving species and, to a lesser extent, fish and marine mammals. • Resuspension of low-level contaminated sediments could contribute to biomagnification of contaminants in species within the food chain. • Accidental oil or fuel spills could impact marine species, especially sea birds. • About 5 acres (2 ha) of algae/kelp habitat would be removed with expected re-vegetation within 1 or 2 growing seasons. • About 7 to 14 acres (3 to 6 ha) of benthic and sediment habitat would change due to increased sediment temperatures. • <u>In the few areas were the cable would lie on the sea floor unburied, individual benthic organisms in the vicinity of the 140°F (60°C) exposed cable could be prevented from crossing over the exposed cable because of its temperature at that location.</u> • <u>Marine species sensitive to magnetic fields may become disoriented if close (within 3</u>	• Monitor the beach within 100 feet (30.5 m) of the route for concentrations of crab and urchins, under the supervision of a qualified biologist over a two-week period prior to installation for any work occurring between February and September. If the survey identifies an unexpectedly high concentration of these priority species that would be directly impacted by the project, then determine additional mitigation requirements in consultation with WDFW. • Mitigate loss of geoducks based on agreements with the DNR, ~~and~~ WDFW<u>, the Lower Elwha Klallam Tribe, the Port Gamble S'Klallam Tribe, and the Jamestown S'Klallam Tribe</u>. • Use procedures that reduce the volume of drilling muds and drill cutting discharged into the Harbor. (See HDD mitigation measures listed in Water Resources Section.) • Assess impacts to nearshore habitat from drilling and trenching to a depth of 70 feet (21 m) within two weeks after cable installation is completed and again after one year during the growing season between June 1 and October 1. If the marine vegetation has not recovered to 80 percent of the density of adjacent areas within three years of monitoring, develop a mitigation plan in consultation from WDFW. (Mitigation measure also listed in Vegetation and Wetlands Section.) • Institute control measures on the cable vessel to prevent the potential risk of an accidental release	No Impact

Proposed Action		No Action
Potential Impacts	**Mitigation Measures**	**Potential Impacts**
feet [1 m]) to the cable. • Underwater noise levels from ship and equipment could impact fish and mammals (avoidance of work vicinity, possible disruption of communications, migration, and feeding behaviors), and potentially disrupt benthic species behaviors, including filter feeding and foraging. Noise levels near the trenching activities would be considered harassment to marine mammals and fish by the National Marine Fisheries Services. • Ship presence, noise, and vessel wakes could temporarily disturb sea birds, including bird colony areas in the Harbor area. • Artificial light used at night on the cable-laying vessel could potentially disrupt behaviors of fish and marine mammals attracted to the light.	of any hazardous materials. (Mitigation measure also listed in Water Resources Section.) • Use oil-adsorbent materials, maintained on the construction vessels, in the event of a petroleum product spill on the deck and/or if any sheen is observed in the water. (Mitigation measure also listed in Water Resources Section.) • Implement appropriate mitigation measures as required by USFWS or NOAA through consultations, including potential work windows (for example, no in-water work from March 2 through July 15 to protect migrating juvenile salmonids and from February 16 through July 15 to protect bull trout). • Mitigate potential impacts to state-protected species as required by WDFW based on consultation (for example, marine work windows outside of the gray whale migration season of June 1 to November 30). • Have a trained marine mammal observer on board the cable-laying vessel to record any observations of marine mammals, especially ESA-listed species. During nighttime operations, the observer would use low-light binoculars for observations. During cable-laying operations, observations for a minimum of 10 minutes would be made at least four times each hour. If any listed species are observed, the following procedures would be followed: ➢ If an individual or group of animals is observed at 1,000 yards (915 m) from the cable-laying vessel, then behavior would be recorded and vessel operators would be notified. No change to cable-laying operations would be required. ➢ If an individual or group of animals approaches the cable-laying vessel within 500 yards (457 m), the behavior of the animals would continue to be recorded, and the vessel operator would be notified and preparations to reduce the speed of cable-laying operations would begin. ➢ If an individual or group of animals approaches the cable-laying vessel within 400 yards (366 m), the behavior of the animals would continue to be recorded, the	

Proposed Action		No Action
Potential Impacts	**Mitigation Measures**	**Potential Impacts**
	vessel operator would be notified, and cable-laying operations would be reduced to one-half speed. The operator would prepare to stop cable-laying operation if necessary. ➢ If an individual or group of animals approaches the cable-laying vessel within 100 yards (91 m), the behavior of the animals would continue to be recorded, the vessel operator would be notified, and cable-laying operations would cease until the individual or group of animals had moved beyond 100 yards (91 m) of the vessel; then reduced-speed operations may resume. • Deploy any item or material that has the potential for entangling marine mammals only as long as necessary to perform its task, and then immediately remove it from the project site. • In the unlikely event that a marine mammal becomes entangled, immediately notify the stranding coordinator at NOAA Fisheries so that a rescue effort can be initiated. • Aim work lights on the cable-laying ship and support vessels to illuminate work areas in such a way as to minimize spilling light into adjacent areas of water. • <u>If required by the Department of Ecology, undertake a marine monitoring program to help confirm the extent to which buried portions of the marine cable remain covered with sediment, and develop mitigation measures to keep the cable buried to the extent practical. (Mitigation measure also listed in Socioeconomics.)</u>	
Terrestrial Wildlife and Freshwater Fish		
• Low quality terrestrial habitat would be removed; about 4.5 acres (1.8 ha) of forested habitat and 5 acres (2 ha) of grass/shrub habitat. • HDD drilling, equipment, and blasting would cause noise and visual disturbance to birds (including possible low-level impacts to foraging eagles) and small terrestrial mammals in the vicinity of project construction. • If stormwater runoff was not controlled,	• Implement appropriate mitigation measures for ~~bald eagle~~ <u>ESA-listed species</u> if required by USFWS through Section 7 consultations~~and stated in the biological opinion~~. Measures could include limitations to construction timing for noise producing activities. • Develop a dewatering plan for trenching activities in consultation with the City of Port Angeles. (Mitigation measure also listed in Water Resources Section.) • Provide appropriate long-term stormwater	No Impact

Proposed Action		No Action
Potential Impacts	**Mitigation Measures**	**Potential Impacts**
impacts to fish of Ennis, White, and Peabody creeks could occur.	detention or control facilities at the converter station site so that peak flows in Ennis and White creeks are not increased from pre-existing levels. (Mitigation measure also listed in Water Resources Section.)	
Geology and Soils		
• Sea floor sediment would be disturbed (22,000 to 145,000 yards^3 [17,000 to 111,000 m^3] in the Strait and 43,000 yards^3 [33,000 m^3] in the Harbor) with 10 to 20 percent of the disturbed sediment dispersing up to about 0.5 mile (0.8 km) from its original place on the sea floor. • Disturbed low-level contaminants in Harbor would stay in the contaminated area, disperse to another contaminated area, or disperse to an unpolluted area. • Sand waves could increase sediment depth over the buried cable or erode sediment resulting in a thinning or removal of sediment cover over the cable. • If a severe earthquake occurred, the cable could potentially be severed, at which time the power would automatically shut off. • Drilling muds (bentonite) would be released into Harbor as the HDD drill bit exits through the seafloor. Though drilling mud would be removed to the extent possible, some drilling mud would inevitably remain and become part of the sediment make-up. • About 215 yards3 (165 m^3) of drill cuttings from the HDD hole would be removed and taken to a suitable landfill or spoil disposal location. • Construction of the terrestrial cables, converter station, and interconnection at BPA's substation would impact soil through disturbance, removal, exposure to run-off, compaction, and covering with buildings or rock. • Up to about 1000 yards^3 (765 m^3) of soil would be removed from the converter station site and about 20,000 yards^3 (15,000 m^3) of soil would be excavated at Port Angeles	• Follow all mitigation measures required by the Department of Ecology for water quality and contaminated sediments. Measures could include pre-construction sediment sampling near the HDD end point and cable trench in the Harbor, sediment dispersion modeling, sediment monitoring to ensure turbidity levels are not raised more than 5 NTU above background levels, and sediment control measures. (Mitigation measure also listed in Water Resources Section.) • Limit site disturbance to the minimum area necessary to complete construction activities to the extent practicable. (Mitigation measure also listed in Water Resources Section.) • For the SWPPP, use management practices contained in the most current addition of the Storm Water Management Manual for Western Washington found at http://www.ecy.wa.gov/programs/wq/stormwater/manual.html (e.g., use silt fences, straw bales, interceptor trenches, or other perimeter sediment management devices, placing prior to the onset of the rainy season and monitoring and maintaining until disturbed areas have stabilized). (Mitigation measure also listed in Water Resources Section.) • For the SWPPP, use management practices contained in the Storm Water Management Manual for Western Washington (e.g., use silt fences, straw bales, interceptor trenches, or other perimeter sediment management devices, placing them prior to the onset of the rainy season and monitoring and maintaining until disturbed areas have stabilized). (Mitigation measure also listed in Water Resources Section.) • If needed, develop temporary retention pond (a vegetated swale, a shallow excavation, or a combination of detaining systems) to contain turbid stormwater during construction at Port	No Impact

Proposed Action		No Action
Potential Impacts	**Mitigation Measures**	**Potential Impacts**
Substation and used on site for terracing.	Angeles Substation. (Mitigation measure also listed in Water Resources Section.) • Seed or plant exposed areas as soon as practicable after construction, or as called for by permit, at the converter station site and Port Angeles Substation to reduce the potential for short and long-term erosion. (Mitigation measure also listed in Water Resources, Vegetation and Wetlands, and Air Quality Sections.) • Cut or crush vegetation, rather than blade, in areas that will remain vegetated in order to maximize the ability of plant roots to keep soil intact. (Mitigation measure also listed in Vegetation and Wetlands Section.) • Install trip switches in the converter station to automatically shut off power at the station in the event of strong ground shaking during a seismic event that could damage the transmission system. • Include engineered design and earthquake-resistant construction in all habitable structures to increase the safety of persons occupying the buildings. The minimum seismic design would comply with the Clallam County Building Code and applicable Washington State Building Codes. • Design and construct non-habitable project components using earthquake-resistant measures.	
Land Use		
• Construction in the Harbor and marine waters would potentially cause temporary low-level disruption to fishing and ship traffic avoiding the slow-moving cable-laying operations. • Residents near the HDD site would be affected by construction noise, dust, night-time lighting, and traffic disruptions 24 hours/per day, 7 days a week for about 23 days. • Residents along Liberty Street and near the converter station site and BPA's substation would be affected during construction activities: noise (including blasting required along Liberty Street between 5th and 8th streets), dust, and traffic disruptions between	• Notify residents and business owners of the construction schedule, potential impacts, and contact numbers for project managers who can provide information or address concerns during construction. • Contact residents along the route prior to construction to coordinate driveway access and reduce interference. • Provide appropriate signage for redirecting traffic during construction through coordination with the City of Port Angeles Public Works Department. • Implement measures to reduce visual and noise impacts (see Visual and Noise sections).	No Impact

Proposed Action		No Action
Potential Impacts	**Mitigation Measures**	**Potential Impacts**
7 a.m. and 7 p.m. • Land use of the converter station site would change from a nearly-vacant lot used for an electrical transmission line corridor and open space (with casual recreation) to a converter station, incrementally increasing the utility-related use of the area. • Land use of the BPA substation property would change from existing open space (with casual recreation) and transmission line corridor to fenced substation yard, incrementally increasing the utility-related use of the area.		
Visual Resources		
• Some residents along streets near the Harbor and visitors to the Discovery Trail would see the cable-laying ship, supporting boats, and other equipment during construction of the marine cable in the Harbor. • Residents and motorists near the HDD construction site, along the terrestrial cable route, near the converter station site, and near the BPA substation would have temporary views of construction activities. • The new converter station building, electrical yard, and required tree removal and thinning, would create a long-term change in the landscape of the area. • The expansion of the BPA electrical yard for the interconnection work and required tree removal and thinning would create long-term visual impacts to residents in the vicinity, increasing the existing utility/industrial-related look to the area.	• Seek and incorporate input from local residents and planning officials about the design of the exterior of the converter station. • Design converter station building exterior to be compatible with facilities of Peninsula College. This ~~could~~ would be accomplished by ~~doing~~ including the following: ➢ Installing decorative walls, ➢ Planting native trees and understory vegetation, ➢ Installing slats on chain-link fencing. • Revegetate exposed ground above underground AC lines on BPA property with vegetation that does not jeopardize safety or reliability of equipment.	No Impact
Socioeconomics		
• Impacts to socioeconomics would include some low-level positive impacts to the economy due to construction worker and project supply spending. • Short-term increases in population and housing (campgrounds, RV parks, hotels) needs would occur with about 85 construction workers coming from outside the area to work on various portions	• Record the location of the marine cable bundle on navigational charts. (Mitigation measure also listed in Health and Safety Section.) • Bury the cable bundle deep enough to provide protection, up to 12 feet (3.6 m), in areas of soft soils and potential ship anchorage. (Mitigation measure also listed in Health and Safety Section.) • If required by the Department of Ecology to reduce the possibility of the cable being snagged	No Impact

Proposed Action		No Action
Potential Impacts	**Mitigation Measures**	**Potential Impacts**
of the project at different points in time. • Addition of potential jobs in the area would include some local workers for non-specialty construction jobs and a full-time security guard and a local grounds maintenance company for the converter station. • Construction in the Harbor and marine waters would create temporary low-level impacts as fishing and ship traffic would need to avoid the slow-moving cable-laying operations. • There would be a minimal risk that the cable could be snagged or hit by ship anchors.	by anchors, undertake a marine monitoring program to help confirm the extent to which buried portions of the marine cable remain covered with sediment, and develop mitigation measures to keep the cable buried to the extent practical. (Mitigation measure also listed in Marine Habitat and Wildlife.)	
Cultural Resources		
• Potential impacts to undiscovered cultural resources during marine trenching or terrestrial ground disturbing activities (no sites were identified through surveys).	• ~~Identify and locate any potential historic resources along the marine cable corridor using existing sonar data, if adequate, or gather additional data, if necessary.~~ • ~~Determine final cable alignment to avoid potentially significant resources.~~ • Develop an Inadvertent Discovery Plan that details crew member responsibilities for reporting in the event of a discovery during marine cable installation. • Develop a Cultural Resource Monitoring Plan in consultation with the Lower Elwha Klallam Tribe. • Ensure tribal monitors from the Lower Elwha Klallam Tribe and an archaeologist are present during excavation in areas of moderate to high risk for impacts (e.g., at the HDD platform, trenching along level areas of the terrestrial route, and excavation at the converter station site and interconnection site work). • Develop an Inadvertent Discovery Plan that details construction worker responsibilities for reporting in the event of a discovery during terrestrial excavation. • If final placement of the project elements results in unavoidable adverse impacts to a significant resource, prepare a Mitigation Plan to retrieve the scientific and historical information that makes the site significant under the direction of a qualified archeologist and in consultation with	No Impact

Proposed Action		No Action
Potential Impacts	**Mitigation Measures**	**Potential Impacts**
	Washington SHPO and the Lower Elwha Klallam Tribe. • Stop work immediately and notify local law enforcement officials, the Washington SHPO, and the Lower Elwha Klallam Tribe if project activities expose human remains, either in the form of burials or isolated bones or teeth, or other mortuary items.	
Noise		
• Temporary noise impacts would occur for 2 to 3 days, 24 hours/day from the cable laying ship and equipment work in the Harbor. • The HDD hole construction site would generate noise 24 hours/day for 23 consecutive days at levels slightly louder than typical construction noise levels, reducing to ambient noise levels at a distance of about 600 feet (183 m) from the drilling equipment. • Terrestrial construction of the cable trenching, converter station, and interconnection work would generate construction level noise, between 7 a.m. and 7 p.m. Required blasting along Liberty Street between 5th and 8th streets would include two blasts per day for 10 days. • Operation of the converter station may raise existing noise levels in the immediate vicinity. • Vibration due to the HDD drilling could be perceptible to nearby residents. • Vibrations due to pipe ramming at the HDD hole site would be above levels that could potentially cause damage to residential structures, but less than levels that could potentially damage industrial buildings.	• Incorporate the use of sound attenuating techniques at the HDD construction site to reduce noise levels as close to its source as possible. • Do not permit the use of equipment with back-up warning devices between 7:00 p.m. and 7:00 a.m. • Monitor vibration levels during initial HDD operations and during pipe ramming. • Conduct pre-construction and post-construction structural surveys of adjacent and nearby structures to determine if structural damage has occurred due to pipe ramming vibrations. Compensate property owners for damages as appropriate. • Reduce the speed of the HDD drill during non-exempt hours, if possible, to limit noise levels. • Enclose major noise-generating equipment inside the converter station building, where possible. • Place cooling fans at the converter station away from residents.	No Impact
Health and Safety		
• The proposed project health and safety issues include potential shocks, increased exposures to magnetic fields, use and disposal of toxic and hazardous materials, and risk of fire. • Accidental electric shocks could occur in the rare event that future construction excavating equipment breached the insulation of the	• Obtain approval from the City of Port Angeles prior to construction in city streets. • Provide detailed information about the location of the cable (as-builts) to the Port Angeles Engineering Department so construction crews can avoid it. • Install concrete and warning tape above buried	No Impact

Proposed Action		No Action
Potential Impacts	**Mitigation Measures**	**Potential Impacts**
cable. • Potential low level increased exposure to magnetic fields could occur along the AC cable depending on the cable configuration and placement in the street and the distance from the cable to a residence. • Accidental oil spills, mishandling, or storage of any toxic or hazardous waste products could occur if mitigation measures were not followed. • Potential fire could occur without appropriate fire protection systems installed in the converter station or if trees were allowed to grow too close to overhead lines or electrical yards.	terrestrial cables to protect the cable from possible damage during future excavation in the street near the cable corridor. • Record the location of the marine cable bundle on navigational charts. (Mitigation measure also listed in Socioeconomic Section.) • Bury the cable bundle deep enough to provide protection, up to 12 feet (3.6 m), in areas of soft soils and potential ship anchorage. (Mitigation measure also listed in Socioeconomic Section.) • Configure and locate buried AC cables and overhead transmission lines to lessen potential magnetic field exposures. • Abide by all federal, state, and local requirements for the storage, handling, transport, disposal, and spill reporting requirements of all products and deleterious substances. Personnel handling or transporting such materials would be adequately trained and, where necessary, material safety data sheets (MSDS) would be kept on hand. • Ensure proper refueling procedures are followed and that containment materials are on hand at refueling locations. • Maintain "good-housekeeping practices" within the hazardous material containment area, including prompt cleanup of spills. • Place all transformers inside a bermed area large enough to capture the full potential volume of any oil spills or leaks from the equipment. • Conduct periodic inspections around all transformers to look for any minor leaks or spills. • Install appropriate fire detectors, sprinklers, and other fire safety equipment in the converter station. • Remove vegetation and tall trees that could pose a danger to overhead transmission lines, converter station equipment, and electrical yards to prevent potential damage during large windstorms or from tree deadfalls.	
Air Quality		
• Construction activities would create dust (5 tons [4.5 metric tons]), and heavy equipment, ships, generators, and vehicles	• Apply water to exposed soils at construction sites as necessary to control dust.	No Impact

Proposed Action		No Action
Potential Impacts	**Mitigation Measures**	**Potential Impacts**
would emit exhaust pollutants.	• Clean accumulated dirt, as necessary, from roads along the cable construction corridor and near the converter station and substation. • Implement dust control measures, as necessary, to limit dust releases from dump trucks (such as wetting dry soil). • Seed or plant exposed areas as soon as practicable after construction, or as called for by permit, at the converter station site and Port Angeles Substation to reduce the potential for wind blown erosion. (Mitigation measure also listed in Water Resources, Vegetation and Wetlands, and Geology and Soils sections.) • Keep all construction equipment in good running condition to minimize emissions from internal combustion engines and ensure that odor impacts are kept to a minimum. • To the degree practical, minimize equipment idling for long periods of time.	

2.3 Affected Environment, Environmental Impacts, and Mitigation Measures (Chapter 3)

2.3.1 Water Resources

Page 3-2, paragraph 6 has been modified as follows:

The Port Angeles Harbor is contained within Ediz Hook, a 4-mile (6.4-km) sand spit (see Figure 1-1). The City of Port Angeles contains 26 miles (42 km) of marine shoreline, including Ediz Hook (City of Port Angeles 2004). The marine waters of Port Angeles Harbor are currently listed as impaired by the State of Washington under Section 303(d) of the Clean Water Act. The impairment listing is due to low dissolved oxygen levels, which can stress populations of fish and other aquatic organisms (Clallam County 2004). In addition, water quality and marine sediments in Port Angeles Harbor have been adversely impacted by storm water runoff, discharges of wastewater from various past industrial and municipal uses, and discharges from the former Rayonier pulp mill. The former Rayonier pulp mill outfall is about 4,400 feet (1,300 m) east-north-east from the proposed the HDD hole end point. While water quality has likely recovered since the closure of the mill in 1997, residual marine sediments are still degraded.

Page 3-14, text has been added after bullet item 3 as follows:

- Follow all mitigation measures required by the Department of Ecology for water quality and contaminated sediments. Measures could include pre-construction sediment sampling near the HDD end point and cable trench in the Harbor, sediment dispersion modeling, sediment monitoring to ensure turbidity levels are not raised more than 5 NTU above background levels, and sediment control measures. (Mitigation measure also listed in Geology and Soils Section.)

Page 3-15, bullet item 3 has been modified as follows:

- For the SWPPP, use management practices contained in the most current addition of the Storm Water Management Manual for Western Washington found at http://www.ecy.wa.gov/programs/wq/stormwater/manual.html (e.g., use silt fences, straw bales, interceptor trenches, or other perimeter sediment management devices, placing prior to the onset of the rainy season and monitoring and maintaining until disturbed areas have stabilized). (Mitigation measure also listed in Geology and Soils Section.)

2.3.2 Vegetation and Wetlands

Page 3-17, paragraph 2 has been modified as follows:

The 5-acre (2-ha) converter station property has a mix of vegetation. A little over a third of the site was cleared of trees and vegetation in 2004 for the construction of a steel pole

transmission line and is now a field dominated by white clover (*Trifolium repens*) and various grasses. (See Figure 3-2.) This cleared area is on the east side of the property. ~~There is also a tree buffer on this side, outside of the property boundary next to S. Liberty Street.~~ The middle portion of the site has three wood-pole transmission lines crossing the area and is regularly maintained to keep vegetation from growing close enough to the lines to cause outages. The vegetation under the existing lines consists of young red alder (*Alnus rubra*) and Douglas fir (*Pseudotsuga menziesii*) trees about 20 feet (6 m) tall, and lower-growing vegetation of willow (*Salix*), snowberry (*Symphoricarpos albus*), and salal (*Gaultheria shallon*). In 2007, a winter wind storm blew down or otherwise damaged 60 to 70 percent of the trees on the converter station site's eastern border (next to South Liberty Street). After the storm, the City of Port Angeles determined that the remaining trees were a hazard to public safety and cleared them (Bloom June 7, 2007).

Page 3-19, last paragraph has been modified as follows:

To construct the converter station and associated facilities, an approximate 3.75 acre (1.5 ha) portion of the property would be cleared of vegetation, with a vegetative buffer~~s~~ remaining on the ~~east and~~ west property border~~s~~ (see Figure 3-2). About 1.8 acres (0.7 ha) of grasses and clover would be removed, about 1.3 acres (0.5 ha) of the young trees and shrubs (willow, alder, Douglas fir, snowberry, salal, and Scotch broom) under the existing transmission lines would be removed, and about 1 acre (0.4 ha) of more established trees and undergrowth (fir, cedar, alder maple ferns, snowberry, and salal) on the west side would be removed. A vegetative buffer about 100 feet (30 m) wide would be left along the west side. However, select tall trees growing within this buffer area that would have the potential of falling into the converter station yard would be removed. These trees would most likely be the taller-growing Douglas fir and cedar. ~~The trees growing on the eastern boundary, along S. Liberty Street, are not within the converter station property boundary; however, select trees within this area may also be removed if they too pose a safety hazard to the converter station.~~

Page 3-22, paragraph 1 (after bullets) has been modified as follows:

Impacts to vegetation with all mitigation measures in place would include the removal of about 5 acres (2 ha) of algae, with expected re-colonization within one to two seasons; and removal of about 3.8 acres (1.5 ha) of grasses, about 1.3 acres (0.5 ha) of young trees and shrubs, and about 4.5 acres (1.8 ha) of trees. In addition select trees, with the potential of causing safety hazards at the converter station, would be removed within the vegetative buffer area~~s~~ on the ~~east and~~ west side~~s~~ of the site.

2.3.3 Marine Habitat and Wildlife

Page 3-29, Table 3-3, third entry under fish has been modified as follows:

Species[1]	State Status[2]	Federal Status[2]	Possibly Present in Project Vicinity
Fish			
Puget Sound Steelhead *(Oncorhynchus mykiss)*	None	~~PT~~ T	Yes

1. List from WDFW: http://wdfw.wa.gov/wlm/diversty/soc/soc.htm http://wdfw.wa.gov/hab/phslist.htm
2. Status: Endangered (E), Threatened (T), Proposed Threatened (PT), Federal Candidate (FC), Federal Species of Concern (FCo), State Candidate (SC), State Sensitive (SS), Priority Species (PS).
3. Species also ESA-listed.

Page 3-43, paragraph 1 has been modified as follows:

The coasts of Clallam County support various Pacific salmon groups including Chinook, chum, sockeye, pink, coho, steelhead, and coastal cutthroat trout. The generalized life history of Pacific salmon involves freshwater incubation, hatching, and emergence then migration to the ocean. Subsequent initiation of maturation occurs in saltwater with a return to freshwater for completion of maturation then spawning (Myers et al. 1998). ~~Three~~ Four salmon stocks in Clallam County are listed as threatened under the ESA: the Puget Sound Evolutionarily Significant Unit (ESU) Chinook salmon; the Hood Canal summer-run ESU chum salmon (NOAA 2005b); Puget Sound Steelhead (NOAA 2007); and the Coastal-Puget Sound bull trout.

Page 3-47, last paragraph has been modified as follows:

Geoduck densities in the project area are low, between 0.024 and .008 clams/foot^2 (0.26 and 0.086 clams/m^2). Based on an impact distance of about 1,560 yards (1,426 m) (from the HDD-hole end point out to a water depth of 70 feet [21 m]), between 1,348 and 4,044 geoduck clams could be fatally injured by trenching, by either direct contact with the cable trench equipment or being buried by sidecast sediment. Since recruitment of geoduck clam populations is low (Goodwin and Pease 1989), recovery to pre-impact conditions may take several years. Compensatory mitigation, if required, for the loss of this resource would be negotiated with the Lower Elwha Klallam Tribe, the Port Gamble S'Klallam Tribe, the Jamestown S'Klallam Tribe (who all have Usual and Accustomed Fishing Areas in the Strait), the Washington State Department of Natural Resources (DNR) and the WDFW. (See also impacts to geoduck due to habitat alteration.)

Page 3-51, new text has been added after paragraph 1 as follows:

Increased sediment temperatures could attract some benthic species to the localized warmer area. Species would tolerate the elevated temperatures as they would settle or migrate over the area. Eggs and larvae within the sediment could develop faster than they would have at lower temperatures.

Page 3-51, new text has been added to paragraph 4 as follows:

In the few areas where the cable may not be buried (up to 2,000 feet [610 m] of the 10.5 mile [17 km] length under U.S. jurisdiction), the cable bundle would lie on the ocean floor. In some areas this unburied cable would be covered by concrete mattresses or protective sleeves. In other areas the cable would be exposed. Marine species could come in contact with the cable or the protective covering. To the touch, the cable would be about 140°F (60°C). Species could be injured or startled if they settled on the unburied cable. Long stretches of exposed cable could limit benthic species (such as urchins, sea cucumbers, sea stars, marine snails, etc.) from migrating over the cable within the Strait due to elevated temperatures. However, the 2000 feet (610 m) of exposed cable would not be in one continuous length, but would occur intermittently in various areas on the sea floor. The cable is estimated to be exposed for about 4 percent of its total length under U.S. jurisdiction. This small percentage, broken into different segments, would not be enough to create a migration barrier, although individual benthic organisms in the vicinity of the exposed cable could be prevented from crossing over the exposed cable because of its temperature at that location.

Page 3-52, paragraph 1 has been modified and a table has been added as follows:

Electric and Magnetic Fields

Habitat could also be potentially altered by static electric and magnetic fields (EMF) generated by the cable. As described in Section 3.11, Health and Safety, electric fields can be shielded (by insulation, burial, etc.), whereas magnetic fields cannot. In addition, while DC magnetic fields do not induce currents into objects or living creatures, these fields have the potential to affect species that use magnetic fields for migration.

~~EMF~~ Magnetic field levels decrease exponentially from the field source. The magnetic fields generated from the cable at the sediment surface would range from 66,600 mg at the cable surface, dropping off rapidly to 380 mg at 3 feet (1 m) from the cable (see Table 3-9a). In the project area, the naturally-occurring geomagnetic fields of the earth measures at about 550 mg. The field strength of a typical bar magnet is about 100,000 mg.

Table 3-9a DC Magnetic Field Levels Generated by Cable

Distance from Cable	Magnetic Field Level (milligauss)
0 feet (0 m) cable surface – exposed	66,600
1.6 feet (0.5 m)	1,680
3 feet (1 m)	380
6 feet (2 m)	100
10 feet (3 m)	≤100
20 feet (6 m)	≤100

Because most of ~~T~~the proposed cable would be buried between 3 to 5 feet (1 to 1.5 m) deep below the seafloor, ~~and~~ the magnetic fields for these portions of the cable measured at the seafloor and above ~~may be slightly higher~~ would be less than the naturally-occurring

geomagnetic field of the earth.~~, which is 550 milligauss.~~ However, near locations where the cable is exposed or not buried as deep as proposed, magnetic fields from the cable would be higher than the earth's naturally-occurring field.

Some species are known to use or otherwise be sensitive to magnetic fields, although there is little definitive research in this area. Sharks and rays are known to be sensitive to EMF, which is used for navigation and locating food (Kalmijn, Gonzalez, and McClune 2002). Other marine species that are considered to be sensitive to magnetic fields include turtles (Light, et al. 1993), Chinook and sockeye salmon (Quinn, et al. 1981), and whales (Klinowska 1985, Kirschvink, et al. 1986). Live strandings of toothed and baleen whales have been correlated with local geomagnetic anomalies (Kirschvink, et al. 1986). There is little information on benthic species' sensitivity to magnetic fields, though spiny lobsters (which live in warm seas) use magnetic fields for migration (Lohnmann, et al. 1995).

Elevated EMF may affect these species within a few yards or meters from the cable corridor; in this situation, sharks or rays would rely on other environmental factors (current, temperature, etc.) for navigation (Bailey, 2006). Little data or analysis has been reported of potential impacts from EMF specifically from submarine power cables (Foster and Repacholi 2001). The Center for Marine and Coastal Studies at the University of Liverpool (2002) completed a review of existing information and concluded that the state of knowledge was too variable and inconclusive to make any assessment of the environmental effects of EMF. (See also Section 3.11.) Nonetheless, given the sensitivity of certain species to magnetic fields as discussed above, there is the potential that these species could be affected from elevated magnetic fields from an exposed cable and portions of the cable buried nearer the surface than proposed. As discussed in Chapter 2, there would be few areas in which the cable would be exposed or buried nearer the surface than proposed, and these areas would be dispersed along the length of the cable. However, species sensitive to magnetic fields that could come within 3 feet (1 m) of the cable in these areas could be affected and experience confusion or disorientation. Elevated EMF may affect sharks or rays within this distance from the cable; in this situation, sharks or rays would be expected to rely on other environmental factors (current, temperature, etc.) for navigation (Bailey 2006). Any benthic species sensitive to magnetic fields may also be temporarily disoriented. However, because magnetic fields that would be generated by the cable would drop below the magnetic field levels generated by the earth within 3 feet (1 m) of the cable, species would not be expected to be influenced by the cable beyond 3 feet (1 m). Because whales, including the southern resident killer whale, generally would not be expected to come within this distance of the cable with any regularity given their migratory patterns and behaviors, the cable would not be expected to influence these species.

Page 3-54, new text has been added after the last paragraph as follows:

The operation of the cable would not generate noise. AC transmission lines create a hum because of the changing polarity of the alternating current. Since DC lines do not change polarity, there is no hum. Therefore, there would be ***no*** noise impacts to marine species during cable operations.

Page 3-58, bullet item 2 has been modified as follows:

- Mitigate loss of geoducks based on agreements with the DNR, ~~and~~ WDFW, the Lower Elwha Klallam Tribe, the Port Gamble S'Klallam Tribe, and the Jamestown S'Klallam Tribe.

Page 3-59, new text has been added after the last bullet item as follows:

- If required by the Department of Ecology, undertake a marine monitoring program to help confirm the extent to which buried portions of the marine cable remain covered with sediment, and develop mitigation measures to keep the cable buried to the extent practical. (Mitigation measure also listed in Socioeconomics.)

2.3.4 Terrestrial Wildlife and Freshwater Fish

Page 3-61, paragraph 2 has been modified as follows:

The WDFW Priority Habitats and Species database identified an area used year-round by waterfowl about 1.5 miles (2.4 km) west of the cable landing site at the Waterfront Trail near Hollywood Beach (see Figure 3-3). Another area includes the Waterfront Trail near Ennis Creek where it has been documented that loons (*Gavia* sp.) use the area out to 0.25 miles (0.4 km) off shore. The database identified anadromous fish present within Ennis Creek, including coho salmon, bull trout, and winter steelhead. Cutthroat trout are the resident species present within Ennis Creek and White Creek. Anadromous fish within White Creek ~~only~~ include the coho salmon, which has federal status as a Species of Concern.

Page 3-61, paragraph 3 has been modified as follows:

The WDFW Priority Habitat and Species database and other databases identified four ~~several~~ ESA-listed species that may occur within the project vicinity: ~~. Special-status terrestrial species that have been identified within the project area include the bald eagle and~~ northern spotted owl, marbled murrelet, ~~coho salmon,~~ bull trout, and Puget Sound steelhead (see Table 3-10). The bald eagle may also occur in the project vicinity; this species, which previously was listed as a threatened species, was removed from the endangered species list on August 8, 2007.

Page 3-61, Table 3-10 has been modified as follows:

Table 3-10 Endangered Species Act-Listed Species Found in the Terrestrial and Freshwater Environment in Clallam County, Washington

Species[1]	Status[2]	Jurisdiction[3]	Possibly Present in Project Area
~~Bald Eagle (*Haliaeetus leucocephalus*)~~	~~T~~	~~USFWS~~	~~Yes~~
Northern Spotted Owl (*Strix occidentalis caurina*)	T	USFWS	May Occur
Marbled murrelet *(Brachyramphus marmorata*)	T	USFWS	May Occur
Bull Trout (*Salvelinus confluentus*)	T	USFWS	Yes
Puget Sound Steelhead *(Oncorhynchus mykiss)*	~~PT~~ T	NOAA	Yes

1. List from USFWS: http://westernwashington.fws.gov/se/SE_List/CLALLAM.htm
   NOAA Fisheries: http://www.nmfs.noaa.gov/pr/species/concern
2. Status: Threatened (T), Proposed Threatened (PT)
3. United States Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration (NOAA).

Page 3-62, paragraph 1 has been modified as follows:

The bald eagle is no longer on the endangered species list, but it is still protected under the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. ~~is a federally-listed threatened species and was proposed for delisting on July 6, 1999 (64 Federal Register [FR] 36453).~~ The historical decline of the bald eagle has been attributed to a loss of feeding and nesting habitat, shooting, organochloride pesticide residues, poisoning, and electrocution. However, in recent years, the population in the continental U.S. has increased dramatically.

Page 3-63, paragraph 3 has been modified as follows:

Puget Sound steelhead were ~~proposed to be~~ listed as threatened under the Endangered Species Act on May 7, 2007 (72 FR 26722) ~~March 29, 2006 (1FR15666)~~. ~~A final determination about whether steelhead should be listed as threatened should occur within a year.~~ The listing ~~would~~ includes all naturally-spawned anadromous ~~winter-run and summer-run~~ O. mykiss (steelhead) populations, in streams in the river basins of the Strait, Puget Sound, and Hood Canal, Washington, bounded to the west by the Elwha River (inclusive) and to the north by the Nooksack River and Dakota Creek (inclusive), as well as the Green River natural and Hamma Hamma winter-run steelhead hatchery stocks.

Page 3-64, paragraph 1 has been modified as follows:

Of the ~~5~~ 4 ESA-listed terrestrial or fish species that could occur within the project area, one of them would not be affected by the project while ~~four~~ three of the species may be affected, but are not likely to be adversely affected. Table 3-11 lists the species and a determination of effects on those species. A biological assessment has been ~~will be~~ submitted to both NOAA

and USFWS. The following discussions regarding impacts of the project address the effects on the various ESA-listed species, as well as on the recently delisted bald eagle.

Page 3-64, Table 3-11 has been modified as follows:

Table 3-11 Threatened and Endangered Species Determination of Effects

Species[1]	Determination[2] of Effects
~~Bald Eagle (*Haliaeetus leucocephalus*)~~	~~May affect, not likely to adversely affect~~
Northern Spotted Owl (*Strix occidentalis caurina*)	No Effect
Marbled Murrelet *(Brachyramphus marmorata*)	May affect, not likely to adversely affect
Bull Trout (*Salvelinus confluentus*)	May affect, not likely to adversely affect
Puget Sound Steelhead *(Oncorhynchus mykiss)*	May affect, not likely to adversely affect

1. List from USFWS: http://westernwashington.fws.gov/se/SE_List/CLALLAM.htm
   NOAA Fisheries: http://www.nmfs.noaa.gov/pr/species/concern
2. Determination may be altered as species and project information is compiled.

Page 3-65, paragraph 3 has been modified as follows:

Overall, disturbance to wildlife, including murrelets, due to noise from the HDD work would be temporary and impacts would be ***low***. Impacts to eagles would also be ***low*** because the closest nest site would be over 1 mile (1.6 km) from construction activities and eagles in the area are accustomed to human disturbance. ~~with the inclusion of mitigation measures for eagles (including determining if any occupied nests, nocturnal roost sites, or wintering concentration areas are within 1 mile (1.6 km) of project activities prior to construction).~~

Page 3-66, paragraph 2 has been modified as follows:

Most of the upland cable would be trenched within paved roadways that have minimal wildlife habitat (only foraging birds and small mammals). Construction would cause noise and human presence and, but for the blasting required, would be consistent with activities occurring regularly in the city. Blasting during trenching would occur on Liberty Street between 5th and 8th Streets about twice a day over 10-days and may cause wildlife to temporarily leave or avoid the area. ~~With inclusion of mitigation measures for eagles, o~~ Overall impacts to wildlife from construction of the terrestrial DC cable would be ***low***. The terrestrial DC cable would not remove any wildlife habitat.

Page 3-66, paragraph 4 has been modified as follows:

As described in Section 3.1, Water Resources, trenching within city streets would likely intercept shallow perched groundwater zones if the trenching is conducted during the wetter months. Water encountered during trenching would need to be pumped from the trench and managed as stormwater. Although it is not known how much water would be generated, it

would be generated over a 1-month period. Even if the construction period corresponded with peak water flows in Ennis and White creeks, water pumped from the trench would not contribute enough stormwater to increase water flows and impact fish habitat; there would be ***no-to-low*** impacts to fish.

Page 3-69, bullet item 1 has been modified as follows:

- Implement appropriate mitigation measures for ~~bald eagle~~ ESA-listed species if required by USFWS through Section 7 consultations. ~~and stated in the biological opinion~~. Measures could include limitations to construction timing for noise producing activities.

2.3.5 Geology and Soils

Page 3-70, last paragraph has been modified as follows:

The HDD hole would also be under the Beaches soil type, which is typically in long, narrow stretches along the shoreline. These areas are mainly above mean tide level, but are subject to ocean wave action during storms. The soil is generally characterized as bare and typically consists of gravel, cobbles, and sand. In the project area, this soil has been subject to modification, including importation of fill material for road and utility construction and prior industrial land use such as the former Rayonier pulp mill.

Page 3-74, paragraph 3 has been modified as follows:

Trenching activities would also disturb marine sediments contaminated by ~~releases~~ discharges from historic industrial and municipal uses, and historic operations at the Rayonier pulp mill. As described in Section 3.1.1.1, most recent contaminate monitoring and sampling in the Harbor found contaminates (4-methylphenol, pesticides, and resin acids) at concentrations within Washington state sediment standards. The sediment disturbance caused by trenching and prop-wash in the vicinity of the Rayonier pulp mill outfall could spread existing contaminates up to 0.5 mile (0.8 km) from sea bed activities. Contaminants disturbed could fall back to the sea floor in an already contaminated area, disperse to another area already contaminated, or disperse to an unpolluted area. If contaminants are moved to an already polluted area, the contaminate levels in this area could be raised above state standards. Any contaminates dispersed to unpolluted areas would be expected to be in small enough quantities that the new area would also be within Washington state standards. Impacts to soils due to potential redistribution of existing contaminates would be ***low-to-moderate***.

Page 3-79, new text has been added before bullet item 1 as follows:

- Follow all mitigation measures required by the Department of Ecology for water quality and contaminated sediments. Measures could include pre-construction sediment sampling near the HDD end point and cable trench in the Harbor, sediment dispersion modeling, sediment monitoring to ensure turbidity levels are not raised more than 5 NTU above background levels, and sediment control measures. (Mitigation measure also listed in Water Resources Section.)

Page 3-79, bullet item 3 has been modified as follows:

- For the SWPPP, use management practices contained in the most current edition of the Storm Water Management Manual for Western Washington found at http://www.ecy.wa.gov/programs/wq/stormwater/manual.html (e.g., use silt fences, straw bales, interceptor trenches, or other perimeter sediment management devices, placing prior to the onset of the rainy season and monitoring and maintaining until disturbed areas have stabilized). (Mitigation measure also listed in Water Resources Section.)

2.3.6 Visual Resources

Page 3-91 to 3-92, Section 3.7.2.4 has been modified as follows:

Residents in about ~~five~~ ten homes along Liberty Street, Porter Street and East Lauridsen Boulevard would have temporary foreground views of the construction of the converter station. These views would be ***short-term*** (about 10 months) and the impact would be ***moderate***.

Residents ~~of Peninsula College and~~ of an assisted care facility next to the converter station site would have views of the construction of the converter station site that could be partially screened. Construction views for these residents would be in the foreground and middle ground; views would be ***short-term***, and impacts would be ***low***.

Peninsula College students, faculty, and visitors would also have views of the construction of the converter station site. In addition, ~~A~~audience members and participants coming to the Port Angeles Community Playhouse across East Lauridsen Boulevard from the converter station site could view the construction if it takes place during the theater season.~~;~~ These impacts would be ***short-term*** and ***low.***

The converter station building and electrical yard would create a long-term change in the landscape of the area. Four existing transmission lines traverse the site, crossing over from BPA's electric substation yard across Park Street. The site is treed on the west ~~and east~~ side of the property, providing some screening of the existing lines for some viewers located west of the converter station. The trees also provide a screen for existing views of the parking lot at Peninsula College and the Port Angeles Substation for some viewers. ~~These~~This tree screen~~s~~, as well as an area of thick low-growing brush and a grass field on the site, offers some visual relief in the suburban/urban environment. The grass field and low-growing vegetation on the site would be removed. The trees on the west side of the site would be partially removed, with a 100-foot wide vegetative buffer remaining. However, tall trees within the buffer that could fall into the electrical yard would also be removed, which would thin the existing buffer and lower the height of screening. ~~Some trees on the east side of the converter station would also be selectively removed, thinning and lowering the height of the existing vegetative screen of the site from South Liberty Street.~~

The converter building would be 35 feet (10.7 m) tall and electrical equipment would likely be taller. If it is not possible to underground the existing transmission lines, the lines would

be placed on towers about 10 to 20 feet (3 to 6 m) taller than the existing lines to cross over the converter station.

Residents in about ~~five~~ ten homes in the area would have long-term views of the converter station. Residents of ~~Peninsula College and~~ the assisted care facility would also have views of the station, though their view would be partially screened by trees. In addition, some views of the Olympic Mountains for about three homes on the north side of the site may be at least partially blocked by the converter station. Peninsula College students, faculty, and visitors and Port Angeles Community Playhouse visitors would also have views of the converter station site when in the area. Mitigation measures include designing the building's exterior to be compatible with buildings on the Peninsula College campus and enclosing outside electrical equipment with a decorative wall or slatted chain link fence. Though the look of the converter station would be consistent with the existing industrial look of the existing adjacent Port Angeles Substation and transmission lines, and the campus look of the college~~s~~, the site would be permanently changed and would add another industrial element in the neighborhood.

Landscaping and other mitigation measures would also lessen the contrast with the tree buffer~~s~~ and would soften the industrial appearance of the converter station. ***Long-term*** impacts would be ***high*** to local residents, especially if views of the mountains would be blocked, and ***moderate*** to residents and visitors to Peninsula College and the Community Playhouse, and motorists.

Page 3-94, bullet items 2 thru 5 have been modified as follows:

- Design converter station building exterior to be compatible with facilities of Peninsula College. This ~~could~~ would be accomplished by ~~doing~~ including the following:
  - Installing decorative walls,
  - Planting native trees and understory vegetation,
  - Installing slats on chain-link fencing.

2.3.7 Socioeconomics

Page 3-97, paragraph 1 has been modified as follows:

The City of Port Angeles is in an area known for its rich natural resources, and the industries they support, especially timber and fishing. Recent declines in these industries have had a major effect on the economy of Port Angeles and vicinity. For example, ~~T~~the closure in 1997 of the Rayonier pulp mill ~~left 200 people unemployed~~ resulted in the loss of approximately 365 jobs in the Port Angeles area (News-Tribune 1997). In recent years, though, there has been an increase in service industries related to tourism in the area and an increase in popularity of the Olympic Peninsula as a retirement destination. Tourism is expanding rapidly with major attractions being sport fishing, Olympic National Park, and the two ferry terminals that provide access to Vancouver Island. Manufacturing has also become an additional source of employment in the city and surrounding area. Westport Shipyard, which

employs about 200 people, recently opened a yacht-building facility in Port Angeles (City of Port Angeles 2004).

Page 3-103, new text has been added before bullet item 1 as follows:

- If required by Department of Ecology to reduce the possibility of the cable being snagged by anchors, undertake a marine monitoring program to help confirm the extent to which buried portions of the marine cable remain covered with sediment and develop mitigation measures to keep the cable buried to the extent practical. (Mitigation measure also listed in Marine Habitat and Wildlife.)

2.3.8 Cultural Resources

Page 3-106, paragraph 3 has been revised as follows:

~~Due to the coarser nature~~ Examination of the sonar data for the remainder of the cable route (from north of Port Angeles Harbor to the international boundary), did not reveal any potential cultural resource sites. ~~it is unknown at this point if potentially significant marine archaeological resources are present north of Port Angeles Harbor.~~

Page 3-106, new text has been added after paragraph 5 as follows:

In August 2003, the Department of Transportation re-discovered the largest ancient Indian village ever recorded in Washington, finding 335 intact skeletons, many structures, and more than 10,000 artifacts showing human activity in the area occurring up to 2,500 years in the past (*The Seattle Times*, May 2005). The village is called Tse-whit-zen and is at the base of Ediz Hook, approximately 2.8 miles (4.5 km) west of the project area.

Page 3-107, paragraph 7 has been modified as follows:

No known marine archaeological or historical resources exist within the marine cable corridor. For the portion of the cable corridor that would be near the HDD hole end point, the four anomalies that could potentially be undiscovered resources are far enough from construction activities and would not be impacted. No potential cultural resource sites were found in the cable route from north of Port Angeles Harbor to the international boundary. ~~For the remaining portion of the cable route, due to the coarser resolution of data for this area, it is not known whether any potentially significant undiscovered marine archaeological and historical resources may exist.~~ If trenching occurs across any undiscovered resources, then impacts could be ***moderate-to-high***. With mitigation identified in Section 3.9.3, these impacts could be avoided so there would be ***no*** impacts.

Page 3-108, paragraph 1 has been modified as follows:

If an inadvertent discovery of a shipwreck(s) ~~are~~ were ~~found~~ made during construction and the public were to become~~s~~ aware of the shipwreck location(s), recreational diving of the area may increase. As a result, potentially significant marine archaeological and historical resources may experience damage or destruction. If this occurs, impacts could be ~~***low-to-moderate***~~.

Page 3-109, bullet items 1 and 2 have been deleted as follows:

- ~~Identify and locate any potential historic resources along marine cable corridor using existing sonar data, if adequate, or gather additional data, if necessary.~~
- ~~Determine final cable alignment to avoid potentially significant resources.~~

Page 3-109, new text has been added after bullet item 3 as follows:

- Develop a Cultural Resource Monitoring Plan in consultation with the Lower Elwha Klallam Tribe.

Page 3-109, bullet item 4 has been modified as follows:

- Ensure tribal monitors from the Lower Elwha Klallam Tribe and an archaeologist are present during excavation in areas of moderate to high risk for impacts (e.g., at the HDD platform, trenching along level areas of the terrestrial route, and excavation at the converter station site and interconnection site work).

2.3.9 Noise

Page 3-111, new text and two new tables have been added following paragraph 2 as follows:

Some construction activities generate vibrations with effects that can range from annoyance to structural damage. The strength of a vibration is the maximum rate of particle movement and is referred to as the "peak particle velocity," typically measured in inches per second (cm/second). Subsurface geological conditions and distance affect vibration levels; vibration levels decrease with increasing distance. Vibration levels above 0.10 inches/second (0.25 cm/second) are distinctly perceptible and levels above 0.5 inches/second (1.3 cm/second) have the potential to cause architectural damage to normal dwellings (please see Tables 3-15a and 3-15b).

Table 3-15a Effects of Construction Vibration

Response	Ground Vibration (peak particle velocity)	
	inches/second	centimeters/second
Barely to distinctly perceptible	0.02 – 0.10	0.05 – 0.25
Distinctly perceptible to strongly perceptible	0.10 – 0.50	0.25 – 1.3
Strongly perceptible to mildly unpleasant	0.50 – 1.00	1.3 – 2.5
Mildly unpleasant to distinctly unpleasant	1.00 – 2.00	2.5 – 5.0
Distinctly unpleasant to intolerable	2.00 – 10.00	5.0 – 25.4

Source: Bender 1996.

Table 3-15b Transportation Research Board Building Maximum Structure Vibration Criteria (construction vibration levels with possible risk of damage to various structure types)

Structure and Condition	Ground Vibration (peak particle velocity)	
	inches/second	centimeters/second
Historic buildings; certain other old buildings	0.5	~1.3
Residential structures (plaster walls)	0.5	~1.3
New residential structures (drywall walls)	1.00	~2.5
Industrial buildings	2.0	~5.1
Bridges	2.0	~5.1

Source: Transportation Research Board 1997.

Page 3-112, new text has been added following paragraph 6 as follows:

The vibration created by the HDD operation would be below 0.2 inches/second (0.5 cm/sec) and could be perceptible to residents depending on the distance of residents to the construction, but would be below limits for potential structural damage.

If casing pipes are required, the pipe ramming would create vibration that would be experienced by residents in the area. The vibrations would likely be more than 0.5 inches/second (1.3 cm/second), but less than 2 inches/second (5.1 cm/second) for residential structures located within 30 feet (9 m) of the proposed pipe ramming operation. These levels could be distinctly unpleasant for nearby residents. The vibration level is above levels that could potentially cause structural damage to residential structures, but less than the vibration levels that could potential cause damage to industrial buildings. If pipe ramming would be required, it would be performed between 7 a.m. and 7 p.m., and would take up to 3 days to complete, depending on the geological conditions.

Impacts due to noise and vibration from the HDD hole construction would be short term and ***high***. Any potential damage to structures due to vibration would be compensated for; therefore, there would be ***no*** long-term impacts.

Page 3-114, new text has been added after bullet item 2 as follows:

- Monitor vibration levels during initial HDD operations and during pipe ramming.
- Conduct pre-construction and post-construction structural surveys of adjacent and nearby structures to determine if structural damage has occurred due to pipe ramming vibrations. Compensate property owners for damages as appropriate.

2.3.10 Health and Safety

Page 3-116, paragraph 2 has been modified as follows:

Portions of the site occupied by ~~T~~the former Rayonier pulp mill located at 700 North Ennis Street are ~~is a~~ contaminated~~site~~. The mill property consists of about 80 acres (32 ha), including submerged land in the southeastern portion of Port Angeles Harbor. The pulp mill operated from 1930 to 1997 and used an acid sulfite and bleaching process to produce paper products. Most of the facility has been dismantled since its closure (Integral Consulting and Foster Wheeler 2003). See Section 3.1, Water Resources for more information regarding the types of contaminants.

Page 3-122, paragraph 5 has been modified as follows:

The HDD hole would pass beneath the former Rayonier pulp mill site, portions of which are ~~is a designated~~ contaminated from previous operations ~~site~~. Contaminants occur in the surface sediments. Because of the proposed depth of the HDD hole, no contaminated soils or sediments are expected to be encountered during the drilling, so ***no*** impacts on contaminated soils or sediments are anticipated (see Section 3.5.4.2, Horizontal Directional Drill Hole). The contaminated marine sediments would be disturbed in the Port Angeles Harbor. But samples indicate that the sediments generally do not exceed the State of Washington Sediment Quality Standards (SQS). Impacts would be ***low***. See Sections 3.1, Water Resource, 3.3, Marine Habitat and Wildlife, and 3.5, Geology and Soils, for more information regarding dispersal of contaminated sediments.

Page 3-129, the last sentence has been modified as follows:

Dam removal is expected to begin after the water supply mitigation is completed. Since this mitigation is expected to take about five years to complete, dam removal may not begin until ~~in 2008~~ 2012 (~~Bureau of Reclamation, 2006~~ Seattle Times 2007).

Page 3-132, paragraph 1 has been modified as follows:

The 9 million yards^3 (6.9 million m^3) of sediments that could be released over several years after the Elwha and Glines Canyon dams are removed would also contribute to cumulative impacts in marine coastal areas near the Elwha River. About half of these sediments, or an estimated 4.5 million yards^3 (3.5 million m^3), could be transported to the Strait (Bureau of Reclamation, August 1996). Sediment deposits would be expected to largely replicate the natural distribution of sediments prior to dam construction. These sediments thus likely would be deposited at various locations including the river delta, Angeles Point, Ediz Hook, and the Strait in general. These sediments would cause temporary turbidity increases during transport, and could create new shoals and bars in portions of the Strait, depending on existing seabed contours and the coarseness of sediments. In the near term (5 to 10 years from the expected beginning of dam removal in ~~2008~~ 2012), the greatest amount of sediment release at any given time would likely occur immediately following dam removal activities and intermittently following extreme storm events.

Page 3-132, paragraph 2 has been modified as follows:

The Proposed Action would contribute incrementally to adverse cumulative impacts to marine water resources, though only slightly and for a short time. During its construction, the Proposed Action would add to adverse cumulative impacts to marine resources through temporary sediment dispersal and increased turbidity in the Strait from trenching and cable laying activities. Possible adverse cumulative effects likely would be greatest if construction of the Proposed Action occurs at the same time as sediment releases from removing the Elwha and Glines Canyon dams; however, given the current expected schedule for dam removal, it is unlikely that project construction would occur at the same time as dam removal. The Proposed Action would not be expected to contribute to cumulative impacts to marine resources from fill of nearshore marine areas, as the Proposed Action would not involve this type of fill. Similarly, the Proposed Action would not be expected to significantly contribute to cumulative impacts to marine resources from stormwater or wastewater discharges since the Proposed Action likely would not generate discharges that would reach the Strait.

Page 3-136, paragraph 2 has been modified as follows:

Similar to general fish and wildlife species, protected fish and wildlife species have been cumulatively adversely impacted by a wide variety of past and present development and activities. Implementation of the reasonably foreseeable future actions would be expected to incrementally add to these cumulative impacts, with the exception of the removal of Elwha and Glines Canyon dams, which would restore habitat and thus provide additional habitat for protected species that may exist in the general project vicinity. The Proposed Action would not be expected to contribute to cumulative impacts to marbled murrelet or northern spotted owl because, as described in Section 3.4, the Proposed Action would not adversely affect these species or their habitat. The Proposed Action could contribute to cumulative impacts to bald eagles, though only slightly and for a short time during construction of the Proposed Action. ~~In addition, mitigation measures are proposed in Section 3.4 that would avoid the Proposed Action's contribution to cumulative impacts to bald eagles if implemented.~~

Page 3-136, paragraph 3 has been modified as follows:

The Proposed Action also could contribute to cumulative impacts to bull trout and Puget Sound steelhead, though only slightly and for a short time during construction. ~~Similar to bald eagle, m~~Mitigation measures are proposed in Section 3.4 that would avoid the Proposed Action's contribution to cumulative impacts to these species if implemented.

2.4 Consultation, Review, and Permit Requirements (Chapter 4)

2.4.1 Clean Water Act

Page 4-8, paragraph 5 has modified as follows:

Section 401 – Section 401 of the Clean Water Act, the State Water Quality Certification program, requires that states certify compliance of federal permits and licensees with state water quality requirements. Sea Breeze would obtain a water quality certification from the Department of Ecology.

Page 4-8, paragraph 7 has modified as follows:

Section 404 – Authorization ~~for~~ from the U.S. Army Corps of Engineers is required when there is a discharge of dredge material or fill material into waters of the US, including wetlands. Because ~~T~~the trenching required for laying the cable is considered dredging and results in a displacement of sediment, Sea Breeze would need to obtain ~~that requires~~ a Section 404 permit from the Corps of Engineers.

2.4.2 Historic Preservation

Page 4-11, paragraph 4 has been revised as follows:

Notifying potentially affected tribes regarding the Proposed Action included a meeting and consulting on a technical level with the Lower Elwha Tribe, as well as consultation with the Washington State Department of Archaeology and Historic Preservation (DAHP). The DAHP and 23 tribes that potentially would be interested in the proposed project were sent letters to initiate consultation pursuant to Section 106 of the National Historic Preservation Act. The tribes included the Lower Elwha Klallam Tribe, Jamestown S'Klallam Tribe, Hoh Tribe, Lummi Nation, Makah Nation, Muckleshoot Indian Tribe, Quinault Indian Nation, Samish Indian Nation, Sauk-Suiattle Indian Tribe, Skokomish Tribal Nation, Snoqualmie Tribe, Squaxin Island Tribe, Shoalwater Bay Tribe, Port Gamble S'Klallam Tribe, Nisqually Indian Tribe, Nooksack Indian Tribe, Puyallup Tribe, Quileute Tribe, Suquamish Tribe, Swinomish Indian Tribe, Tulalip Tribes, Upper Skagit Tribe, and the Confederated Tribes of the Chehalis.

In response to the August 2, 2005 consultation letter, the Samish Indian Nation said the project is outside of their area of concern and the Squaxin Island Tribe said BPA should work with the Lower Elwha Klallam Tribe; both responding tribes asked to be removed from the mailing list. The Suquamish Tribe responded to the public scoping letter requesting more information about the project. The Lower Elwha Klallam Tribe provided comments both during the public scoping process and on the Draft EIS review with comments on three main areas; cultural resources, the Rayonier Port Angeles Mill Site, and treaty rights to fish and shellfish.

Once available, the cultural resource survey report will be sent to the DAHP and the Lower Elwha Klallam Tribe. All other tribes will be notified of the availability of the report upon request. Section 106 consultation letters with tribes and the SHPO can be found in Appendix B.

2.5 References (Chapter 5)

The following references have been added to the EIS:

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3.0 Responses to Comments

This chapter presents comments received on the Draft EIS, and DOE's responses to these comments.

DOE catalogued a total of 140 comments. Most were submitted in writing by letter and at the April 10, 2007 public meeting and hearing for the Draft EIS. Telephone calls and e-mail messages to DOE also generated a few comments. Comments were received from federal and state agencies, tribes, and private citizens living along the proposed line route.

Comments were primarily made on Chapters 1 through 3 of the EIS. Chapter 1, Purpose of and Need for Agency Action, attracted about 16 percent of the comments. These comments focused largely on why the cable was being built and who the power would serve. About 25 percent of the comments were focused on Chapter 2, Proposed Action and Alternatives. Most of these comments were questions regarding the following: how the project would be built, the construction schedule, the location of project components, and the next steps for future transmission lines that could be required. Chapter 3, Affected Environment, Environmental Impacts, and Mitigation Measures, received most of the comments (49 percent). Comments were made in the following resource areas:

Marine Habitat (9 percent);
Cultural Resources (8 percent);
Noise (7 percent);
Geology and Soils (6 percent);
Land Use (6 percent);
Socioeconomics (5 percent);
Water Resources (4 percent);
Vegetation (2 percent);
Visual Resources (2 percent); and
Health and Safety (1 percent).

The remaining comments consisted of comments made on the Summary section of the EIS, Chapter 4, Consultation, Review and Permit Requirements, and a few miscellaneous comments.

Comments are organized by chapter/section using the outline of the Draft EIS. The following abbreviations identify the source of each comment:

OH	Comments made during the open house portion of the April 10, 2007 public meeting in Port Angeles
PH	Comments made during the public hearing portion of the April 10, 2007 public meeting in Port Angeles
EM	Comments sent via e-mail
T	Comments made via telephone
LTR	Comments sent via letters to DOE

Comments were designated with an identifying number based on the order in which the letter, e-mail, or other item of correspondence was received. The letters, e-mails, phone call logs, and meeting summaries that contain comments are copied in whole in Chapter 4 of this Final EIS.

3.1 Summary

Comment: *I would like to know more under s.2.2 HDD - the effects of drilling muds and "fluids" being released back into the sea bed/environments. There doesn't seem an adequate explanation of this. [EM-011]*

Response: The comment references a portion of the summary section of the EIS that describes the proposed horizontal directional drill (HDD) hole. The summary is intended to only briefly describe HDD drilling activities. Section 2.1.2, Horizontal Directional Drill Hole, of the EIS describes these activities in more detail, and potential environmental impacts of drilling muds and fluids being released into the marine environment is analyzed and more fully explained in the discussion of releases of drilling fluids and cuttings in Section 3.1.2.2, Horizontal Directional Drill Hole.

Comment: *Under s.4.3.2, page s-12, 2nd & last para re underwater noise...it seems the DEIS lists all these impacts and states little on what will be done to mitigate or avoid them. Such as the underwater noise disturbances. What measures are proposed to prevent the disturbances? [EM-011]*

Response The comment references a portion of the EIS summary that briefly summarizes potential impacts to marine species from underwater noise. These impacts are more fully discussed in the analysis of potential noise impacts in Section 3.3.2.2, Marine DC Cable, of the EIS. Section 3.3.3, Mitigation Measures, of the EIS identifies mitigation measures to minimize or avoid impacts to marine species from underwater noise, including placing marine mammal observers on board the cable-laying vessel to change or stop cable–laying operations if animals come within the vicinity of the ship, and following any federal and state regulatory agencies' requirements for timing marine work when sensitive marine species are not likely to be present.

Comment: *on page S-12, s 4.3.2 para 3 you are missing a period after the last word in the paragraph "impacted" [EM-011]*

Response: Comment noted. Thank you.

Comment: *under Toxic and Hazardous materials, page s-19: the facts of such are mentioned but how is this related to this project and what effects would it have? What relationship is there? - this is not clearly identified. [EM-011]*

Response: The comment references a portion of the EIS summary that is intended to only briefly summarize the affected environment for toxic and hazardous materials. Potential impacts of the Proposed Action related to toxic and hazardous materials are summarized on page S-21 of

the EIS, and are more fully described in Section 3.11.2.2, Toxic and Hazardous Materials, of the EIS. As discussed in this section, potential impacts from disturbing existing contaminants primarily would occur from marine work in Port Angeles Harbor, which could disturb existing contaminated marine soils and sediments in the Harbor.

3.2 Purpose and Need for Agency Action (Chapter 1)

3.2.1 Need for Agency Action

Comment: *EPA recommends that the final EIS include clarification of the purpose and need statement, reflecting both Sea Breeze and the broader public interest and need for the project, supported by data showing the amount of power currently available from all sources (power lines, solar and wind, gains from conservation measures) in the project area and how much is needed to meet any current deficiencies and expected needs in the future. [LTR-009]*

Comment: *What is the need? [OH-010]*

Response: In discussing the "need" for the proposed project, it is important to distinguish: (1) the federal government's (OE and BPA, both parts of DOE) need for action related to the proposed project; from (2) the need for the proposed project that has been identified by the applicant (Sea Breeze). Sections 1.2, Purpose and Need for Action, and 1.3, Sea Breeze's Project Objectives, of the EIS reflect this distinction. Section 1.2 clearly identifies DOE's need for agency action, as well as the purposes or objectives that will be considered by DOE. As discussed in this section, DOE's need is to respond to requests from Sea Breeze for a Presidential permit (DOE/OE) and interconnection to the federal transmission system (DOE/BPA). This is the statement of agency need that is required under NEPA.

In addition, Sea Breeze has identified several needs that its proposed project is intended to address. Please see the responses to comments regarding Sea Breeze's project objectives in Section 3.2.2 that follows for more information.

Comment: *What criteria exactly is Bonneville and the Department of Energy utilizing in order to evaluate whether or not this project is worthwhile? [PH-012]*

Comment: *[Will the decision to allow the project to go forward] ...depend upon the number of customers for ... firm, committed capacity? [PH-012]*

Response: A decision by DOE to approve the proposed project would not depend on whether the proposed project is considered worthwhile or whether there are customers committed to subscribing for capacity. Rather, DOE would make any such decision by applying the considerations identified in Section 1.2, Purpose and Need for Action, of the EIS.

As described in Section 1.2.1, Office of Electricity Delivery and Energy Reliability, of the EIS, DOE/OE may issue the Presidential permit if it determines that the action is in the public interest and after obtaining favorable recommendations from the U.S. Departments of State and Defense. In determining whether issuance of a permit is in the public interest, DOE/OE will consider the environmental impacts of the proposed project as described in the EIS, the project's impact on electric reliability, and any other factors that DOE/OE may consider relevant.

Section 1.2.2, Bonneville Power Administration, of the EIS describes the purposes or objectives that DOE/BPA will consider in making a decision concerning Sea Breeze's request to interconnect. These include maintenance of transmission system reliability, consistency with BPA's environmental and social responsibilities, and cost efficiencies.

Comment: *What is in it for BPA? [OH-010]*

Comment: *How is BPA benefiting [from this project] money-wise? [PH-012]*

Response: BPA has no stake in the proposed project. The Federal Energy Regulatory Commission (FERC) has an order in effect that requires all public utilities that own, control or operate facilities used for transmitting electric energy in interstate commerce to have a process for non-discriminatory access to the electrical system. Although BPA is not subject to FERC's jurisdiction in this area, BPA has adopted an Open Access Transmission Tariff consistent with this order. This course of action demonstrates BPA's commitment to non-discriminatory access to its transmission system and ensures that BPA will receive non-discriminatory access to the transmission systems of utilities that are subject to FERC's jurisdiction. Under BPA's tariff, BPA offers transmission interconnection to the federal transmission system to all eligible customers on a first-come, first served basis, subject to an environmental review under NEPA.

BPA would not financially benefit from the project. As discussed in Chapter 2 of the EIS, Sea Breeze (or its successor in interest) would own and operate the proposed cable, and thus would be the recipient of any revenues received from selling transmission rights to the proposed cable. However, BPA is being funded for its expenses related to the proposed project. Sea Breeze thus is reimbursing BPA for the environmental analysis, preliminary design, and system review costs that BPA is incurring for the interconnection request. Sea Breeze would also pay for equipment and construction costs that would be associated with the interconnection. If the interconnection work were to be considered a network upgrade, then those equipment and construction costs could be reimbursed back to Sea Breeze.

3.2.2 Sea Breeze's Project Objectives

Comment: *EPA noted that [during the public meeting] the public was unsure about the need for the proposed project, which would result in additional power production in the project area that has been experiencing power surpluses (htp://ww.bpa.gov/power/pgp/whitebook/2006/). [LTR-009]*

Comment: *Purpose and Need (s.1): there is nothing in the document that tells me why we should have this project. It tells us about the project and how will be constructed and operate*

and how DOE/OE makes determination but nothing to tell us why this project is in our national interest [EM-011]

Response: As described in Section 3.2.1 above, DOE's federal need for action is different from the need for the proposed project that has been identified by Sea Breeze. Section 1.3, Sea Breeze's Project Objectives, of the EIS identifies Sea Breeze's objectives for the proposed project, which are largely based on the project need that Sea Breeze has identified. A Sea Breeze project fact sheet entitled "Juan de Fuca Cable – Project Rationale" provides more information on the project need identified by Sea Breeze (available at <http://www.jdfcable.com/downloads/juan_de_fuca_cable_-_project_rationale.pdf>, last visited August 29, 2007). Sea Breeze's identified need includes a need for increased transmission transfer capacity across the U.S.-Canadian border, enhancement of electric reliability in the Pacific Northwest and British Columbia, and alleviation of transmission congestion.

Comment: *Why do they [Sea Breeze] want to do it? [PH-012]*

Comment: *I came in here thinking that this was about BPA selling energy to Canada. It's not. It is the opposite. [PH-012]*

Comment: *But your main purpose for this is [to send power from Canada] to [the U.S.]. [PH-012]*

Comment: *So [the power that would run across the cable] is for Vancouver Island…? [PH-012]*

Comment: *[Will the power be] [g]oing to other states or other countries? [PH-012]*

Comment: *But your primary focus there is on getting entities that are generating power on the island and having that come this direction through this cable? [PH-012]*

Comment: *I guess I was under the impression that the primary purpose of this cable was to get wind power off of the island, Sea Breeze's wind power. [PH-012]*

Comment: *I understand that this is step one, if that's the case. But step two or some eventual step down the line I was under the impression that was going to be for wind power. [PH-012]*

Comment: *...having this [cable] go through will improve the local reliability because you'll be able to do some switching if Bonneville went down, Portland... went down outside of our area and caused ... an outage here, could we take power from Canada and heat up the Peninsula, technically? [PH-012]*

Comment: *[would the cable] provide...another source of power other than Bonneville for our local? [PH-012]*

Comment: *Who do you perceive to be your market? [PH-012]*

Response: These comments concern Sea Breeze's objectives for the proposed project. As discussed in the preceding response and in Section 1.3, Sea Breeze's Project Objectives, of the EIS, Sea Breeze's objectives are to address needs that it has identified related to power and transmission in the region. The Sea Breeze project fact sheet referred to in the preceding response provides additional information on project objectives. In addition, a detailed explanation of the project rationale and market conditions supporting the development of the proposed project is contained in Sea Breeze's application for a Certificate of Public Convenience and Necessity to the National Energy Board of Canada, Sections 1.2 and 1.3 (available at <https://www.neb-one.gc.ca/ll-eng/livelink.exe/fetch/2000/90464/90548/387164/387165/390781/386546/B-1-b_Section_1_-_Project_Overview,_Justification_and_Market_(A0S3Y6).pdf?nodeid=386553&vernum=0>, last visited August 29, 2007). As discussed in these materials, the proposed project would be intended to provide a new two-way electrical transmission path between the U.S. and Canada to help get electricity from existing and new regional energy generators, including renewable energy such as wind, to the market on either side of the border. The proposed project also would provide an alternative pathway for power transmission in the event of an outage on the federal transmission system in the area, and thus could increase reliability in the Port Angeles area. Finally, Sea Breezes believes that, by providing an additional path for electricity, the proposed project would allow existing transmission connections in the region to operate at greater capacity, thereby reducing the potential for transmission congestion.

3.2.3 Public Involvement

Comment: *While I did attend 2 earlier public meetings on this project, I did not see a published notice for the 4/10/07 meeting, thus my comments are based on a newspaper report of the meeting. [LTR-005]*

Response: Comment noted. Concurrent with release of the Draft EIS in early March 2007, DOE conducted a mass mailing of a letter to all potentially affected or interested parties, including the commentor, which gave notice of the April 10, 2007, public hearing on the Draft EIS. DOE also provided notice of the public hearing in the Peninsula Daily News in the April 4, 2007, and April 8, 2007, editions. In addition, the public letter and a separate notice of the Draft EIS public hearing were posted on the BPA web site. Thank you for your interest in this project and for submitting comments.

Comment: *Section 1.4 Indian Tribes are aligned by reference to "interest groups". Federally recognized Tribes operate as sovereign governments. [LTR-007]*

Response: The comment is referring to the third bullet in Section 1.4, Public Involvement, which describes one of the methods used by DOE to solicit scoping comments for the Draft EIS. The bullet merely lists the wide spectrum of persons and organizations that received a May 4, 2005, scoping letter, and was not intended to align any recipient with another. DOE recognizes that Tribes operate as sovereign governments, and that DOE has a trust responsibility.

Comment: *Who is Sea Breeze? [OH-010]*

Response: Sea Breeze Pacific Juan de Fuca Cable LP is a special purpose company that was formed to develop transmission opportunities in the Pacific Northwest. It is a partnership between Sea Breeze Power Corp., a Vancouver-based renewable energy developer; Boundless Energy NW, Inc., a transmission and utility engineering company based in York Harbor, Maine; and a fund of the EIF Group, a private equity fund manager. Sea Breeze Pacific Juan de Fuca Cable LP has two subsidiaries to manage the multi-jurisdictional affairs for the proposed international power line: Sea Breeze Victoria Converter Corporation works on the line development issues in Canada, and Sea Breeze Olympic Converter LP works on line development issues in the United States.

3.2.4 Issues Outside the Scope of the Proposed Action or this EIS

Comment: *…only clean environmentally sound energy should be transmitted across. Hydro wind nuclear tidal are in my opinion future-acceptable options. Even they (habitat-damaging hydro etc.) can be detrimental. BC should commit to no future construction of coal gas or fossil-fuel fired plants in the bargain. [LTR-003]*

Response: Sea Breeze will operate the proposed transmission line as a merchant transmission line. Because it is currently unknown which customers would enter agreements with Sea Breeze to use the proposed line, it is uncertain what types of energy might be transmitted across the line. However, Sea Breeze Energy Inc., a wind energy development firm affiliated with Sea Breeze Olympic Converter LP, has submitted a bid for transmission service on the line (see Section 2.1.10, Transmission Service, of the EIS).

3.3 Proposed Action and Alternatives (Chapter 2)

3.3.1 Proposed Agency Action

Comment: *…what is the duration of the permission to interconnect? Are there any dates associated with it at all? [PH-012]*

Response: If a decision is made by BPA to allow the requested interconnection of Sea Breeze's proposed project to the federal transmission system, BPA would offer an interconnection agreement to Sea Breeze pursuant to BPA's interconnection procedures. The interconnection agreement would identify an intended completion date for the interconnection. This date would be the earliest possible date that BPA could be expected to reasonably accommodate the proposed interconnection, but could be extended because of unexpected construction difficulties.

Concerning Sea Breeze's application to DOE/OE for a Presidential permit, once a Presidential permit is issued, it is good indefinitely unless there is a change in operating conditions.

Comment: *I'm wondering whether say, number one, Sea Breeze could sell the permit or whether the permit could be transferred to some other entity by way of Sea Breeze. For example, being acquired by another corporation or merged with another corporation. [PH-012]*

Comment: *Is it possible to make a market to interconnect directly or indirectly? Can it be sold to a company and basically be blocked for the interconnect by simply an acquisition by another corporation? [PH-012]*

Response: It is expected that the proposed project, including rights and responsibilities under any permits and approvals issued by DOE for the project, could be transferred to another entity, whether through sale, acquisition, or merger. If the proposed project were transferred to another entity, that entity would be required to abide by all the conditions placed on the project through the issued permits and approvals. However, Presidential permits are non-transferable. If DOE/OE were to grant the requested presidential permit to Sea Breeze and the proposed project were transferred to another entity, that entity would be required to apply for a new Presidential permit and Sea Breeze would need to make a contemporaneous request for DOE to rescind any permit issued to it.

3.3.2 Direct Current Cable

Comment: *[Will this be a] [d]irect current cable? [PH-012]*

Response: As discussed in Chapter 2 of the EIS, the cable across the Strait and through Port Angeles up to the converter station would be a direct current (DC) cable. The cable between the converter station and BPA's Port Angeles Substation would be alternating current (AC).

Comment: *So there's going to be 550 megawatts. Is that -- it is more power? [PH-012]*

Response: Five hundred fifty megawatts is enough power to serve about 100,000 homes/year in the Northwest. However, that is the maximum capacity of the project. How many megawatts that would actually be transmitted across the line is unknown at this time, as described in the EIS and in earlier responses. The cable would be operated at ±150 kilovolts (kV) DC, which is roughly equivalent to a 300-kV AC cable. For comparison, the existing BPA transmission lines that come into the Port Angeles area are 230-kV AC and the transmission lines of local utilities tend to be 115-kV and 69-kV AC.

Comment: *How deep will the cable be buried? [OH-010]*

Comment: *How deep will that cable be? [PH-012]*

Response: As described in Chapter 2 of the EIS, in the marine environment the cable would generally be buried 3 to 5 feet (1 to 1.5 m) deep. However, in some areas where trenching is not feasible the cable would be laid directly on the sea bed. In other areas (such as the Port Angeles Harbor), the cable may need to be buried up to 12 feet (33.7 m) deep.

The depth of the portion of the proposed cable located in the HDD hole would vary depending on location, but could be as deep as approximately 80 feet (25 m) under the shoreline bluff.

On land, the DC cable would be buried about 4 to 8 feet (1 to 2.5 m) deep and the AC cable would be buried about 4 to 6 feet (1 to 2.5 m) deep.

Comment: *Will the cable be underground for the whole length? [OH-010]*

Response: Yes.

Comment: *Where would the transmission line go? [OH-010]*

Response: The cable would go from the greater Victoria area (View Royal) in British Columbia, Canada, across the Strait of Juan de Fuca to Port Angeles, Washington, connecting into BPA's Port Angeles Substation. For maps illustrating the proposed route, please see Figures 1-1, 2-1, 2-4, and 2-7 in the EIS.

Comment: *[Landowner on Liberty Street]...wants the cable to go on a different Street. [EM-014]*

Response: Comment noted. As discussed in Section 2.3.4, Terrestrial Cable Route Alternatives, of the EIS, alternative routes for the terrestrial cable were considered but eliminated from detailed study because there were no advantages to existing land uses, existing utilities, or environmental features.

Comment: *How often will the line need repair and what will the impacts be then? [OH-010]*

Comment: *Are there provisions in place to repair the cable in the event of a cable fault somewhere along its underwater length? How would such a repair be made short of bringing the damaged portion to the surface for splicing? [LTR-008]*

Response: Operation and maintenance of the proposed cable is discussed in Section 2.1.9, Operation and Maintenance, of the EIS. The cable would be flexible and protected with layers of polymer and armor, and would generally rest below the seabed with little exposure to disruptive influences. These characteristics, as well as records from installed cables, indicate that the need for repair likely would be infrequent. Underground or subterranean cables typically are significantly more reliable than overhead cables, although disruptions, when they do occur, are more difficult to locate, access, and repair. If there were a fault in the line, the cable would require repair. In the marine environment, the portion of cable with the fault might need to be

raised to the surface. The impacts of raising the cable for repairs and reburial would be similar to the impacts of constructing the cable, although the impact area would be isolated to the area of the cable fault. Developments in underwater repair methodologies are constantly evolving, and it is possible that new methodologies that would allow for underwater repair may be available before the proposed in-service date of this project.

3.3.3 Horizontal Directional Drill

Comment: *Will there be a big pit [at the HDD drill site] for the big diesel boring machines down in the ground? [PH-012]*

Response: As discussed in Section 2.1.2, Horizontal Directional Drill Hole, of the EIS, construction of the proposed site for drilling the HDD hole would include digging a hole about 5 feet wide by 6 feet long by 3 feet (1.5 m by 1.8 m by 0.9 m) deep near the intersection of North Liberty Street and Caroline Street. This hole is needed to allow proper drilling of the HDD hole.

Comment: *Where is that drill construction site? [PH-012]*

Response: The proposed location for the drilling operation would be near the intersection of North Liberty Street and Caroline Street (see Figure 2-9 of the Draft EIS).

Comment: *What's the diameter of the cutter head [for the HDD]? [PH-012]*

Response: There would be two cutter heads: the one for the pilot hole would be about 8 inches (20 cm) in diameter; the one for reaming would be between 13 and 15 inches (33 and 38 cm) in diameter.

3.3.4 Converter Station

Comment: *The road on the east side of the converter station site isn't Liberty Street; it's essentially a college driveway. [OH-010]*

Response: Comment noted. Maps available from the City of Port Angeles indicate that this road is a portion of South Liberty Street, rather than a driveway to Peninsula College (see <http://www.cityofpa.us/maps.htm>, last visited June 20, 2007). However, it is likely that this road is used to access the College.

Comment: *For the first time, there is mention of a converter station to be built on BPA land just north of their existing facility. I strongly object to such construction since it would involve pushing an industrial building into a residential neighborhood. [LTR-005]*

Response: Comment noted. As a point of clarification, the proposed converter station would not be located on BPA land, but rather would be constructed by Sea Breeze on property that is presently owned by Clallam County PUD (see Section 2.1.4, Converter Station, of the EIS). Portions of this property currently are used by Clallam County PUD and the City of Port Angeles as a transmission line right-of-way, and this property is zoned Public Buildings and Parks, which includes public utilities as a permitted use. However, as discussed in Section 3.6, Land Use, of the EIS, placement of the converter station in that location would increase the industrial presence in the immediate vicinity. Sea Breeze is proposing to use decorative fencing and landscaping to minimize impacts on adjacent uses. For more details about land use and visual impacts, please see Sections 3.6 and 3.7, Visual Resources, of the EIS.

Sea Breeze did make a request during the early planning stages of the project that BPA consider making available space for Sea Breeze's proposed converter station facilities on BPA property south of BPA's Port Angeles Substation. As discussed in Section 2.3.5, Converter Station Site Alternative, of the EIS, this alternative for the converter station site was considered by BPA but eliminated from detailed study in the EIS because of insufficient room on the BPA property for a converter station.

Comment: *Any further BPA expansion should take place to the south of the current BPA complex and/or along its transmission line right of way (also south of BPA and Peninsula College). [LTR-005]*

Response: The only expansion of BPA facilities that is proposed would occur south of BPA's Port Angeles Substation, as suggested by the comment. To accommodate the interconnection, the BPA substation yard would be expanded by about 2 acres (0.8 ha) to the south of the existing substation complex on existing BPA property. (Please see Section 2.1.6, Port Angeles Substation Interconnection, in the Draft EIS.)

Comment: *What time estimate do you have for building the converter station in terms of length of time? [PH-012]*

Response: It is expected to take 10 months to complete the converter station. Please see Table 2-1 in the EIS for a summary of the construction schedule.

3.3.5 Terrestrial Alternating Current Cable

Comment: *What's the difference between option A and option B up there on the south side of the existing [substation]. [PH-012]*

Response: There are two short routing options for the 230-kV cable as it enters BPA property: Option A continues to follow Porter Street, and then makes a right angle turn across BPA property to the yard expansion area. Option B angles across BPA property to the yard expansion area. Please see the EIS, Figure 2-11 and Section 2.1.5, Terrestrial Alternating Current Cable, for more detail.

3.3.6 Transmission Service

Comment: *The [newspaper] article states that there is no commitment for power transmission from generating companies. Is the proposed cable project being done "on spec" or is there a reliable expectation of it being promptly and efficiently used? [LTR-005]*

Comment: *All we're really talking about is a new transmission line with no use, no source and no load. [PH-012]*

Comment: *In other words, basically at this stage of the game what this is all about is granting or not granting permit to interconnect regardless of whether anybody really wants to use it. [PH-012]*

Comment: *I'm kind of left with this feeling here that...[this project]... is just laying a cable out in the Sound or in the Strait because something might happen some time. ... is it worth doing all of that to the environment of the Sound because something might happen some time in the future. [PH-012]*

Response: As discussed in Section 2.1.10, Transmission Service, of the EIS, the private developer, Sea Breeze, is proposing the project without firm commitments for the entire capacity of the cable from power transmission customers. It is currently unknown what power purchasers or users would buy capacity on the cable, what type of power they will be generating, or which way they will want to send the power. At this time, Sea Breeze is pursuing appropriate construction and environmental permits and approvals without such commitments and believes that, if the proposed project is permitted, power producers or purchasers will fully subscribe for transmission capacity on the cable.

Comment: *Will Sea Breeze be part of helping out as far as the relaying upgrades that are required from here to Olympia? [PH-012]*

Response: Sea Breeze would provide funding for new and upgraded equipment required to interconnect at the Port Angeles Substation. If the work were to be considered a network upgrade (for example, it improves overall transmission system performance), Sea Breeze could be reimbursed for those costs over time. Because no transmission service is requested at this time, Sea Breeze is not responsible for improvements that are not required for the interconnection.

Comment: *Will there be environmental review (NEPA) for a transmission request? [OH-010]*

Response: Yes, to the extent that such a request has the potential for environmental effects. Once there is a request to BPA to use the federal transmission system for sending power to or from the interconnection at the Port Angeles Substation to some other point on the system or beyond, it would be appropriate for BPA to conduct more detailed system studies. The studies would show the location and extent of improvements, if any, that would be needed to transmit the power. Environmental review would be conducted for any new construction activities that would be required.

Comment: *Is [the request for transmission service] before or after [the cable] is already built? [PH-012]*

Response: A request for transmission service across BPA's system could be made before or after the cable has been built.

3.3.7 No Action Alternative

Comment: *No Action: following up on above, this section is pretty much non informative. So the project isn't built and there would be no impacts. If so, given we don't know why the project should be built or in our national interest as mentioned above, sounds like no action is a great alternative or best choice. There is nothing that tells us the importance of the project or what the effect would be if it wasn't built/constructed. [EM-011]*

Response: Comment noted. The EIS adequately describes the environmental impacts of the No Action Alternative; because the project would not be built under this alternative, there are no real environmental impacts from this alternative to describe. In addition, the project is not being proposed by the federal government to meet a particular need. The project is being proposed by a private developer to meet its objectives, and the federal government's "need" in this case is to respond to certain requests for permits and approvals. Please see previous responses to comments concerning the Need for Action in this chapter, as well as Section 1.3, Sea Breezes Project Objectives, of the EIS, for information regarding Sea Breeze's project objectives.

3.3.8 Other Project-Related Comments

Comment: *The [newspaper] article states that power could flow in both directions through the cable. Is it anticipated that power actually would be sent from the U.S. to Canada? Earlier meetings gave the impression of only a southerly flow. [LTR-005]*

Comment: *Will power flow from Canada or from the U.S.? [OH-010]*

Comment: *…Will the system as it is installed be able to convert to AC from Bonneville and sell power through the DC line back to Canada? [PH-012]*

Response: As discussed in Section 1.1, Introduction, of the EIS, Sea Breeze's proposed cable would be capable of sending power in either direction: north from the U.S. to Canada, or south from Canada to the U.S. The proposed converter stations in Port Angeles, WA, and near Victoria, BC, would be capable of controlling the movement of power and converting the power both from DC to AC and from AC to DC.

Comment: *Is there going to be a priority of who gets power [from the proposed cable]? Are there priorities involved? [PH-012]*

Comment: *So in some kind of future scenario where perhaps power from the river does become maybe a more limited commodity, is Washington State the priority before [power from the cable] get[s] sold off to private entities? [PH-012]*

Response: Because the proposed cable would be a merchant transmission line owned and operated by a private company, there would be no inherent priority rights to use of the line unless that company grants such rights. All rights for use of the cable, including any priority rights, would be obtained by interested transmission system customers through negotiations with Sea Breeze.

Comment: *It is really about generating -- that's the market that you want to develop or, I mean, let's talk about your marketing plan. So you have to get funding for all of this, yes? [PH-012]*

Comment: *Once your permits are done you have to secure funding? [PH-012]*

Comment: *I would like to know who's going to get the money. Where's it coming from? [PH-012]*

Response: Sea Breeze is financing the project through equity partners and debt partners, as a single company, Sea Breeze Pacific Juan de Fuca Cable L.P. This project company (or its successor in interest) would receive all revenues from selling capacity on the proposed cable.

Comment: *...could this line potentially help mitigate the Canadian entitlement? [PH-012]*

Response: This comment is referring to the one half of downstream power benefits that the U.S. is required to deliver to Canada from operation of the three storage dams built in Canada – Mica, Duncan, and Arrow dams – pursuant to the Columbia River Treaty between the U.S. and Canada, which was entered into force in 1964. The BPA Administrator and the U.S. Army Corps of Engineers Western Division Engineer have been designated by the U.S. President through executive order as the U.S. Entity to carry out and make arrangements for implementation of the Treaty. In 1999, after many years of negotiation, the U.S. and Canadian entities entered into an agreement for delivery of the Canadian Entitlement at specified points on the U.S.-Canada border near Blaine, Washington (northwest of Bellingham), and near Boundary, Washington, in northeastern Washington. This agreement is in effect until 2024. BPA, in its role as part of the U.S. Entity, expects to fully abide by the terms of the 1999 agreement including its specified Canadian Entitlement delivery points, and the U.S. Entity does not intend to seek formal renegotiations of these delivery points. Thus, it is not likely that the proposed project could be used for delivery of the Canadian Entitlement to Canada during the term of the 1999 agreement.

3.4 Affected Environment, Environmental Impacts, and Mitigation Measures (Chapter 3)

3.4.1 Water Resources

Comment: *How deep is the water most of the way? I notice 27 feet is the depth of water where it would start. Across the Strait what's the average depth? [PH-012]*

Response: The HDD hole end point in the Harbor would be at a water depth of about 27 feet (8 m), as noted by the comment (see Section 2.1.2, Horizontal Directional Drill Hole, of the EIS). Within the cable corridor, the Strait goes down to a depth of about 500 feet (150 m). Appendix C of the EIS provides bathymetric maps that show the depth of the Strait along the length of the project corridor.

Comment: *[EPA is] also concerned about the project's potential to further degrade water quality within marine waters and creeks that are already on 303(d) list due to low dissolved oxygen (p.3-2) and fecal coliform bacteria contamination (p. 3-4). [LTR-009]*

Response: Comment noted. As discussed in Section 3.1, Water Resources, of the EIS, the impact of the Proposed Action on marine waters listed as impaired under Section 303(d) of the Clean Water Act (i.e., those waters within Port Angeles Harbor) would be temporary during the construction phase of the proposed project, and would not be expected to result in significant degradation of these waters. Any impact of the Proposed Action on Peabody Creek, the only 303(d)-listed creek in the project vicinity, would occur from degraded runoff from the proposed Port Angeles Substation expansion site potentially reaching this creek. Mitigation measures to minimize or avoid this potential impact are identified in Section 3.1.3, Marine Habitat and Wildlife, of the EIS.

Comment: *During project construction, there is also potential for sediment discharge and increased turbidity in the Strait of Juan de Fuca and Harbor (p. 3-6 to 3-10). [LTR-009]*

Response: As described in Sections 3.1.2.1, Marine DC Cable, and 3.1.2.2, Horizontal Direction Drill Hole, of the EIS, construction of the proposed project would cause short-term turbidity in the Strait of Juan de Fuca. The turbidity would be due to trenching activities along the cable route, prop-wash from the cable vessel when working in relatively shallow waters, excavation around the HDD hole end point, and release of drilling muds and cuttings during punch through of the HDD hole into the Harbor. Mitigation measures to minimize these impacts are identified in Section 3.1.3, Mitigation Measures, of the EIS.

Comment: *The mitigation measures state that Ecology's stormwater manual will be used to prepare the stormwater pollution prevention plan for the project. Ecology recommends using the*

most current edition of the stormwater management manual, published in 2005: http://www.ecy.wa.gov/programs/wq/stormwater/manual.html. [LTR-004]

Response: Comment noted. Mitigation measures in the EIS that reference the stormwater management manual have been revised to reflect this recommendation.

Comment: *Canada doesn't have a very good environmental track record, especially for water quality (they dump raw sewage into the Strait). [OH-010]*

Response: Comment noted.

3.4.2 Vegetation

Comment: *Said [converter station] parcel of BPA land has already been cleared (it was a woodlot) but the previous understanding was that it was cleared for the cable right-of-way, not for construction of aboveground facilities. [LTR-005]*

Comment: *Why have the trees been cleared recently on the converter station site? Was it for this project? [OH-010]*

Response: As a point of clarification, the parcel of land where the proposed converter station would be located is not owned by BPA, but rather is owned by Clallam County PUD (see Section 2.1.4, Converter Station, of the EIS). Trees were cleared in 2004 by Clallam County PUD to accommodate the rebuild of their 115-kV transmission line that crosses the property.

In 2007, since the release of the Draft EIS, trees were cut on the east side of the proposed converter station site. This portion of land between the converter station site and the road is owned by the City of Port Angeles. During a winter wind storm, 60 to 70 percent of the trees were either blown over or severely damaged. The City determined that the remaining standing trees were a hazard to public safety and cut the remaining trees (Bloom, June 7, 2007). Appropriate sections of the EIS have been revised to reflect the removal of trees in this area.

Comment: *So most of the Strait the bottom is pretty bare, ... it is not like seaweed and whatever, mostly bare out there? [PH-012]*

Response: Most of the sea floor of the Strait that is crossed by the project corridor is sand and gravel, with no marine vegetation. As discussed in Section 3.2, Vegetation and Wetlands, of the EIS, the depth of water in which vegetation grows is generally no more than 100 feet (30 m). This depth occurs about 6,065 feet (1,849 m), or about 1.1 miles (1.8 km), northeastward from the proposed HDD hole end point in the Port Angeles Harbor.

3.4.3 Marine Habitat and Wildlife

Comment: *I have concerns with impacts in the marine environment, especially to the sea bed from trenching. [OH-010]*

Comment: *...I am concerned about … the marine life, the impact on the marine life of digging a trench for 10.5 miles, that's got to have some impact there. And thinking about migration routes for the whales and other sonar animals out there that is going to potentially have quite an impact on. [PH-012]*

Response: Potential impacts on marine vegetation from the proposed project are discussed in Section 3.2, Vegetation and Wetlands, of the EIS, and potential impacts on marine habitat and wildlife are discussed in Section 3.3, Marine Habitat and Wildlife, of the EIS. Short-term impacts on marine life during construction would include the following: possible collisions of trenching equipment or the slow-moving cable laying ship with marine species, especially benthic species; decrease in localized water quality due to turbidity, dispersal of low-level contaminants, or accidental petroleum spills; and underwater noise and ship presence disturbance. Longer-term impacts include the following: possible contribution to biomagnification of contaminants in species due to resuspension of low-level contaminated sediments in the Harbor; removal of about 5 acres of algae/kelp habitat with expected revegetation, and about 7 to 14 acres (3 to 6 ha) of benthic and sediment habitat changes due to increased sediment temperatures. Overall, impacts to marine life would vary between low and moderate. Sections 3.1.3, 3.2.3, and 3.3.3 list mitigation measures that lessen potential impacts.

Comment: *Very little detail is given regarding the locations in which the cable is expected to be laid on the seabed without excavation, only that up to 2,000 feet of the cable may remain unburied. Additional concrete mattresses may be needed for these areas to not only protect the cable, but to allow organisms a transportation corridor over the cable, especially when the cable is predicted to be about 140 degrees F (60 degrees C). [LTR-007]*

Comment: *Regarding cable placement along seabottom without trenching or erosion of sediments resulting in a thinning or removal of sediment cover along the cable: Cables along the seabed may serve as effective migration barriers to demersal organisms (ie. sea urchin, sea cucumber, and especially Dungeness crab). [LTR-007]*

Response: As described in Section 2.1.1.2, Cable Protection Without Trenching, the cable would be laid on the sea floor without trenching in two instances: where the sediment layer is thin and trenching would not be possible, and where the cable would cross other utility cables or pipelines. Sea Breeze has estimated that up to about 2000 feet (610 m) of cable would be placed on the sea floor without being buried. The 2000 feet (610 m) of exposed cable would be in various locations and not a single length. Over the 10.5 mile (17 km) of corridor on the U.S. side, 2000 feet (610 m) is about 4 percent of this area. This small percentage would not be long enough to create a migration barrier, though individual benthic organisms in the vicinity of the cable could be limited from crossing over the cable. Section 3.3.2.2, Marine DC Cable, of the EIS has been updated to reflect this information.

Comment: *Localized temperature increases within the sediments covering the cable may serve as deterrents to migration, as well. [LTR-007]*

Response: As described in Section 3.1.2.1, Marine DC Cable, temperatures of the sediment above the cable are expected to drop off rapidly at the surface/water interface. Temperatures of the sea floor bottom directly above the buried cable are expected to be between 4.1°F (2.3°C) and 7.9°F (4.4°C) above ambient temperatures. Though the temperature increase would not be high enough to be injurious to species, it could potentially change the behavior of benthic species crossing the area, conceivably attracting some species to the elevated temperatures. Section 3.3.2.2, Marine DC Cable, of the EIS has been updated to reflect this information.

Comment: *Electro-magnetic fields generated by the cable may also affect migration behavior of these organisms. This would effectively split the Strait of Juan de Fuca into two separate east and west biomes, except for the transport of pelagic juveniles by ocean currents. Additional insulation of the cable, especially in areas of high biotic productivity (to depths of 300 feet) may be needed to mitigate these effects. [LTR-007]*

Comment: *The affects analysis also needs to address EMF impacts on southern resident killer whales; will it interfere with echolocation? If there are no effects, state so and why. [T-002]*

Response: As described in Section 3.11, Health and Safety, DC magnetic fields do not induce currents into objects or living creatures (unlike AC magnetic fields). However, DC magnetic fields have the potential to affect species that use magnetic fields for migration. Although insulation for the proposed DC cable would not lessen magnetic fields (as opposed to electric fields, which can be reduced by insulation), magnetic field levels generated by DC cables drop off rapidly with distance. Potential impacts to species, such as sharks and rays, which use magnetic fields for navigation, are described in Section 3.3.2.2, Marine DC Cable, of the EIS. The text has been updated to include the cable's magnetic field levels and a list of other potential species that could be influenced by field levels. Because magnetic field levels would diminish rapidly with distance from the cable, the area of field level influence would be localized and impacts on species would be unlikely.

Comment: *[The Lower Elwha Klallam Tribe] recommend[s] the cable be periodically checked (annually or semi-annually) to verify that those areas originally buried remain covered by the seabed, and that a maintenance plan include the reburial of any newly exposed cable. [LTR-007]*

Response: Sea Breeze may undertake a marine monitoring program to help confirm the extent to which the marine cable remains buried and to develop mitigation measures to keep the cable buried to the extent practical. Section 3.3.3, Mitigation Measures, of the EIS has been updated to reflect this possible mitigation measure.

Comment: *The affects analysis needs to address noise impacts of the operation of the marine cable on southern resident killer whales. Will it create a hum (like overhead lines do) that would increase underwater background noise levels? [T-002]*

Response: Operation of the cable would not create noise. AC transmission lines create a hum because of the changing polarity of the alternating current. Since DC lines do not change polarity, there is no hum. Section 3.3.2.2, Marine DC Cable, of the EIS has been updated to reflect this information.

Comment: *I have concerns with noise and vibration impacts to marine mammals along their migration routes. [OH-010]*

Response: As described in Section 3.3.2.2, Noise, page 3-52, potential impacts of underwater construction noise on marine mammals would include avoidance of the work vicinity, and possible disruption of communications, migration, and feeding behaviors. Noise levels within 1,360 feet (415 m) of the vessel would be considered harassment to marine mammals and fish by the National Marine Fisheries Services; impacts would be short-term and moderate. There would be no on-going noise or vibration during operation of the cable.

Comment: *The Tribes reserve the right to resurvey the project area for commercial beds of geoduck potentially impacted by this project. We are already aware of geoduck resources in waters deeper than that indicated by Figure 3.3. [LTR-007]*

Comment: *[Please make sure your EIS includes] [m]itigation agreements for loss of geoducks and other fisheries resources including habitat degradation, are made with the Lower Elwha Klallam Tribe (as well as Port Gamble and Jamestown Tribes, who also have Usual and Accustomed Fishing Areas in the Strait) as well as the DNR and WDFW. In the state of Washington, the Tribes share co-management authority of fisheries resources within the State Agencies. [LTR-007]*

Comment: *If damages to natural resources on state-owned aquatic land are unavoidable, DNR would request monetary compensation for said resources, based upon fair market value. [LTR-013]*

Comment: *In areas where commercial or recreational shellfish beds could be located, populations surveys will need to be conducted. [LTR-013]*

Comment: *Assessments for disturbed or damaged shellfish and geoduck may be added to the value established to procure the cable easement. [LTR-013]*

Comment: *DNR will request that the Juan de Fuca cable is buried four feet below the subtidal geoduck beds in order to avoid any future interference with commercial geoduck harvesting. [LTR-013]*

Response: Section 3.3.3, Mitigation Measures, of the EIS has been revised to include, along with the DNR and WDFW, consultation with the Lower Elwha Klallam Tribe, the Port Gamble S'Klallam Tribe, and the Jamestown S'Klallam Tribe for mitigation for the loss of geoducks.

As described in Section 3.3.17, Shellfish, WDFW habitat data was reviewed and geoducks surveys were conducted (2005) to determine concentration areas along the marine cable corridor. Consultation with the state agencies and tribes may result in additional geoduck survey information or refinement of construction plans.

3.4.4 Geology and Soils

Comment: *...where that line crosses I'm concerned about the pulp mill. I have been intimately acquainted with it for a number of years and I live fairly close to the site. And I'm interested how deep that cable's going to go, where it crosses that site because that place is ugly and has -- and it's been ugly for as long as I have been alive. Toxically it is a nasty place. And they are going to dig a hole through it. How deep is the hole going to be? [PH-012]*

Response: Existing contaminants in Port Angeles Harbor near the former pulp mill are described in Sections 3.1, Water Resources, and 3.5, Geology and Soils, of the EIS. As discussed in Section 3.5.2, Environmental Impacts – Proposed Action, of the EIS, potential impacts from disturbance of these contaminants by the proposed project would occur through trenching for the marine DC cable, and excavation of a small area at the HDD hole end point to allow proper entry of the marine cable into the HDD hole. The HDD hole itself would be drilled deep enough into the bedrock such that it would avoid the existing contaminants, and thus avoid impacts from disturbing these contaminates. Please also note the comment and response below.

Comment: *It may be prudent to collect several sediment samples along the proposed [underwater] cable route prior to initiating excavation to assess dioxin and PCB contaminant levels. [LTR-007]*

Comment: *If contamination is currently known or suspected during construction, testing of the potentially contaminated media must be conducted. If contamination of soil or groundwater is readily visible, or is revealed by testing, Ecology must be notified. Contact the Environmental Report Tracking System Coordinator at the Southwest Regional Office at (360) 407-6300. For assistance and information about subsequent cleanup and to identify the type of testing that will be required contact Mr. Bob Warren with the Toxics Cleanup Program at (360) 407-6361. [LTR-004]*

Response: Comment noted. Information on existing contamination in Port Angeles Harbor, based on previous sampling and surveys, is described in Sections 3.1, Water Resources, and 3.5, Geology and Soils, of the EIS. Sea Breeze is currently coordinating with the Department of Ecology regarding activities that could disturb contaminated soils and the appropriate mitigation. Mitigation measures could include pre-construction sediment sampling near the HDD hole end point and trench in the Harbor, sediment dispersion modeling, and possibly, sediment control

measures. Mitigation measures have been revised in Section 3.5.3, Mitigation Measures, of the EIS.

Comment: *Regarding Potential Impacts to Marine Biota (fish and shellfish): Recent marine remedial investigations conducted under the ITT Rayonier pulp mill cleanup process have noted significantly elevated levels of dioxins/ furans and PCBs in sediment and shellfish within Port Angeles harbor. The distribution of these contaminated sediments has not been well delineated to this point. Due to the nature of the proposed trenching methods, which may include "trench widths of up to 16 feet wide" (sec. 2.1.1.1), and propwash impacts within shallow areas, the potential for significant sediment disturbance and translocation appears significant, resulting in further contamination and exposure ("as much as 0.5 miles") to toxins and metals in adjacent shellfish beds and to bottom dwelling biota. All measures to minimize disturbance of these contaminated soils is encouraged. [LTR-007]*

Comment: *[The Lower Elwha Klallam Tribe] strongly recommend[s] selecting equipment that ensures a minimum of sediment disturbance during trenching activities within Port Angeles harbor. This should include scheduling work during periods of relatively calm waters and continuous monitoring during excavation to ensure that sediment plumes do not occur. [LTR-007]*

Response: Potential impacts from marine sediment disturbance and dispersal of contaminants is discussed in Sections 3.1.2.1, Marine DC Cable; 3.1.2.2, Horizontal Directional Drill Hole; 3.5.2.1 Marine DC Cable; and 3.5.2.2, Horizontal Directional Drill Hole, of the EIS. Sea Breeze will work with the Department of Ecology to determine appropriate measures to lessen potential impacts; these measures could include pre-construction sediment sampling near the HDD hole end point and trench in the Harbor, sediment dispersion modeling, and possibly, sediment control measures. Mitigation measures listed in the EIS have been revised to reflect possible sampling and sediment control measures.

Comment: *And has there been a survey done of the bottom of the sound...? [PH-012]*

Comment: *[Is the route across the Strait] [m]ostly just bare gravel and dirt throughout? [PH-012]*

Response: Sea Breeze has had various surveys of the Strait's sea floor performed to determine geology and sediment depth. Appendix C of the EIS provides bathymetric maps that show the depth of the Strait and other information along the length of the project corridor. The sea bottom within the project corridor consists mainly of sand, gravel, and mud silt (see the response to comments in Vegetation earlier in this chapter).

Comment: *In the nearshore environment, horizontal directional drilling (HDD) is the preferred method of submarine cable installation in order to minimize impacts. The installation of submarine cables in locations where other utilities are also located is also preferred. Shoreline contours should be returned to as near pre-construction condition as possible. [LTR-013]*

Response: Comment noted. By using HDD, impacts to the shoreline would be avoided.

Comment: *There are soil and drainage problems on the converter station site. [OH-010]*

Response: Soil conditions and drainage at the proposed converter station site are discussed in Section 3.1, Water Resources, and Section 3.5, Geology and Soils, of the EIS. It is acknowledged that water occasionally collects in lower-lying portions of the site during rainy weather.

3.4.5 Land Use

Comment: *Are there other examples of neighborhoods where lines like this have gone through? [OH-010]*

Comment: *Has this type of line and amount of power been used before in residential areas? [OH-010]*

Response: There are a number of BPA owned high-voltage overhead AC transmission lines in the Pacific Northwest that cross urban and residential areas, mostly where the high voltage lines come into urban areas such as Portland, Seattle, Tacoma, and Spokane. In San Diego, a 230-kV AC line has just been built (Otay-Metro Powerloop), a portion of which was routed underground through the city. Because DC transmission lines are usually used for very long routes, or for underwater cables, they are usually not found in residential areas.

Comment: *Will there be compensation for adjacent landowners? [OH-010]*

Response: There is no plan to compensate adjacent landowners. Mitigation for pipe ramming vibration could be determined during monitoring activities.

Comment: *As discussed on April 10, 2007, the upland owner has preference rights to certain areas of state-owned aquatic lands, specifically 1st class tidelands in harbor areas. In this situation, it appears Sea Breeze will be exiting in a harbor area. The upland owner will need to be included in discussions about using this location. Please ensure Sea Breeze is working with DNR on this issue. [LTR-013]*

Response: Comment noted. Sea Breeze is working with DNR, the city, and appropriate upland owners concerning this issue.

Comment: *I heard that condos were going to be built on the converter station site. [OH-010]*

Response: As discussed in Section 2.1.4, Converter Station, of the EIS, the property where the proposed converter station would be located is owned by Clallam County PUD and is zoned Public Buildings and Parks. Sea Breeze is in negotiations with the PUD to purchase the property for the converter station. DOE as no information about alternative plans that might have been considered for the site.

Comment: *Will improvements be made in traffic flow on streets? [OH-010]*

Comment: *Will there be any improvements, plantings, or pedestrian paths made through this project? [OH-010]*

Comment: *Will improvements be made to calm traffic in the area? [OH-010]*

Comment: *Will enhancements be made to the street? [OH-010]*

Response: The proposed project does not include any long-term improvements to existing streets, pedestrian paths, or traffic flows. After the construction period during which the proposed cable would be buried in the street, these streets would be repaved to return them to essentially current conditions. Plantings would be done as part of landscaping the converter station (see Section 2.1.4, Converter Station, of the EIS).

Comment: *Will you bury existing lines? [OH-010]*

Response: Existing overhead utility lines along streets in the project vicinity would not be buried as part of this project. The existing overhead lines that cross the proposed converter station site would likely be rerouted overhead across the property (see Section 2.1.4, Converter Station, of the EIS).

3.4.6 Visual Resources

Comment: *What is this going to block the view of? [OH-010]*

Response: Potential visual impacts of the proposed project are discussed in Section 3.7, Visual Resources, of the EIS. The cable would be placed underground and, once constructed, would not be visible or block views. The converter station building would be about 35 feet (10.7 m) tall and electrical equipment in the converter station yard would likely be taller. Some homes in the vicinity of the converter station may note a change in their views toward the mountains. In addition, the Port Angeles Substation expansion could potentially obscure existing views across the substation toward the Strait from one or two houses on Craig Avenue.

Comment: *Will there be landscaping around the converter station building? [OH-010]*

Response: Yes, as discussed in Section 2.1.4, Converter Station, of the EIS, the converter station plans include landscaping to enhance the appearance of the station.

Comment: *The clearing of the woodlot has already resulted in the very evident loss of a buffer which served as an effective noise and visual barrier to the rest of the BPA operation to the south. [LTR – 005]*

Response: Comment noted. Vegetation clearing that has occurred at the converter station site in recent years is discussed in Section 3.2.1.3, Terrestrial Vegetation, of the EIS. The EIS has been updated to reflect the removal of trees adjacent to the converter site by the City of Port Angeles since the release of the Draft EIS (see the previous response in Section 4.4.2, Vegetation.). Past tree removal from the site is not related to the proposed project.

3.4.7 Socioeconomics

Comment: *How have lines like this through neighborhoods affected property values? [OH-010]*

Response: There are no studies found on the effects of property values due to the presences of high-voltage underground-DC cables. Multiple studies on property values due to the presence of high-voltage overhead AC transmission lines show variable results. Overhead line studies have generally found that other characteristics (community, neighborhood, lot and dwelling) play a more significant role in determining the market value of a property than the presence of overhead transmission lines.

Concerns with potential effects on property values tend to be related to three aspects: actual disruption to land use, visual impact, and concerns with potential health effects due to exposure to EMF. The proposed cable would not be expected to impact property values since the cable would be placed in the street right-of-way, would not cross residential properties, and would be underground with no visual presence. Also the majority of the cable is DC, which does not have potential health effect concerns associated with exposure to EMF (there is no induced magnetic field).

Comment: *Will there be jobs associated with this project? [OH-010]*

Response: As discussed in Section 3.8.2.2, Economics, of the EIS, some local workers could be hired for non-specialty jobs, such as traffic control. Permanent jobs created by the completed project would be limited to a full-time security guard for the converter station and a local company hired for grounds maintenance.

Comment: *[Will Sea Breeze or DOE] [h]ire union workers? [PH-012]*

Response: Construction of the cable and converter station would be carried out by a private construction company under the supervision of the cable supplier. It is unknown at this time whether they would hire union workers.

BPA construction workers belong to their respective unions. When BPA hires contractors, BPA must fairly compete the work and cannot be biased between union or non-union proposals.

Comment: *How will this affect power rates for consumers & local industries? [OH-010]*

Comment: *... how will this affect power rates for the average consumer? [PH-012]*

Comment: *Will [the consumer power rates] go down? [PH-012]*

Response: The potential impact on power rates if the proposed project is approved and constructed is unknown. Based on economic theory, greater access to competing suppliers in the market typically causes the energy cost to either go down or not increase as rapidly in the future. BPA does not expect an impact on power rates.

Comment: *…with Davis-Bacon and a Federal agency in mind, only prevailing wage-earners should perform the labor from one end to the other. [LTR-003]*

Response: Comment noted. The Davis-Bacon Act of 1931 is a federal law which requires paying prevailing wages on public works projects. As discussed in Chapter 2 of the EIS, Sea Breeze, a private developer, would be the entity that would construct and own the proposed project.

3.4.8 Cultural Resources

Comment: *[State of Washington Department of Archaeology and Historic Preservation] would appreciate receiving a copy of the professional cultural resources survey report so [they] may review the appropriateness of the proposed Mitigation Measures identified in Section 3.9.3 on page 3-109. [LTR-001]*

Response: Comment noted. A copy of the cultural resource report has been submitted to the commenting agency.

Comment: *Lower Elwha Klallam Tribe Cultural Property Protection Code was included as an attachment to the Tribe's comments. [LTR-007]*

Response: Thank you.

Comment: *[State of Washington Department of Archaeology and Historic Preservation] would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4) and a copy of the monitoring report when available. [LTR-001]*

Response: BPA will provide the DAHP correspondence from concerned tribes and other parties as they are received, and will also send a copy of the monitoring report when it is available.

Comment: *The [Lower Elwha Klallam] Tribe appreciates the project provisions for directional drilling below the Ennis Creek site. This alternative avoids potential for significant impact to cultural resources in that village site. [LTR-007]*

Response: Comment noted.

Comment: *Section 3.9.1.1 notes that the Lower Elwha Reservation was established in 1937. Although federal land was set aside and Indian families relocated to the Lower Elwha, the Reservation was eventually proclaimed in 1968. [LTR-007]*

Response: The EIS text has been revised to reflect this information. Thank you.

Comment: *[Please make sure your EIS includes] [r]eference to the re-discovery of the Tse Whit Zen village site along Port Angeles harbor just east of Nippon Paper Company. This significant village site was unearthed during the excavation of the proposed DOT Graving dock project, and has been estimated to be at least 2500 years old. [LTR-007]*

Response: The EIS text has been revised to reflect this information. Thank you.

Comment: *[Please make sure your EIS includes] [p]rovisions for consultation with Lower Elwha Klallam Tribe in development of Cultural Resource Monitoring Plan, including provisions for an on site archeologist and tribal monitors in areas of moderate to high risk for impacts. [LTR-007]*

Response: The EIS text has been revised to reflect this information. Thank you.

Comment: *[Please make sure your EIS includes] [i]nclusion of an Inadvertent Discovery Plan for cultural resources. [LTR-007]*

Response: The EIS text has been revised to reflect this information. Thank you.

Comment: *The [Lower Elwha Klallam] Tribe generally concurs with the project proponents proposed "Mitigation Measures (3.9.3)" to address the potential for cultural resources disturbances and requests the opportunity to work with the proponent to better define Monitoring and Inadvertent Discovery Plans. [LTR-007]*

Response: Comment noted. Sea Breeze and BPA plan to work with the Lower Elwha Klallam Tribe to define the Monitoring and Inadvertent Discovery Plans.

Comment: *Under Socioeconomics, page s-16 - discussion of tribes. What consultation has been done with the identified tribe especially given that there is tribal lands affected? Also there is no discussion of the Section 106 NHPA given tribal lands/water were identified. [EM-011]*

Comment: *[Environmental Protection Agency] recommend[s] that the final EIS include a discussion about consultations DOE has had with the Tribes impacted by the project, their outcomes, and a discussion of how issues raised in the consultations with the Tribes were addressed. [LTR-009]*

Response: There are no tribal reservation lands affected by the project; however the Strait of Juan de Fuca is in the usual and accustomed fishing grounds of the Lower Elwha Klallam Tribe, Port Gamble Tribe, and the Jamestown Tribe. DOE has initiated Section 106 consultations with 23 tribes in the project area. Section 4.16, Historic Preservation, of the EIS has been revised to include more detail regarding Section 106 consultation.

3.4.9 Noise

Comment: *What is the compensation to landowners for noise and other impacts? [OH-010]*

Response: No compensation is being considered. Mitigation for pipe ramming vibration could be determined during monitoring activities.

Comment: *[Landowner on Liberty Street]…wants the construction impacts to be minimized. [EM-014]*

Response: Measures to lessen noise impacts due to construction are identified in Section 3.10.3. In addition, measures to lessen land use and air quality impacts due to construction are identified in Sections 3.6.3 and 3.12.3 respectively.

Comment: *I have concerns with local environmental noise along route. [OH-010]*

Comment: *...I am concerned about noise locally, certainly with the construction itself,… [PH-012]*

Comment: *We are opposed to blasting taking place near our homes on our street. [EM-014]*

Response: Comment noted. Section 3.10, Noise, of the EIS discusses the impacts to residents due to noise. There would be noise due to construction, which would be limited to daylight hours except at the HDD site where drilling would be 24 hours a day, 7 days a week. The cable itself would not produce operational noise. The operation of the converter station would produce noise levels that could be louder than existing ambient night-time noise levels. However, Sea Breeze plans to design the converter station to lessen noise that could emanate from the equipment.

Comment: *[The HDD drilling] will be going on for 24 hours a day? [PH-012]*

Response: As described in Section 2.1.2, Horizontal Directional Drill Hole, in order to maintain hole stability, the HDD would need to continue operations for 24 hours a day, 7 days a week until the hole was complete (23 days).

Comment: *You probably [will] mitigate noise, build a shed over a diesel engine. [PH-012]*

Comment: *What time of year do you anticipate doing [the HDD drilling]? We would prefer you do it in the winter when everybody's windows are closed. [PH-012]*

Comment: *Another question about decibel levels for the drilling site, what is your understanding of that? [PH-012]*

Response: As described in Section 3.10, Noise, of the EIS, noise generated from the HDD operation would be 90 to 95 dBA, which would be somewhat louder than typical construction noise levels (which can range from 80 to 89 dBA). Construction noise is exempt from state and local regulations between the hours of 7:00 a.m. and 10:00 p.m. Since the drilling would be continuous for 24 hours a day, Sea Breeze obtained a City-approved variance from the local noise ordinance. At this point in the project, the time of year in which drilling would take place is unknown. Sea Breeze will incorporate the use of sound attenuating techniques to help reduce noise levels as possible.

Comment: *Is there vibration that's felt at the surface level? [PH-012]*

Response: Vibration during drilling at the HDD site (drill operation, equipment movement, etc.) would be perceptible at nearby residences. If the HDD hole requires casing pipe installed, the pipe-ramming vibration could be distinctly unpleasant for nearby residents. The vibration level would be above levels that could potentially cause damage to older plaster walls in

residential structures within 30 feet (9 m) of the proposed pipe ramming operation, but less than the levels that could potentially damage industrial buildings. Pipe ramming would take up to 3 days to complete, depending on the geological conditions, and would be conducted between the hours of 7:00 a.m. and 10:00 p.m. Pre-construction and post-construction surveys of nearby structures, as well as real-time vibration monitoring during construction, would be conducted to monitor potential effects. Sections 2.1.2, Horizontal Directional Drill Hole, and 3.10, Noise, of the EIS have been updated to reflect this information.

Comment: *We have so much construction going on on campus right now I don't think [the construction noise in that area]… would be noticed. [If] [t]here's an increase. [PH-012]*

Response: Comment noted.

Comment: *[What is the] Timing for this disruption in the neighborhood in terms of length of construction[?] [PH-012]*

Response: A summary of the project construction schedule is given in Table 2-1 of the EIS. The HDD hole would take about 32 days, with drilling machinery operating for 23 days, 24 hours a day, 7 days a week. The terrestrial DC cable would take about 32 days to construct along the length of Liberty Street. The converter station would take about 10 months to construct. The terrestrial AC cable would take about 21 days to construct. Work at Port Angeles Substation would take about 6 months.

3.4.10 Health and Safety

Comment: *What does [500 mega watts] do for our local environment? Anything? In what way? As far as field levels or heat or ... community health. People who live near the area. I know in Europe they have done a number of studies of showing increased cancer rates for people who live near substations. And somebody who's closely connected to the college, you know, that's going to impact that environment. Certainly there's an assisted living home right next to this site. Have those kinds of things been looked at? Or increasing that, you know, putting that much potential power generation in that little area right there? [PH-012]*

Response: Section 3.11, Health and Safety, of the EIS discusses electric and magnetic field exposures. Magnetic field exposure has been the subject of a number of studies, primarily on exposure to AC magnetic fields, because AC fields induce currents into objects unlike DC fields. Because DC fields do not induce currents into objects, exposures are not considered a health risk. The EIS considers field exposures of both the DC cable and the relatively short AC cable.

3.5 Consultation, Review, and Permit Requirements (Chapter 4)

Comment: *Ecology's comments are based upon the information provided with the SEPA checklist. As such, they do not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action. [LTR-004]*

Response: Comment noted. It is acknowledged that there are other permits and requirements for the proposed project. These authorizations are discussed in Chapter 4 of the EIS.

Comment: *[The Environmental Protection Agency] recommend[s] that Sea Breeze work with Washington State Department of Ecology "Ecology" to assure that the state water quality standards will be met. Specifically, Sea Breeze will need to obtain the Clean Water Act (CWA) Section 401 Water Quality Certification and a National Pollutant Discharge Elimination System (NPDES) permit for storm water management from Ecology, and the CWA Section 404 permit from the U.S. Army Corps of Engineers to discharge sediments in waters of the US. The final EIS should include information regarding these required permits or certificates. [LTR-009]*

Response: Information about the permits referenced in the comment is provided in Chapter 4 of the EIS. Sea Breeze will work with the Department of Ecology regarding required permits, including a Section 401 Water Quality Certification and a NPDES permit under the CWA. Sea Breeze also has coordinated with the Army Corps of Engineers concerning a CWA Section 404 permit. Chapter 4 of the EIS has been revised to include updated information concerning these permits.

Comment: *As the proposed project moves forward through the permitting process, Sea Breeze will need to continue to maintain coordination with DNR [Washington State Department of Natural Resources) on the development of a use authorization for any state-owned aquatic lands the cable will encumber. A successful meeting on this subject occurred on April 10, 2007, between Sea Breeze Corporation and the DNR in Port Angeles. [LTR-013]*

Comment: *A complete application to use state owned aquatic lands will be required prior to any preconstruction or construction work in the right-of-way on state owned aquatic lands. [LTR-013]*

Comment: *An aquatic lands survey defining the boundaries of the state-owned aquatic lands to be leased is required prior to issuing a use authorization. If Sea Breeze Corporation is developing an "as-built" survey, please work with DNR to ensure that the details meet DNR Survey Guidance for state-owned aquatic lands. [LTR-013]*

Comment: *These details [regarding installation methods and trenching] will be required before DNR can issue a use authorization. [LTR-013]*

Response: As described in Section 4.9, Federal, Statewide, Area-wide, and Local Plan and Program Consistency, Sea Breeze is required to obtain applicable state and local landuse approvals and permits. This would include working with DNR for authorizations for the cable right-of-way and construction work for the state-owned aquatic lands in the Port Angeles Harbor and Strait of Juan de Fuca.

3.6 Other Comments and Responses

Comment: *These comments [from the State of Washington Department of Archaeology and Historic Preservation] are based on the information available at the time of this review… Should additional information become available, our assessment may be revised. [LTR-001]*

Response: Information is being submitted as it becomes available.

Comment: *Thank you for the opportunity to comment and a copy of theses comments [from the State of Washington Department of Archaeology and Historic Preservation] should be included in subsequent environmental documents. [LTR-001]*

Response: Thank you for taking the time to comment. We have included your letter in this Final EIS.

Comment: *The Department of the Interior has reviewed the Draft Environmental Impact Statement for the…Port Angeles-Juan de Fuca Transmission Project...The Department does not have any comments to offer. We appreciate the opportunity to comment. [LTR-006]*

Response: Thank you for taking the time to review the Draft EIS.

Comment: *Because of concerns about water quality and unclear information about the need for the proposed project, we have assigned a rating of EC-2 (Environmental Concerns-insufficient information) to the draft EIS. This rating and a summary of our comments will be published in the Federal Register. [LTR-009]*

Response: Thank you for taking the time to review and rate the Draft EIS.

Comment: *[Landowner on Liberty Street]…and his neighbors are willing to spend a lot of money to stop or change the project. [EM-014]*

Comment: *I am now concerned about impacts and my neighbors and I are prepared to take action to delay or stop the project from coming up our street. [EM-014]*

Response: Comment noted.

Comment: *I was just going to say, it seems to me watching the Canadian TV that they are not moving forward with a bunch of coal fired and fossil fuel fired power plants. I think that would be a concern that would be up to the Canadian people and the Canadian government. But I would figure that the power that's generated from now on will be... environmentally conscious. That's what it seems to me that you're more responsible than the American people generally. And I would, just like I said, I figure that it just sounds like a fairly good idea, actually, to me. [PH-012]*

Response: Comment noted.

4.0 Comment Letters

This chapter presents copies of the comment letters, e-mails, and phone call logs received on the Draft EIS, as well as the public meeting notes and public hearing transcripts. Correspondence was designated with an identifying log number based on the order in which the item was received.

Log No.	Name/Affiliation
JDF-001	Robert G. Whitlam, Ph.D. - Washington Department of Archaeology and Historic Preservation
JDF-002	Martha Jensen - U.S. Fish and Wildlife Service
JDF-003	Eugene Voight
JDF-004	Department of Ecology, Southwest Regional Office
JDF-005	Karl Schroeter
JDF-006	Preston A. Sleeger - Department of Interior
JDF-007	Sonya Tetnowski - Lower Elwha Klallam Tribe
JDF-008	Greg Butler
JDF-009	Christine B. Reichgott - Environmental Protection Agency
JDF-010	Public Meeting Notes, April 10, 2007
JDF-011	Elizabeth A. Orlando - U.S. Department of State
JDF-012	Public Hearing Transcript, April 10, 2007
JDF-013	Martha Hurd - Washington Department of Natural Resources
JDF-014	Brian Pettyjohn

STATE OF WASHINGTON

DEPARTMENT OF ARCHAEOLOGY & HISTORIC PRESERVATION

1063 S. Capitol Way, Suite 106 • Olympia, Washington 98501
Mailing address: PO Box 48343 • Olympia, Washington 98504-8343
(360) 586-3065 • Fax Number (360) 586-3067 • Website: www.dahp.wa.gov

March 12, 2007

Mr. Mark Korsness
Bonneville Power Administration
PO Box 61409
Vancouver, Washington 98666-1409

Re: Port Angeles – Juan de Fuca Transmission Project
Log No: 081705-02-BPA

Dear Mr. Korsness;

Thank you contacting our department. We have reviewed the Draft Environmental Impact Statement (DEIS) for the proposed Port Angeles – Juan de Fuca Transmission Project in Port Angeles, Clallam County, Washington. We would appreciate receiving a copy of the professional cultural resources survey report so we may review the appropriateness of the proposed Mitigation Measures identified in Section 3.9.3 on page 3-109. We look forward to receiving the report when available.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4) and a copy of the monitoring report when available.

These comments are based on the information available at the time of this review and on the behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act, as amended, and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised. Thank you for the opportunity to comment and a copy of these comments should be included in subsequent environmental documents.

Sincerely,

Robert G. Whitlam, Ph.D.
State Archaeologist
(360) 586-3080
email: rob.whitlam@dahp.wa.gov

cc: K. St. Hilaire

BPA F 1325.09e
(01-1999)
(Previously OF 271)

U.S. DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION
CONVERSATION RECORD

Electronic Version Approved by CIL – 01/05/1999

TIME	DATE (MM/DD/YYYY)
10.00 a.m.	04/04/07

LOCATION OF VISIT/CONFERENCE
Log # - JDF-002

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU
Martha Jensen - U.S. Fish and Wildlife Service

ORGANIZATION/OFFICE: **KEC**
TELEPHONE NUMBER:

TYPE
- ☐ Visit
- ☐ Conference
- ☒ Telephone
  - ☐ Incoming
  - ☐ Outgoing
- ☒ Other (Specify)

Returned phone call

ROUTING		
NAME	ORG. CODE	INITIALS

SUBJECT
Comments on the Port Angeles-Juan de Fuca Transmission Project Draft EIS

SUMMARY

The affects analysis needs to address noise impacts of the operation of the marine cable on southern resident killer whales. Will it create a hum (like overhead lines do) that would increase underwater background noise levels? (The operation of underwater gas pipelines creates noise, which has to be addressed in pipeline environmental documents.)

The affects analysis also needs to address EMF impacts on southern resident killer whales; will it interfere with echolocation? If there are no effects, state so and why.

ACTION REQUIRED
Respond to comments in final EIS

SIGNATURE	TITLE	DATE (MM/DD/YYYY)
	Environmental Coordinator	**04/04/07**

ACTION TAKEN

SIGNATURE	TITLE	DATE (MM/DD/YYYY)

FILE CODE: N/A
RETENTION: N/A

BPA Public Affairs

4/12/07

JDF-003

Sir - Ms.

Having attended the meeting at Port Angeles on the Sea Breeze project (intl. cable crossing - 150KV) and commenting for the record, I neglected, in retrospect to clarify, mention a couple of specifics.

First, only clean environmentally sound energy should be transmitted across. Hydro, wind, nuclear, tidal are in my opinion, future-acceptable options. Even they (habitat-damaging hydro etc.) can be detrimental. BC should commit to no future construction of coal, gas or fossil-fuel fired plants in the bargain.

Second with Davis-Bacon and a Federal agency in mind, only prevailing wage-earners should perform the labor. From one end to the other.

Eugene L Voight

April 20, 2007

Ms. Stacy Mason – KEC-4
Bonneville Power Administration
PO Box 3621
Portland, OR 97208

Dear Ms. Mason:

Thank you for the opportunity to comment on the draft environmental impact statement (DEIS) for the Port Angeles-Juan de Fuca Transmission project. The Department of Ecology (Ecology) reviewed the DEIS and has the following comment(s):

TOXICS CLEANUP: Lisa Pearson (360) 407-6261

If contamination is currently known or suspected during construction, testing of the potentially contaminated media must be conducted. If contamination of soil or groundwater is readily visible, or is revealed by testing, Ecology must be notified. Contact the Environmental Report Tracking System Coordinator at the Southwest Regional Office at (360) 407-6300. For assistance and information about subsequent cleanup and to identify the type of testing that will be required contact Mr. Bob Warren with the Toxics Cleanup Program at (360) 407-6361.

WATER QUALITY: Roberta Woods (360) 407-6269

The mitigation measures state that Ecology's stormwater manual will be used to prepare the stormwater pollution prevention plan for the project. Ecology recommends using the most current edition of the stormwater management manual, published in 2005: http://www.ecy.wa.gov/programs/wq/stormwater/manual.html.

Ecology's comments are based upon the information provided with the SEPA checklist. As such, they do not constitute an exhaustive list of the various authorizations that must be obtained or legal requirements that must be fulfilled in order to carry out the proposed action.

If you have any questions or would like to respond to these comments please contact the appropriate reviewing staff listed above.

Department of Ecology
Southwest Regional Office

(AW: 07-1890)

cc: Lisa Pearson, TCP
Roberta Woods, WQ
Jerry Pell, Department of Energy, Office of Electricity Delivery & Energy Reliability

20 April 2007 JDF-005

To: Bonneville Power Admin.
Communications – DM-7
P.O. Box 14428
Portland, OR 97293-4428

From: Karl Schroeter
1331 E. Lauridsen Blvd.
Port Angeles, WA 98362

JDF-005
4-23-07

Re: Port Angeles – Juan de Fuca Transmission Project.

While I did attend 2 earlier public meetings on this project, I did not see a published notice for the 4/10/07 meeting, thus my comments are based on a newspaper report of that meeting.

(1.) The article indicates that there is no committment for power transmission from generating companies. Is the proposed cable project being done "on spec" or is there a reliable expectation of it being promptly and efficiently used?

(2.) The article states that power could flow in both directions through the cable. Is it anticipated that power actually would be sent from the U.S. to Canada? Earlier meetings gave the impression of only a southerly flow.

(3) For the first time, there is mention of a converter station to be built on BPA land just north of their existing facility. I strongly object to such construction since it would involve pushing an industrial building into a residential neighborhood. Said parcel of BPA land has already been cleared (it was a woodlot) but the previous understanding was that it was cleared for the cable right-of-way, not for construction of above ground facilities. The clearing of the woodlot has already resulted in the very evident loss of a buffer which served as an effective noise and visual barrier to the rest of the BPA operation to the south. Any further BPA expansion should take place to the south of the current BPA complex and/or along its transmission line right of way (also south of BPA and Peninsula College).

Sincerely,

United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
500 NE Multnomah Street, Suite 356
Portland, Oregon 97232-2036

9043.1
IN REPLY REFER TO
ER07/232

Electronically Filed

April 24, 2007

Mark Korsness
Project Manager
Bonneville Power Administration
P.O. Box 61409
Vancouver, Washington 98666

Dear Mr. Korsness:

The Department of the Interior has reviewed the Draft Environmental Impact Statement for the Bonneville Power Administration's Port Angeles – Juan de Fuca Transmission Project, Greater Victoria Area, British Columbia, Canada to Port Angeles, Clallam County, Washington. The Department does not have any comments to offer.

We appreciate the opportunity to comment.

Sincerely,

Preston A. Sleeger
Regional Environmental Officer

Lower Elwha Klallam Tribal Center, 2851 Lower Elwha Road, Port Angeles, WA 98363

JDF-007
4/24/07

April 23, 2007

BPA Public Relations DKC-7
PO Box 14428
Portland, OR 97293-4428

Attached you will find comments from the Lower Elwha Klallam Tribe on the following project:

Port Angeles - Juan de Fuca Transmission Project
Draft Environmental Impact Statement

Contact for Lower Elwha Klallam Tribe on this project will be

Sonya Tetnowski, Chief Executive Officer
2851 Lower Elwha Road
Port Angeles, WA 98363
360-4542-8471*115
sonya.tetnowski@elwha.nsn.us

Thank you for this opportunity to comment.

Sincerely,

Sonya Tetnowski
Chief Executive Officer

Port Angeles-Juan de Fuca Transmission Project
Draft Environmental Impact Statement

Comments from the Lower Elwha Klallam Tribe

1. **Please make sure your EIS includes:**

A. Mitigation agreements for the loss of geoducks and other fisheries resources, including habitat degradation, are made with the Lower Elwha Klallam Tribe (as well as Port Gamble and Jamestown Tribes, who also have Usual and Accustomed Fishing Areas in the Strait) as well as the DNR and WDFW. In the state of Washington, the Tribes share co-management authority of fisheries resources with the State Agencies. The Tribes reserve the right to resurvey the project area for commercial beds of geoduck potentially impacted by this project. We are already aware of geoduck resources in waters deeper than that indicated by Figure 3.3.

B. Reference to the re-discovery of the Tse Whit Zen village site along Port Angeles harbor just east of Nippon Paper Company. This significant village site was unearthed during the excavation of the proposed DOT Graving dock project, and has been estimated to be at least 2500 years old.

C. .Provisions for consultation with Lower Elwha Klallam Tribe in development of Cultural Resource Monitoring Plan, including provisions for an on site archeologist and tribal monitors in areas of moderate to high risk for impacts .

D. Inclusion of an Inadvertent Discovery Plan for cultural resources.

2. **Please consider these ideas for lessening impacts:**

Regarding Potential Impacts to Marine biota (fish and shellfish):
Recent marine remedial investigations conducted under the ITT Rayonier pulp mill cleanup process have noted significantly elevated levels of dioxins/ furans and PCBs in sediment and shellfish within Port Angeles harbor. The distribution of these contaminated sediments has not been well delineated to this point. Due to the nature of the proposed trenching methods, which may include "trench widths of up to 16 feet wide" (sec. 2.1.1.1), and propwash impacts within shallow areas, the potential for significant sediment disturbance and translocation appears significant, resulting in further contamination and exposure ("as much as 0.5 miles") to toxins and metals in adjacent shellfish beds and to bottom dwelling biota. All measures to minimize disturbance of these contaminated soils is encouraged.

We strongly recommend selecting equipment that ensures a minimum of sediment disturbance during trenching activities within Port Angeles harbor. This should include scheduling work during periods of relatively calm waters and continuous monitoring during excavation to ensure that sediment plumes do not occur. It may be prudent to

collect several sediment samples along the proposed cable route prior to initiating excavation to assess dioxin and PCB contaminant levels.

Regarding cable placement along seabottom without trenching or erosion of sediments resulting in a thinning or removal of sediment cover over the cable. Cables along the seabed may serve as effective migration barriers to demersal organisms (i.e. sea urchin, sea cucumber, and especially Dungeness crab). We recommend the cable be periodically checked (annually or semi-annually) to verify that those areas originally buried remain covered by the seabed, and that a maintenance plan include the reburial of any newly exposed cable. Very little detail is given regarding the locations in which the cable is expected to be laid on the seabed without excavation, only that up to 2,000 feet of the cable may remain unburied. Additional concrete mattresses may be needed for these areas to not only protect the cable, but to allow organisms a transportation corridor over the cable, especially when the cable is predicted to be about 140 degrees F (60 degrees C). Localized temperature increases within the sediments covering the cable may serve as deterrents to migration, as well. Electro-magnetic fields generated by the cable may also affect migration behavior of these organisms. This would effectively split the Strait of Juan de Fuca into two separate east and west biozones, except for the transport of pelagic juveniles by ocean currents. Additional insulation of the cable, especially in areas of high biotic productivity (to depths of 300 feet) may be needed to mitigate these effects.

3. **The Lower Elwha Klallam Tribe submits the following additional comments:**

A. The Tribe appreciates the project provisions for directional drilling below the Ennis Creek site. This alternative avoids potential for significant impact to cultural resources in that village site.

B. Section 1.4 Indian Tribes are aligned by reference to "interest groups." Federally recognized Tribes operate as sovereign governments.

C. Section 3.9.1.1 notes that the Lower Elwha Reservation was established in 1937. Although federal land was set aside and Indian families relocated to the Lower Elwha, the Reservation was eventually proclaimed in 1968.

D. The Tribe generally concurs with the project proponents proposed "Mitigation Measures (3.9.3)" to address the potential for cultural resources disturbances and requests the opportunity work with the proponent to better define Monitoring and Inadvertent Discovery Plans.

E. Lower Elwha Klallam Tribe contact information for this project:
Sonya Tetnowski, Chief Executive Officer
2851 Lower Elwha Road
Port Angeles, WA 98363
360-4542-8471*115
Sonya.tetnowski@elwha.nsn.us

Lower Elwha Klallam Tribe

Cultural Property Protection Code

Approved by resolution

April 18, 2007

Resolution number 28-07

Lower Elwha Klallam Tribe Cultural Property Protection Code

1. **Definitions.**

1.1. **Activity or Activities** means any action, certificate, construction, contract, development, easement, lease, license, permit, policy, program, project, transaction, or undertaking that could have an Adverse Effect on Cultural Property.

1.2. **Adverse Effect(s)** includes any direct, indirect, or cumulative abuse, alteration, appropriation, change, collection, curtailment, cutting, damage, defacement, degradation, demolishment, desecration, destruction, deterioration, digging, diminishment, disinterment, disruption, disturbance, encroachment, excavation, exposing, gathering, harm, harvest, impairment, injury, interference, jeopardizing, loss, misuse, modification, molestation, mutilation, neglect, removal, taking, transporting, or waste of Cultural Property. "Adverse Effects" include, but are not limited to, adverse effects on historic properties within the meaning of the NHPA and its regulations.

1.3. **Boundary(ies)** means the physical boundaries of sites, districts, traditional cultural properties and other areas with Cultural Property, which is defined in a manner that conforms to and perpetuates the Tribe's culture, beliefs and history. Boundaries shall reflect all criteria included in federal laws and guidance documents, and all additional criteria developed by the Tribe either through written documents, or by Tribal custom. For example, a Boundary may include a viewshed that is important to the Tribe, or, for an area containing human remains that have been removed, a discernable stain in the soil.

1.4. **Business Committee** means the five member committee established under the Constitution.

1.5. **Code** means this Lower Elwha Klallam Tribal Cultural Property Protection Code.

1.6. **Community Council** means the Lower Elwha Tribal Community Council that is composed of all qualified voters of the community, as established under the Constitution, as amended.

1.7. **Constitution** means the Constitution and Bylaws of the Lower Elwha Tribal Community.

1.8. **Cultural Object(s)** means any objects with ceremonial, cultural, historical, sacred, spiritual, or traditional value to the Tribe including, but not limited to, objects and items covered by the Native American Graves Protection and Repatriation Act ("NAGPRA"), Archaeological Resource Protection Act ("ARPA") and other federal laws.

1.9. **Cultural Plant(s)** means any plant, tree, shrub, or herb, including any part thereof, with ceremonial, cultural, historical, sacred, spiritual, or traditional value to the Tribe.

1.10. **Cultural Property** means tangible and intangible Tribal and community assets that are connected to the Tribe's cultural and historic heritage or identity. Cultural Property includes but is not limited to the following: Cultural Objects, Cultural Plants, Cultural Records, Cultural Remains, Cultural Sites; features, isolates, archaeological resources, cultural objects and items, associated and unassociated funerary objects, sacred objects, cultural patrimony, historic property, historic resources, historic or prehistoric ruins or monuments, antiquities of national significance, historic objects, historic sites, and buildings, as covered by the NHPA (but regardless of eligibility for the National Register), NAGPRA, and other federal laws, regulations, guidance, and executive and secretarial orders; Sacred Sites; and access to such tangible property as described herein; as well as native language; myths; stories; names; symbols; songs; beliefs; artwork; designs; and other specialized knowledge.

1.11. **Cultural Research** means any Research of Cultural Property.

1.12. **Cultural Record(s)** means any documents(s), oral histories, or other records that have archaeological, cultural, historical, or traditional value to the Tribe.

1.13. **Cultural Remains** means any remains, including fragments and stains (dust-to-dust) thereof and the surrounding soil matrix, with archaeological, cultural, historical, sacred, spiritual, or traditional value to the Tribe, and also include, but are not limited to, associated and unassociated funerary objects as defined by NAGPRA.

1.14. **Cultural Site(s)** means a natural, physical, geographic area, place, setting, configuration, or location, whether on, below, or above the surface of the earth that has archaeological, ceremonial, cultural, historical, sacred, spiritual, or traditional value to the Tribe, including Tribal ancestral burial grounds, cemeteries, and graves, whether marked or unmarked; a building, structure, facility, or landscape made, prepared, or produced by humans that has archaeological, ceremonial, cultural, historical, sacred, spiritual, or traditional value to the Tribe; and including sites as defined in the NHPA and its regulations, and other federal laws, regulations, and executive orders, whether eligible for listing in or listed in the National Register.

1.15. **Funerary Object(s)** means any objects, artifacts, or materials which are reasonably believed to have been placed with a deceased individual in burial as part of a Tribal cultural ceremony or rite.

1.16. **Historic Property(ies)** means objects and places addressed by the NHPA including, but not limited to, sites, districts and Traditional Cultural Properties.

1.17. **In situ** means that Cultural Property or any portion thereof remains in its original, natural or existing place or position in an undisturbed state.

1.18. **Members or Tribal Members** means enrolled members of the Lower Elwha Klallam Tribe.

1.19. **NAGPRA** means the Native American Graves Protection and Repatriation Act, 25 U.S.C. §§ 470aa *et seq.*

1.20. **National Register** means the National Register of Historic Places established under the NHPA.

1.21. **NHPA means** the National Historic Preservation Act, 16 U.S.C. §§ 470 *et seq.*

1.22. **Person(s)** means any individual, estate of a natural person, corporation, partnership, trust, or any other private entity, association, institution, organization, or society, but shall not mean the Tribe unless otherwise stated.

1.23. **Program** means the Lower Elwha Klallam Tribal Cultural Property Program.

1.24. **Record** means all tangible materials including, but not limited to: treaties, laws, rules, regulations, reports, studies, articles, theses, documents, papers, books, volumes, periodicals, pamphlets, newspapers, newspaper clippings, manuscripts, diaries, letters, correspondence, ledgers, journals, church records, government records, administrative records, inventories, catalogs, maps, surveys, plats, deeds, permits, receipts, contracts, photographs, slides, negatives, portraits, sketches, drawings, models, films, sound or video recordings, audio tapes, microforms, micrographics, reproductions, electronic data, computer data bases, computer discs, printouts, research, field notes, and inventories, and intangible things such as oral histories and interviews.

1.25. **Reinterment** means the Tribal ceremonial or ritual aspect of reburial of disinterred Cultural Remains.

1.26. **Remains** means the physical remains, articulated or unarticulated bones and bone fragments, and the surrounding soil matrix at any stage of decomposition of any deceased human or animal, including any prehistoric human or animal.

1.27. **Repatriation** means the physical return of any Cultural Property to the Tribe.

1.28. **Reservation** means the Lower Elwha Reservation and includes any and all lands within the exterior boundaries of the Lower Elwha Reservation.

1.29. **Sacred Site(s)** means a place that is sacred to the Tribe or Tribal Members by virtue of its established religious significance to, or ceremonial use by, Tribal Members, and that includes Sacred Sites as defined by federal laws, regulations, and executive orders.

1.30. **Territorial Jurisdiction** means:

1.30.1. all land held in trust by the federal government that were purchased in 1936 and 1937 under the authority of the Act of June 18, 1934 (48 Stat. 984-988, 25 U.S.C. § 461-465;

1.30.2. all additional lands that subsequently became held trust by the federal government for the Tribe or its Members, whether within or outside of the Reservation;

1.30.3. all land owned in fee simple by the Tribe whether within or outside of the boundaries of the Reservation;

1.30.4. all other lands or geographic areas where the Tribe's Cultural Property is or may be located, including the territory historically occupied or used by Tribal ancestors; and

1.30.5. all usual and accustomed areas historically traveled by Tribal Members and ancestors.

1.31. **Treaty** means the Treaty of Point No Point, 12 Stat. 933 (1855) (ratified Mar. 8, 1859; proclaimed Apr. 29, 1859).

1.32. **Tribe** or **Tribal** means the Lower Elwha Klallam Indian Tribe and its authorized officials, agents and representatives.

1.33. **Tribal Court** means the Lower Elwha Indian Tribal Court.

1.34. **Tribal Lands** mean all lands within the boundaries of the Reservation, and all lands in which the Tribe holds a trust or fee interest, wherever located.

1.35. **Tribal Register** means the Tribal Register of Cultural and Historic Properties.

1.36. **Tribal Police** means any law enforcement personnel duly authorized by the Tribe to enforce the laws of the Tribe.

2. **General**

2.1. **Title**. This Title shall be known as the "Lower Elwha Klallam Tribal Cultural Property Protection Code."

2.2. **Authority of the Tribal Government**

2.2.1. Inherent authority. The Tribe has the authority and duty to exercise its authority over Cultural Property by virtue of the Tribe's reserved, inherent, Treaty-based, sovereign, proprietary, and common law rights.

2.2.2. Constitutional authority. The Tribe has the authority and duty to exercise its authority over Cultural Property by virtue of the following provisions

of the Constitution and Bylaws of the Lower Elwha Tribal Community, as amended and approved on April 29, 1968, and as amended on May 22, 1976, and May 5, 2003, and as hereafter amended: Preamble, Art. 1, Art. IV, § 1(a); Art. IV, § 1(b); Art. IV, § 1(c); and Art. IV, § 1(f).

2.2.3. Federal authority. The Tribe has the authority and duty to exercise its authority over Cultural Property by virtue of federal statutes, federal common law, and executive orders that confirm, delegate, or grant authority to Indian tribes as related to Cultural Property.

2.3. Tribal laws apply to Cultural Property to the maximum extent. The codes, ordinances, and other laws and customs of the Tribe apply to Cultural Property to the maximum extent of the jurisdiction and authority of the Tribe.

2.4. Cultural Property presently owned by Tribal Members. By enacting this Code, the Tribe does not intend to regulate or take any Cultural Property that is presently and legally owned by Tribal Members and used solely for valid personal, family, or spiritual purposes.

2.5. Other rights and powers of the Tribe are not abrogated by authority over Cultural Property. In exercising its authority over Cultural Property, the Tribe does not sanction or cause any abrogation of the rights of the Tribe or Tribal Members, nor does it diminish any trust responsibility of the federal government.

2.6. Reference to Code Includes Amendments. When reference is made to any portion of this Code, the reference shall apply to all amendments and additions made hereafter.

2.7. Severability. If any part of this Code is invalidated by a court of competent jurisdiction, all parts that are severable from the invalid part remain in effect. If a part of this Code is invalid in one or more of its applications, that part remains in effect in all valid applications that are severable from the invalid application(s).

2.8. Repeal of Inconsistent Laws. All codes, ordinances, resolutions, and other laws of the Tribe that are inconsistent with this Code are hereby repealed. To the extent that this Code is found to be inconsistent with other Tribal laws regarding Cultural Property, this Code shall govern and supersede other Tribal laws.

2.9. No waiver of Tribal sovereign immunity. Nothing in this Code is intended to be nor shall it be construed as a waiver of Tribal sovereign immunity from suit.

3. Findings, Intents and Purposes, and Declarations of Policy

3.1. Findings. The Tribe finds that:

3.1.1. Cultural Property is fundamental to the Tribe's ancestors, present peoples, future generations, proprietary interests, culture, land base, traditions, and sovereignty;

3.1.2. Cultural Property is the communal property of the Tribe, regardless of where it is found or located, and should be treated with respect;

3.1.3. The Tribe holds reserved property rights to access Cultural Property;

3.1.4. The Tribe's Cultural Property is invaluable, irreplaceable, and is in many instances threatened due to misuse, misappropriation, misconduct, and economic growth and development without adequate protection or concern;

3.1.5. The Tribe, by virtue of its legal and other interests in Cultural Property, should be consulted by federal, state and local governments, and the landowners and developers whenever Cultural Property is implicated, including in the development of treatment or mitigation plans, and in establishing Boundaries necessary for protecting sites, districts, traditional cultural properties and other areas with Cultural Property; and shall make decisions as to the appropriate treatment or mitigation of Cultural Property on a case-by-case basis (e.g., Reinterment, remaining *In situ*);

3.1.6. The Tribe has carefully balanced the need for a comprehensive regulatory Code governing Cultural Property, the need for certain levels of confidentiality as related to Cultural Property, the needs of the Tribe, and the need for non-Tribal society to be educated about and protect Cultural Property;

3.1.7. A comprehensive Code is a legitimate and necessary function of the Tribal government, and will require the expenditure of Tribal funds; and

3.1.8. Federal, state and local regulatory programs have not served to protect the Tribe's Cultural Property and the Tribe is the only government with the governmental, regulatory and proprietary interest and expertise needed to adequately protect and restore its Cultural Property.

3.2. Intents and Purposes. The intent and purpose of this Code is to preserve, protect, manage, restore, and perpetuate Cultural Property in a manner that:

3.2.1. Preserves, protects and perpetuates the Tribe's and its Members' culture, history, traditions, sovereignty, and property;

3.2.2. Maintains an appropriate level of confidentiality as to the location, use and purpose of Cultural Property; and

3.2.3. Conservatively establishes physical Boundaries of sites, districts, traditional cultural properties and other areas with Cultural Property in a manner that conforms to and perpetuates the Tribe's culture, beliefs and history.

3.3. Declarations of Policy. The Tribe's policy is:

3.3.1. The Tribe will take primary responsibility for and show leadership in the proper management of Cultural Property;

3.3.2. Tribal regulation and management of Cultural Property as provided for in this Code is in the best interests of the Tribe and its Members;

3.3.3. The Tribe will make reasonable efforts to sufficiently inform all Persons within the Tribe's Territorial Jurisdiction about this Code and the importance of protecting Cultural Property, while maintaining appropriate levels of confidentiality that are designed to prevent looting while respecting the sensitive nature of certain information about Cultural Property;

3.3.4. The Tribe will not tolerate Adverse Effects to Cultural Property inconsistent with this Code;

3.3.5. All Persons located within, adjacent to, or near lands within the Tribe's Territorial Jurisdiction are encouraged to adhere to Code provisions with respect to Cultural Property located on their respective properties, and to promptly notify the Tribe of any adverse or potentially adverse effects to Cultural Property;

3.3.6. Non-Tribal persons do not have the right to appropriate, display, possess, or otherwise inappropriately use the Tribe's Cultural Property – including but not limited to native language, myths, stories, names, symbols, songs, artwork, designs, and other specialized knowledge – without the Tribe's free and informed consent or in violation of the Tribe's laws, traditions and customs; and the Tribe has the right to restitution of its Cultural Property and other relief in the event that such appropriation, display, possession, or otherwise inappropriate use occurs.

3.3.7. The Tribe will seek intergovernmental agreements with federal, state, local and other tribal governments to effectuate and/or compliment implementation of this Code.

4. **Jurisdiction**

4.1. Personal Jurisdiction. This Code applies to all Persons within the jurisdiction of the Tribe.

4.2. Subject Matter Jurisdiction. This Code applies to all Cultural Property of the Tribe, regardless of the location of the Cultural Property.

4.3. Territorial Jurisdiction. This Code applies to all lands and conduct within the Territorial Jurisdiction of the Tribe.

5. **Organization of the Lower Elwha Klallam Tribal Cultural Property Program**

5.1. The Community Council shall:

5.1.1. Enact resolution(s) authorizing the Business Committee as the governing and policy determining body of the Program that will implement this Code, including the responsibilities described in this Section 5; and

5.1.2. Enact additional legislation or changes in existing legislation as related to Cultural Property.

5.2. The Business Committee shall undertake all necessary activities to oversee and ensure implementation of this Code, and oversee the Chief Executive Officer/Executive Director, who will delegate duties to a Program Director to ensure implementation of this Code.

6. **Program Components**. The Program shall include, but not be limited to, the following elements:

6.1. **Tribal Register of Cultural Properties**. The Program Director shall maintain and continually update a Tribal Register of Cultural Properties. Cultural Properties shall be included on the Tribal Register regardless of their location. The Business Committee may adopt regulations that establish, among other things, criteria and procedures for evaluating, establishing Boundaries of, nominating for and listing of eligible Cultural Properties on the Tribal Register; de-listing properties; criteria for determining information to maintaining confidential or to share with governmental entities and private Persons; notifying property owners, other governments, and other Persons when Cultural Properties are being considered for inclusion on the Tribal Register.

6.2. **Discoveries**. If any Person discovers Cultural Property while conducting an Activity, whether within or outside the boundaries of the Reservation, and on land other than that in which the Tribe holds an ownership interest, the person should immediately stop all Activity in, at minimum, a radius of 150 feet from the discovery; and immediately contact the Program Director. No Cultural Remains shall be removed without the express written permission of the Business Committee.

6.3. **Cultural Records**. The Program includes establishing and maintaining one or more repositories for Cultural Records. The Program may also include: establishing restrictions or restrictions or prohibitions to the access and on the use of Cultural Records that are necessary or advisable to meet the intents, purposes, and policies of this Code; adopting an official seal and authenticating and certifying by the official seal copies or reproductions of Cultural Records; a permit or other process that applies to all persons proposing to conduct Cultural Research within Tribal Territory; and entering into agreements with museums and other institutions that benefit Cultural Property.

6.4. **Confidentiality**. The Program includes taking and authorizing all necessary action to ensure that any and all sensitive information about the Tribe's Cultural

Property is protected from public disclosure in order to protect the integrity of the Cultural Property and the privacy of Tribal Members, including but not limited to ensuring that the Program is the sole custodian of such information when obtained by non-Tribal entities such as anthropologists, archaeologists, other persons and organizations, and federal, state and local governments.

6.5. The Program shall include any other elements that relate to Cultural Property.

7. **Offenses and Enforcement.**

7.1. The Tribal Court has original civil and criminal jurisdiction over any action arising under this Code, and has authority to issue such orders as may be necessary to enforce the provisions of this Code.

7.2. The following activities are prohibited:

7.2.1. It shall be unlawful for any person other than the Tribe, whom knows or has reason to know that Cultural Property is involved, to sell, purchase, exchange, transport, barter, receive, or offer to sell, purchase, exchange, transport or barter, or otherwise inappropriately use any Cultural Property

7.2.2. It shall be unlawful for any Person other than the Tribe to make an unauthorized disclosure of sensitive or confidential information regarding Cultural Property without first obtaining written permission of the Business Committee.

7.2.3. It shall be unlawful to otherwise violate this Code.

7.3. Criminal Penalties. Any Person who knowingly violates, or counsels, procures, solicits or employs any other person to violate, any prohibition contained in the Code shall, upon conviction, be subject to fines and/or jail time to the maximum extent permitted by applicable law, per infraction.

7.4. Civil damages. Any person violating the provisions of the Code shall be liable to the Tribe for civil damages per infraction, to be assessed by the Tribal Court after a hearing without a jury. Civil damages may include but are not limited to:

7.4.1. Site restoration costs;

7.4.2. Costs associated with the enforcement of this Code;

7.4.3. Costs associated with treatment of Cultural Property, including Reinterment; and

7.4.4. Costs associated with documentation, testing, damage assessment, and evaluation of Cultural Property in order to assess the characteristics and integrity of the Cultural Site or Property.

7.5. Forfeiture. All Cultural Property obtained or possessed in violation of the provisions of this Code is contraband and shall be forfeited to the Tribe.

Are there provisions in place to repair the cable in the event of a cable fault somewhere along its underwater length? How would such a repair be made short of bringing the damaged portion to the surface for splicing?

Greg Butler

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, WA 98101

April 24 2007

Reply To
Attn Of: ETPA-088 Ref: 05-026-BPA

Stacy Mason, Environmental Lead
Bonneville Power Administration, KEC-4
P.O. Box 3621
Portland, OR 97208-3621

Dear Ms. Mason:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (EIS) for the proposed **Port Angeles-Juan de Fuca Transmission Project** in Clallam County, WA. Our review was conducted in accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act. Section 309, independent of NEPA, specifically directs EPA to review and comment in writing on the environmental impacts associated with all major federal actions. Under our policies and procedures, we also evaluate the document's adequacy in meeting NEPA requirements.

Sea Breeze Olympic Converter LP (Sea Breeze), a private developer in Canada, proposes to construct, own, and operate a 550-megawatt (MW) High Voltage Direct Current (HVDC) power transmission line from Victoria in British Columbia, Canada across the Strait of Juan de Fuca to Port Angeles, WA in the United States. Since implementation of the proposed project would require a Presidential permit and interconnection into the federal electric transmission system, Sea Breeze has applied to the Department of Energy (DOE)/Office of Electricity Delivery and Energy Reliability (OE) for the permit for international crossing of the cable and to Bonneville Power Administration (BPA) for a transmission interconnection agreement. Both DOE decisions would be based on, among other factors, whether issuance of the permit would be in the public interest and the results of an environmental analysis that show the proposed project would not generate significant impacts to resources within the project area. Consistently, this project impacts' analysis considered the following two alternative actions:

1. **No action**: Under this action alternative, Sea Breeze would be denied the Presidential permit and interconnection to the federal transmission system. As a result, the proposed project would not happen and no environmental impacts would occur.
2. **Proposed Action**. Under this alternative, Sea Breeze would be granted a Presidential permit for the international crossing of the proposed electric power cable and would be allowed to interconnect it to the federal power transmission system at BPA's Port Angeles Substation to the extent that existing capacity on the system would permit. Consequently, Sea Breeze would construct the proposed 32 miles long direct-current

(DC) transmission cable starting from Victoria, British Columbia in Canada and ending at BPA's Substation in Port Angeles after crossing both land and sea (Strait of Juan de Fuca) areas under the US and Canadian jurisdictions. Of the 32 miles cable length, nearly 10.5 miles would be buried in marine bedlands and 0.8 miles trenched through Port Angeles' city streets in the US. Sea Breeze would also establish a one-mile cable corridor across the Straight to characterize the marine environment. Because the proposed cable would be DC and the existing BPA grid to which the project would interconnect is Alternate Current (AC), the proposed action would also require construction of a converter station to invert DC to AC. This station would be built on nearly 5 acres of land owned by Clallam County Public Utility District (PUD) near the existing boundary of BPA's Substation property. After construction, Sea Breeze would restore disturbed areas.

In our scoping comments in June 2005, EPA raised a number of issues related to the proposed project, including the project purpose and need and potential environmental and other effects. The draft EIS includes a good description of resources within the project area, analysis of anticipated environmental impacts from the project, and identifies mitigation measures to offset the impacts (Table 2-2, p. 2-22). The document also indicates that future decisions on any request for transmission services and power exports derived from the proposed project would be subject to separate NEPA analysis and subsequent review (see sections S.1.2 & S.2.9).

On April 10, 2007, a Public Open House and Hearing was held in Port Angeles to discuss the project. EPA noted that the public was unsure about the need for the proposed project, which would result in additional power production in the project area that has been experiencing power surpluses (http://www.bpa.gov/power/pgp/whitebook/2006/). Therefore EPA recommends that the final EIS include clarification of the purpose and need statement, reflecting both Sea Breeze and the broader public interest and need for the project, supported by data showing the amount of power currently available from all sources (power lines, solar and wind, gains from conservation measures) in the project area and how much is needed to meet any current deficiencies and expected needs in the future.

We are also concerned about the project's potential to further degrade water quality within marine waters and creeks that are already on 303(d) list due to low dissolved oxygen (p. 3-2) and fecal coliform bacteria contamination (p. 3-4). During the project construction, there is also potential for sediment discharge and increased turbidity in the Strait of Juan de Fuca and Harbor (p. 3-6 to 3-10). We recommend that Sea Breeze work with Washington State Department of Ecology "Ecology" to assure that the state water quality standards will be met. Specifically, Sea Breeze will need to obtain the Clean Water Act (CWA) Section 401 Water Quality Certification and a National Pollutant Discharge Elimination System (NPDES) permit for storm water management from Ecology, and the CWA Section 404 permit from the U.S. Army Corps of Engineers to discharge sediments in waters of the US. The final EIS should include information regarding these required permits or certificates.

The draft EIS indicates that there has been contacts with Tribes that may be affected by this project. Executive Order (EO) 13175 (*Consultation and Coordination with Indian Tribal Governments)* requires agencies of the U.S. government "to work with Indian tribes on a

government-to-government basis to address issues concerning Indian tribal self-government, trust resources, and Indian tribal treaty and other rights." We recommend that the final EIS include a discussion about consultations DOE has had with the Tribes impacted by the project, their outcomes, and a discussion of how issues raised in the consultations with the Tribes were addressed.

Because of concerns about water quality and unclear information about the need for the proposed project, we have assigned a rating of EC-2 (Environmental Concerns – Insufficient information) to the draft EIS. This rating and a summary of our comments will be published in the *Federal Register*. For your reference, a copy of our rating system used in conducting our review is enclosed.

If you have questions or would like to discuss these comments, please contact Theo Mbabaliye at (206) 553-6322 or me at (206) 553-1601. Thank you for the opportunity to provide these comments.

Sincerely,

/s/

Christine B. Reichgott, Manager
NEPA Review Unit

cc:
EPA Washington Operations Office
Lower Elwha Klallam Tribe
Jamestown S'Klallam Tribe
Port Gamble S'Klallam Tribe

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements Definitions and Follow-Up Action*

Environmental Impact of the Action

LO - - Lack of Objections

The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC - - Environmental Concerns

The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO - - Environmental Objections

The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU - - Environmentally Unsatisfactory

The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 - - Adequate

EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 - - Insufficient Information

The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonaby available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 - - Inadequate

EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment. February, 1987.

Public Meeting Notes
Port Angeles-Juan de Fuca Transmission Project
Port Angeles Public Library
April 10, 2007, 4:30 p.m. – 7 p.m.

Notes from flipcharts:

- How will this affect power rates for consumers & local industries?
- Where would the transmission line go?
- What is in it for BPA?
- Will there be environmental review (NEPA) for a transmission request?
- Are there other examples of neighborhoods where lines like this have gone through?
- How have lines like this through neighborhoods affected property values?
- What is the compensation to landowners for noise and other impacts?
- How deep will the cable be buried?
- There are soil and drainage problems on the converter station site.
- Will improvements be made in traffic flow on streets?
- Will there be compensation for adjacent landowners?
- Will there be any improvements, plantings, or pedestrian paths made through this project?
- Will you bury existing lines?
- Will improvements be made to calm traffic in the area?
- Will enhancements be made to the street?
- Who is Sea Breeze?
- Will there be landscaping around the converter station building?
- Will there be jobs associated with this project?
- Why have the trees been cleared recently on the converter station site? Was it for this project?
- I heard that condos were going to be built on the converter station site.
- What is this going to block the view of?
- The road on the east side of the converter station site isn't Liberty Street; it's essentially a college driveway.
- Will the cable be underground for the whole length?
- Canada doesn't have a very good environmental track record, especially for water quality (they dump raw sewage into the Strait).
- Has this type of line and amount of power been used before in residential areas?
- Will power flow from Canada or from the U.S.?
- What is the need?
- I have concerns with local environmental noise along route.
- I have concerns with impacts in the marine environment, especially to the sea bed from trenching.
- How often will the line need repair and what will the impacts be then?
- I have concerns with noise and vibration impacts to marine mammals along their migration routes.

From: Orlando, Elizabeth A [mailto:OrlandoEA2@state.gov]
Sent: Wednesday, April 25, 2007 2:01 PM
To: Erviti, Pedro G; Pell, Jerry
Subject: RE: Your Phone Call re "Sea Breeze"

Hi Pedro and Jerry,

I reviewed the DEIS for the Sea Breeze project. Overall, I don't see anything objectionable policy or legally but do have a few comments NEPA related and one grammar.

1) on page S-12, s.4.3.2 para 3 you are missing a period after the last word in the paragraph "impacted"

2) I would like to know more under s.2.2 HDD - the effects of drilling muds and "fluids" being released back into the sea bed/environments. There doesn't seem an adequate explanation of this.

3)Purpose and Need (s.1) : there is nothing in the document that tells me why we should have this project. It tells us about the project and how will be constructed and operate and how DOE/OE makes determination but nothing to tell us why this project is in our national interest

4) No Action: following up on above, this section is pretty much non informative. So the project isn't built and there would be no impacts. If so, given we don't know why the project should be built or in our national interest as mentioned above, sounds like no action is a great alternative or best choice. There is nothing that tells us the importance of the project or what the effect would be if it wasn't built/constructed.

5) Under s.4.3.2, page s-12, 2nd & last para re underwater noise...it seems the DEIS lists all these impacts and states little on what will be done to mitigate or avoid them. Such as the underwater noise disturbances. What measures are proposed to prevent the disturbances?

6) Under Socioeconomics, page s-16 - discussion of tribes. What consultation has been done with the identified tribe especially given that there is tribal lands affected? Also there is no discussion of the Section 106 NHPA given tribal lands/water were identified.

7) under Toxic and Hazardous materials, page s-19: the facts of such are mentioned but how is this related to this project and what effects would it have? What relationship is there? - this is not clearly identified.

I just see a need for a bit more information and relevance given to some of the above.

Hope this helps, thanks for letting me take a look at it.
Betsy

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OES/ENV
Foreign Affairs Officer
Multilateral Team
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PORT ANGELES/JUAN de FUCA TRANSMISSION PROJECT

PUBLIC HEARING

April 10, 2007

5:30 p.m.

Port Angeles Branch Library

Port Angeles, Washington

Reported by: Jori L. Moore, RPR, CCR No. 1993

A P P E A R A N C E S

MARK KORSNESS
Project Manager
Bonneville Power Administration

STACY MASON
Environmental Lead
Bonneville Power Administration

JERRY PELL, Ph.D.
Project Manager
U.S. Department of Energy

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MR. KORSNESS: Thanks for coming this afternoon. My name is Mark Korsness and I work for Bonneville Power. And I'll help guide you through this process. Today we're here to make ourselves available to the public and collect any comments you might have or questions you might have about this project and make sure that we answer those in the Environmental Impact Statement for this project. So I'll just take a couple minutes to go through highlights of the project and process here and then give you all an opportunity to ask questions or make comments.

So as most of you are aware, Sea Breeze Olympic converter is proposing to construct an electrical transmission cable across the Strait of Juan de Fuca and from Vancouver Island, BC, to Port Angeles, Washington. The cable would be direct current and would be capable of carrying 550 megawatts of electricity. Sea Breeze would sell a capacity of the cable to interested utilities or power generators. And the description of the project most of you have a basic understanding of. The Office of Electricity Delivery and Energy Reliability, which is a part of the Department of Energy, has received a request from Sea Breeze for a presidential permit for the transmission cable to cross the international border. The Office of

Electricity may issue a presidential permit if the proposal is in the public interest considering environmental electricity impacts.

Bonneville Power has received a request from Sea Breeze to connect the proposed transmission cable to the federal transmission system. BPA allows eligible customers interconnection to the federal transmission system subject to reliability requirements and environmental review. The proposed schedule is that we are taking comments tonight at this public meeting and the draft EIS is out now for comment. We'll be accepting comments through April 24th of this year. And we're scheduled to complete the final EIS this fall. And then Bonneville and the Office of Electricity and Department of Energy will be making decisions based on that EIS. And Bonneville specifically would be making a decision whether to allow interconnection or not. So the reason, again, why we're here tonight is to allow you a chance to comment and ask questions. We're in the one-hour period now between 5:30 and 6:30 where we will have a court reporter recording anything that's said to make sure that we have an accurate accounting of it. And we'll address all issues brought to us in the EIS. So would anyone like to make a comment or ask a question?

MR. GRAHAM: How many volts?
MR. KORSNESS: How many volts in the cable?
MR. GRAHAM: Yeah.
MR. KORSNESS: So how many volts will be -- see, there's two parts. There's the direct current cable and there's the AC cable.
MR. GRAHAM: Direct current cable?
MR. KORSNESS: Mike?
MR. WISE: 150 kilowatt volts.
MR. GRAHAM: Is there going to be a priority of who gets power? Are there priorities involved?
MR. KORSNESS: I'll try to answer that in a general way. This is a company that will build a cable and hopes to sell capacity across it. It's not -- Bonneville Power serves the power needs of the Port Angeles area, so it is not an attempt to provide power to the local utilities or local customers.
MR. GRAHAM: So it is for Vancouver Island or --
MR. KORSNESS: Yeah. The ultimate use of the cable really is unknown at this time. It depends on Sea Breeze, the owner, selling capacity to whoever may want to use the cable. So the ultimate use

I don't think is known yet. And unless you can add anything to that.

MR. WISE: Essentially the easiest way to envision it perhaps is a bridge and that we're simply building the bridge and people would go from south to north or north to south, wherever, and really it is between the supplier of the electricity and the customer that would determine where the electricity is going.

MR. KORSNESS: So we'll try to answer that even more completely in the document. That's a good question.

MS. ASGHARIAN: Are we heading on the right track of what you're asking?

MR. GRAHAM: Sort of. And what I'm looking at theoretically it is like your power drums in a river, basically the river flows are what they are now and 20 years from now are they going to be the same, are they going to be reduced. Are they going to be increased. Who knows. That's why I'm interested. Who are the priority customers and basically what you said is, you know, Washington may come first.

MR. KORSNESS: For this bridge it's whoever is willing to pay Sea Breeze the negotiated amount for capacity on that bridge.

DR. PELL: I'm Dr. Jerry Pell with the Department of Energy, the other Washington, the one on the East Coast. Let me just mention, because it is important that you understand, this is not a Department of Energy project. It is a private sector project by the Sea Breeze Company. And they are the ones who think that it is in their financial interest to build this plant (sic) and sell power over it to the extent that they succeed or fail, how well the company will do. All they are doing is using Bonneville's facility for that purpose because they are crossing the border into Canada it invokes my office in D.C. for the presidential permits, but it's not a federally determined project. It's not a federally designed project. There's no federal stake in the outcome. I just wanted to make sure you all understand that. It is not the Department of Energy that's designing or implementing this project.

MR. KORSNESS: So we're probably starting off a little formal here. I just invite everybody to feel free to make comments or ask questions.

MS. LAWSON: Aleilah, A-l-e-i-l-a-h, Lawson. So in some kind of future scenario where perhaps power from the river does become maybe a more

limited commodity, is Washington State the priority before these things get sold off to private entities?

MR. KORSNESS: Okay. That's a good question.

MS. LAWSON: Going to other states or other countries?

MR. KORSNESS: The federal transmission system is a complicated one. And I have a very small part of it. It's a system of transmission lines or grid and BPA owns a good portion of the grid in the Pacific Northwest and we are charged with transmitting power from the federal dams to whoever wants to buy it. And also, we make the system available to others who either generate power or want to transmit power across the grid. And based on available capacity we allow that and charge them a rate to do that. Sea Breeze right now is just asking for the permission to hook up to our system. So that's the decision we'll make this fall, whether to allow that or not. And then at a later date either Sea Breeze or other entities that will purchase capacity across the cable will actually ask for permission from Bonneville to transmit across the federal system to get to some other use, so that will be a later request and a later decision Bonneville will have to make. This really just creates an

additional path for commercial use. It right now has no effect on the federal system or buyers and users as it is set up right now. But others will perhaps answer that more eloquently than I just did.

MS. LAWSON: Okay.

MR. VOIGHT: Gene Voight (phonetic). I was just wondering, will the system as it is installed be able to convert to AC from Bonneville and sell power through the DC line back to Canada?

MR. KORSNESS: Yeah, it will be able -- that's a good question. It will be able to -- the pathway can send power either to the north or to the south. So from whatever source it comes from the south it will go across, if it happens across BPA lines to get to this converter station. Sea Breeze will convert it to DC and charge a rate to go across the submarine cable and then on the other side convert it to AC and send it to wherever the customer is, and vice versa, if it goes north to south.

MR. VOIGHT: And actually, having this thing go through will improve the local reliability because you'll be able to do some switching if Bonneville went down, Portland, whatever, went down outside of our area and caused, you know, an outage here, could we take power from Canada and heat up the

Peninsula, technically?

MR. KORSNESS: That's a good question. I guess I don't know the -- maybe I don't know all the answers to that. In the short term, this is not a project that Bonneville is seeking to improve its reliability or to provide power for any of its customers, so there is no immediate benefit in that regard. It does expand, it provides another pathway, whether ultimately or how the pathway is used I don't know.

MR. VOIGHT: It provides another source of power other than Bonneville for our local?

MR. KORSNESS: Yeah. Maybe it provides another pathway from Canada to the federal system. The ultimate impact may or may not through your -- the benefit you state there.

MR. VOIGHT: It would depend on maybe Clallum County PUD if they switch power.

MR. KORSNESS: Well, yeah, it goes under the federal system. So yeah, somebody in Bonneville will answer that in the EIS.

MR. WISE: Mike Wise, W-i-s-e, with Sea Breeze, if I may just add. One of the great things about this technology is it has black start capability. This was demonstrated in the crosstown cabling in New

York when the East Coast blackout occurred. The crosstown cable, which is the same technology that we're proposing to use, that part of the East Coast was able to get back up and functioning much quicker than -- in fact, I'd have to check my notes, but I think it was something like 20 hours earlier than the rest of the grid surrounding it. And it is because of the converter stations for this particular type of technology. So that is certainly a benefit in the scenario if transmission lines were to go down and due to an emergency power was necessary the grid could be back up and running due to this technology.

MR. KORSNESS: Although BPA has no plans to purchase capacity on it, off the new cable. Other questions or comments?

MR. BUTLER: Greg Butler, B-u-t-l-e-r, what criteria exactly is Bonneville and the Department of Energy utilizing in order to evaluate whether or not this project is worthwhile?

MR. KORSNESS: Bonneville will not determine whether the project is worthwhile or not. Bonneville will determine whether to allow interconnection to the federal system or not. And that's based on a number of things, probably mainly is the environmental impact and impact to our system

reliability.

MR. BUTLER: Does it depend upon the number of customers for like firm, committed capacity?

MR. KORSNESS: (Nods head).

MR. BUTLER: No. Pretty much environmental?

MR. KORSNESS: It is just if somebody wants to hook up to us, the federal system, we need to allow that unless we find good reason not to. And usually the two most common reasons we would deny somebody hooking up is either because we think the impacts are great and we don't want to facilitate those or the customer and system that wants to hook up would have an adverse impact operationally to our system. So we wouldn't want to jeopardize our reliability. And again, no one has asked to transmit anything yet, which would be a later request.

MR. BUTLER: Will Sea Breeze be part of helping out as far as the relaying upgrades that are required from here to Olympia? Or that's probably not a part of this whole contract yet.

MR. KORSNESS: Sea Breeze will reimburse Bonneville for any costs associated with improvements we need to make either in relays or yard expansion or whatever to allow the hookup excluding those that can

be considered network improvements that others would benefit from. And there's a process that I wouldn't be able to describe fully to determine that. So some costs Sea Breeze will pay for directly, other costs BPA and the rate payers will pay for because there's other benefit. Again, those -- nobody's asked to transmit anything across our system. So there are no improvements planned for past Port Angeles to provide --

DR. PELL: Let me add to that. If Sea Breeze wishes to send power out of the United States into Canada they would have to come back to my office, the presidential permit office, to get an amendment to their permit to allow them to do that. They can't do that absent an amended permit. And one of the issues we look at is, as Mark has said repeatedly, is reliability on the grid. And if that proposal would affect the reliability negatively, the presidential permit would be denied. So there's no potential for negative impact for reliability. The Bonneville grid --

MS. LAWSON: That's an amendment to --

DR. PELL: To the presidential permit.

MS. LAWSON: That's already been issued?

DR. PELL: That they are applying to

have permission to cross the border, that decision will be made by Bonneville. These two applications are taking place in parallel and that's why our two offices are working together so the environmental impact studies -- we're both going to use our studies to make our own decisions. And they need -- both conditions have to be confirmed for the project to go forward.

MR. KORSNESS: It is kind of complicated. I have trouble understanding it myself.

MS. LAWSON: I'm kind of left with this feeling here that -- I mean, it is talking about there is no -- I can't remember exactly what your wording was. But, you know, like it is just laying a cable out in the Sound or in the Strait because something might happen some time. And, you know, is it worth doing all of that to the environment of the Sound because something might happen some time in the future.

MR. KORSNESS: Yeah, that's a good question. Again, it is commercial interest that's proposing the construction of the project. And again, Bonneville will consider the environmental impacts in the United States and decide whether we think they can be adequately addressed or not. And if they can that part of the decision would be taken care of. If we feel they can't then we wouldn't allow the

interconnection.

DR. PELL: I would pick up where Mark left off. What we really need from you folks not just tonight, until the comment period closes on the 24th, is for you to review the documents in terms of how we answer the environmental impact. If you think we missed something this is the time to let us know because on the basis of what we learn from this analysis plus whatever feedback we get from the public, we'll make our ultimate decisions. The major reason that we're here is to get your input on the EIS that hopefully you've all read back to back.

MR. KORSNESS: For example, noise, if you're concerned about noise you need to tell us that, where do you live or where you're concerned about noise. It doesn't have to be where you live and we'll try to make sure we show the impacts in this document. And that will inform you and help us decide whether those can be mitigated adequately or not. So we're interested not only how you feel about the project but what other areas you want us to study to make sure we cover. So other questions or comments?

MR. GRAHAM: John Graham (phonetic). I'm ignorant of construction, especially for a cable. But where that line crosses I'm concerned about the

pulp mill. I have been intimately acquainted with it for a number of years and I live fairly close to the site. And I'm interested how deep that cable's going to go, where it crosses that site because that place is ugly and has -- and it's been ugly for as long as I have been alive. Toxically it is a nasty place. And they are going to dig a hole through it. How deep is the hole going to be?

MR. KORSNESS: Yeah. Do we have charts that show that?

MR. WISE: I think what we're planning to do here is called horizontal directional drilling. We're not actually digging a trench, per se, for that part of the project. We're actually drilling underneath the site. And we plan to be in bedrock through there. So in actual fact, we're going to be -- I think our design depth is roughly 60 feet in through there, 60 feet, that's well below depth of contamination.

MR. GRAHAM: I don't think anybody really knows.

MR. WISE: Well, that's, again, this is what we have seen in the studies. And we will be doing some geotechnical drilling to look closer at this to ensure that we are in bedrock below that site. That's

a design requirement for the horizontal direct drilling work.

MR. KORSNESS: So yeah, from up on top of the hill here, then drill underground and not come out until --

MR. GRAHAM: It has to be to come out and be all right.

MR. KORSNESS: So the soils, those get pumped back up to the surface here?

MR. WISE: That's correct. The drill cuttings get pumped up into a mud tank and then they are put into trucks and hauled off site.

MR. VOIGHT: Hire union workers?

MR. WISE: That decision hasn't been made yet. Yes, we're still contemplating that as part of the project plan.

MS. LAWSON: Where is that drill construction site?

MR. KORSNESS: On Liberty Street between Georgiana and Caroline Street.

MS. LAWSON: That would be where we live.

MR. KORSNESS: So that schedule of that operation would take about --

MR. WISE: About 25 days, something like

that. So certainly we should talk after the meeting and I can go through some of the specifics with you.

MS. LAWSON: Okay.

MR. KORSNESS: Other questions or comments? Things you don't understand about the project or things we should be considering?

Let me ask this: What are you going to ask me to say, okay, we're done with the formal process?

MS. LAWSON: Well, I feel a little constrained in my question-asking because I feel like I'm supposed to have read this environmental impact statement and that I should be asking questions about --

DR. PELL: You mean you're admitting you didn't read it?

MS. LAWSON: No, I didn't read it.

MR. KORSNESS: Don't hesitate to ask questions even if you think they are covered already.

MS. LAWSON: Well, I am concerned about noise locally, certainly with the construction itself, but also with the marine life, the impact on the marine life of digging a trench for 10.5 miles, that's got to have some impact there. And thinking about migration routes for the whales and other sonar animals out there that is going to potentially have quite an impact on.

So what about it?

MR. KORSNESS: Maybe you could just give an overview of things we have addressed in the document.

MS. MASON: So the document talks about what the impacts will be to the seabed, it talks about the marine impacts, turbidity, talks about noise to mammals and fish during construction, and then talks about some of the impacts that after it is all laid and the seabed goes back to what it is and what the impacts of operation of it would be.

MS. LAWSON: So basically we have to go read the statement to find out.

MR. KORSNESS: Anything specific you were wondering about?

MS. LAWSON: Yeah. Well, you know, what's an accept -- I mean, what's the acceptable level of disruption to marine life I guess would be my question.

MS. MASON: So what ends up happening is that you have this corridor or what was the range that we decided that the impacts really were as far as seabed floor maybe up to 16 feet wide across the Strait. And in relationship to the whole Strait seabed floor, it kind of ends up being a small amount. There's

an acreage that we have determined what the acreage of that is and in some ways that acreage also is, because it is linear, it is not just one big block. It can heal itself more easily because you have these side areas that can come and reseed and migrate back. But there will be a trip of impact that occurs. And that's what the environmental process you know. There's turbidity levels that need to be met for.

MR. KORSNESS: And turbidity means the solids suspended in the water.

MS. MASON: You know, working with the -- doing biological assessment with NOAA, they have levels for noise and look at those. There's mitigation measures that have been put in place of how to lessen impacts. But it is not as though there are impacts. But it is figuring out what those impacts would be and then what kind of measure to take to lessen them and then the various agencies that have jurisdiction over that. They are working to work around archeological sites and impacts, you know, potential shipwrecks, things like that.

MR. KORSNESS: So most of the construction impacts in general could be characterized as temporary. And most of the operational impacts could probably be considered minor. But that's an

oversimplification. So I invite you to look at the document and determine for yourself.

MS. LAWSON: So there's going to be 550 megawatts. Is that -- it is more power?

MR. KORSNESS: It will have the capacity to transmit 550 megawatts.

MS. LAWSON: What does that do for our local environment? Anything? In what way? As far as field levels or heat or -- well, I guess I'm thinking about community health. People who live near the area. I know in Europe they have done a number of studies of showing increased cancer rates for people who live near substations. And somebody who's closely connected to the college, you know, that's going to impact that environment. Certainly there's an assisted living home right next to this site. Have those kinds of things been looked at? Or increasing that, you know, putting that much potential power generation in that little area right there?

MS. MASON: So the direct current line has different types of magnetic fields, magnetic fields tend to be ones we're most concerned about. Direct current has different types of not even impacts as alternating. Alternating current is the one who tends to create magnetic field that can be induced into

objects that a lot of the studies have been on. On direct current it doesn't induce current into people or objects.

DR. PELL: There's no power plant construction associated with the project, so there are no emissions of pollutants from generating power to supply the 550 megawatts. One of the prospects that there's a potential; the wind development on Vancouver Island and that wind energy would be used to be sent through the line to customers in the United States, that's just one possible use of the line. But the other thing to note to is that 550 megawatts is not a lot of power as power plants go, a small coal power plant is 650. When you normally think of 550 megawatts really is not a very high number. And also, you were told earlier this is a 150,000 volt line. As transmission lines go, that's considered quite small too because your long distance, long range high voltage transmission that go across the country go up to 750,000 volts. So a 150-volt line is not that high a voltage. It is not nearly as big as the numbers might sound as compared to other transmissions.

MR. KORSNESS: But the document does address specifically electromagnetic forces associated with the DC line associated with the short AC line and

even associated with the substation.

MS. MASON: The converter station and the substation.

MR. KORSNESS: So there's a point, and the documents describes this, where you're far enough away where all those levels drop off to background levels. So I won't try to characterize any more than that. The document gets specific about that.

MR. VOIGHT: I notice that line is pretty jagged. Couple questions. How deep will that cable be?

MR. WISE: About 3 feet. But it really depends. In some operations it may be deeper and other operations it may be shallower. But certainly the intent is to bury the cable the whole way.

MR. VOIGHT: And has there been a survey done of the bottom of the sound straight across there?

MR. WISE: Yes. That's correct.

MR. VOIGHT: Mostly just bare gravel and dirt throughout?

MR. WISE: It is in a very general sense mostly sand, some gravel. There are some short stretches of very hard bottom conditions, but most of it is predominantly sand.

MR. VOIGHT: How deep is the water most

of the way? I notice 27 feet is the depth of water where it would start.

MR. WISE: It would be 27-foot depth is roughly where the exit hole is.

MR. VOIGHT: Across the Strait what's the average depth?

MR. WISE: I don't know. The deepest depth is 180 meters, in feet that's 560 feet. Certainly they have installed in other parts of the world they have installed these cables in much deeper conditions over much longer ranges.

MR. VOIGHT: So most of the Strait the bottom is pretty bare, I mean, it is not like seaweed and whatever, mostly bare out there?

MR. WISE: Yes. That's what our studies have shown. That's correct.

MS. MASON: The vegetational road goes out to 100 feet deep but then it becomes too dark. So the assumption is that there is vegetation growing out to 100 feet and from there on there's none.

MR. KORSNESS: Good questions so far. Any other questions?

MS. LAWSON: Timing for this disruption in the neighborhood in terms of length of construction

MR. WISE: We looked at it pretty

closely for the EIS itself. I mean, essentially I think we're looking at about a week, something like that, about 150 feet a week or something like that.

MR. KORSNESS: That's for the trench?

MR. WISE: That's for the trenching land portion, the marine portion will actually go much quicker than that.

MS. MASON: Then the drilling at the ADD site 25 days.

MR. WISE: 25 days, that's -- there's a bit of a buffer there. But yeah, we expect to be around 25 days.

MS. MASON: The drill site for the horizontal directional drill that's -- that setup will be there for 25 days drilling.

MR. WISE: For that we have been in discussions with the city about a noise variance. And so there's -- and they had a lot of comments and a lot of requirements that they would like us to meet in terms of the noise. And again, I can talk with you about that later. So that was certainly a concern that we have heard early on in the project. And one that we very much want to mitigate.

MS. MASON: It is the one location and it will be 24 hours a day.

MS. LAWSON: It will be going on for 24 hours a day?

MR. WISE: Unfortunately, yes.

MS. LAWSON: For 25 days?

MR. WISE: Yes. Unfortunately we can't shut the drill down at night.

MS. MASON: For that one spot. The rest of the construction will be during regular daytime hours.

MR. VOIGHT: Will there be a big pit there for the big diesel boring machines down in the ground?

MR. WISE: You're thinking of a micro tunnel, which is a slightly different, actually, significantly different than what we're proposing. So what we're proposing is much -- it is much like a geotechnical drill. It is basically a drill that's turned on its side, so the drill actually enters the ground about 25 degrees off horizontal. So basically looks like -- looks kind of like a sled pushing the drill rod in. So yeah, there's no pit, per se. There's no big, deep pit like you would get in a micro tunnel scenario.

MR. VOIGHT: What's the diameter of the cutter head?

MR. WISE: There's two cutter heads. The first is the pilot hole and that would be about eight inches. And then after that there's a reaming bit that's put on to enlarge the hole and that might be 16 perhaps 20 inches. We're still -- again, this is what we need to do as part of detail designs to take a look to see how big that hole needs to be.

MR. WISE: It is a big pipe with a cutter head on the ground that's turning. They're able to direct that.

MR. VOIGHT: You probably mitigate noise, build a shed over a diesel engine.

MR. WISE: Yeah. Again, that's again one of the things that these contractors have done. They actually build up walls around the machinery. They use sound baffles to contain the noise. And yes, those are the types of things we'll be looking at in this project.

MS. LAWSON: What time of year do you anticipate doing this? We would prefer you do it in the winter when everybody's windows are closed.

MR. NIXON: I'd like to know how -- Mike Nixon, N-i-x-o-n. How is BPA benefitting money-wise? And how are you benefitting money-wise and how is the consumer, and I will be a consumer, the first question

is how will this affect power rates for the average consumer? I would like to know who's going to get the money. Where's it coming from?

MR. KORSNESS: Good question. BPA is neutral on this project. We don't care whether it gets built or not or whether they interconnect or not. We just need to determine whether to allow it or not. So BPA does not benefit financially from this project going forward or not. Not knowing everything that my colleagues do, I don't believe it will have any impact on rates for the consumer power rates.

MR. NIXON: Mike Nixon (phonetic). Will they go down?

MR. KORSNESS: Not up or down. It is just a pipe that goes through the neighborhood.

MR. NIXON: Why do they want to do it?

MR. WISE: Well, we see it as a commercial opportunity to reinforce the grid. I mean, currently in British Columbia there's a lot of generation of its hydro. But there's a lot of wind power that is up there. Of course, with all this generation the companies that are building this whether it is BC Hydro other entities want to be able to move this power to market and to do that really the existing transmission system doesn't work all that well for

doing that. And we think this would be an improvement in that respect. We think that improvement is a commercial opportunity.

MR. NIXON: Who do you perceive to be your market?

MR. WISE: Our market would be companies that are generating electricity in British Columbia. And it would be companies in the Pacific Northwest that would want access to that generation. MR. VOIGHT: Technically the more supply then actually the rates could possibly go down if the public utilities commission was on the ball. I mean, that's just the way -- that's the way the world does work. Supply and demand. And such, so technically with more supply you could actually benefit.

MR. KORSNESS: That's a good question. The supply and demand concept we all understand, but currently there are no users for this so we don't know where the power would come from that would be crossing the channel or where it would be going so we would not be able to answer your question because we don't know who the seller is and who the buyer is. I'm unable to answer your question.

MR. VOIGHT: With proper regulation. We don't have any regulation, in the future we might, and

it could be a benefit actually. Sounds like a fairly good idea to me, to be honest with you. And I don't like the private sector very much at all.

MR. BUTLER: I guess I was under the impression that the primary purpose of this cable was to get wind power off of the island, Sea Breeze's wind power.

MR. KORSNESS: Again, and correct me if I'm wrong, Mike, the cable is being proposed by a private company as a commercial opportunity to sell capacity across it. But there's no application for transmission at the moment. So currently there is.

MR. BUTLER: I understand that this is step one, if that's the case. But step two or some eventual step down the line I was under the impression that was going to be for wind power.

MR. KORSNESS: Well, it could be. I would -- I'm sure I'll get corrected if I'm wrong. I would characterize it as a bridge or a pipe that's being built and whoever wants to buy capacity across it and can negotiate that agreement would do so whether it be just whoever wants to. So I don't know if the pipe will be used or who will use it.

MR. BUTLER: Would the fact that it is -- all right. All we're really talking about is a new

transmission line with no use, no source and no load.

MR. KORSNESS: That's one way to put it.

MR. WISE: For the purposes of the EIS that is probably correct.

MR. KORSNESS: We're not looking at who's going to use it or where is it going to be because we don't know. We're just deciding whether to allow the interconnection or not and the impacts assuming a two-fold capacity use of that.

MS. MASON: Once there is a request for transmission so we know who's going to be generating and where it is going to go, that will need to be another process, like Jerry had mentioned, it will be another process for Bonneville to determine. It will kick in another environmental impact.

MR. BUTLER: Is that before or after it is already built?

MS. MASON: It is kind of an interesting -- it will be whoever ends up requesting to send power across it.

MR. KORSNESS: They could make that application while it is being built or they might make it after it's built. Mike?

MR. WISE: Perhaps I could add that we would not be given the financial means to build a

project until we have secured contracts for capacity on the line. And as with many projects, many transmission projects, they actually are planned in advance of generation. So sometimes on the electrical system there's a bit of a chicken and egg. Right now we know that there's a lot of generation that's under construction. And in BC, in fact, there's about probably over one billion dollars worth of generation projects that are under construction right now in British Columbia. So we know that there needs to be a new transmission built. And while we can't say this wind farm in this particular location would ship electricity across the Juan de Fuca project, we do know in a general sense that the project is needed. Obviously, we wouldn't be progressing to this point if we didn't feel it was needed. We also think that this project will provide incentive for more generation projects to be built in British Columbia. We have one of the best wind resources in the world on the coast. We have some of the best hydroelectric potential on the coast. And by hydroelectricity I mean small run-of-river or river-to-river projects. And, you know, having an additional pathway between Southern Vancouver Island and the Olympic Peninsula provides a very important link to the electrical grid in the

Pacific Northwest as a whole.

MR. BUTLER: Thanks for that clarification.

MR. VOIGHT: I was just going to say, it seems to me watching the Canadian TV that they are not moving forward with a bunch of coal fired and fossil fuel fired power plants. I think that would be a concern that would be up to the Canadian people and the Canadian government. But I would figure that the power that's generated from now on will be, you know, environmentally conscious. That's what it seems to me that you're more responsible than the American people generally. And I would, just like I said, I figure that it just sounds like a fairly good idea, actually, to me.

DR. PELL: Let me just add to that. As a general principle, the ability of the United States to import power from Canada is good. The more that we could bring into the country from other sources, the more power is available for the consumer. And to the extent that that power comes in at a price that's competitive with what it would cost to generate that power within the U.S., that has a positive effect -- that has a positive benefit long term, which is why there is a great deal of connection between the U.S.

and Canada in the Northern United States, and the U.S. and Mexico in the South. And a great deal of power is shipped across those borders. And to the extent that we can import power outside the countries, the areas that get the benefit of that power, it is all to their advantage.

For example, in the Northeast there's a great deal of power that's of hydro purely for the purpose to be sent to the American market. So those are considered positive market forces.

MS. LAWSON: I came in here thinking that this was about BPA selling energy to Canada. It's not. It is the opposite.

MR. KORSNESS: BPA has no plans to buy or sell power.

MS. LAWSON: But to hook into the grid for the power to go from here to there. But it is the power to go from there to here.

MR. WISE: Power could go both ways.

MS. LAWSON: But your main purpose for this is there to here.

MR. WISE: I would say as a general characterization, we have a lot of potential generation from British Columbia. And I think a lot of potential customers in the Pacific Northwest. So, again, in a

very general sense in going back to what Dr. Pell said, I think that really --

MS. LAWSON: It is really about generating -- that's the market that you want to develop or, I mean, let's talk about your marketing plan. So you have to get funding for all of this, yes? Once your permits are --

MR. WISE: We have to secure funding, yes.

MS. LAWSON: Once your permits are done you have to secure funding?

MR. WISE: This is the course with any project.

MS. LAWSON: But your primary focus there is on getting entities that are generating power on the island and having that come this direction through this cable?

MR. WISE: It could be on the island or it could be the mainland. It depends on the electrical system right through. There's a new transmission line that's under construction to link the mainland near Vancouver Island. So that would provide additional power for Vancouver Island.

MS. LAWSON: A similar type of --

MR. WISE: Technology. No. Actually,

they are using conventional AC technology. They went through a long hearing process and there was a lot of discussion about, you know, aerial transmission line and health effects and the like.

MR. BUTLER: Dr. Pell, could this line potentially help mitigate the Canadian entitlement?

DR. PELL: I wouldn't know about that. I'm not familiar with what you mean by the entitlement. Two things. I'm a Northeasterner. Second of all, I'm a meteorologist and my business is environmental science. So this is totally out of my area.

MR. KORSNESS: That's something that can be reviewed periodically. But it is my understanding that BPA does not consider this a benefit in that regard.

MR. GAWBER: Mark Gawber. Is it possible to make a market to interconnect directly or indirectly? Can it be sold to a company and basically be blocked for the interconnect by simply an acquisition by another corporation?

MR. KORSNESS: You lost me there.

MS. MASON: If we decide to go forward with this project could it then be -- could Sea Breeze then sell it.

MR. GAWBER: Yeah. In other words,

basically at this stage of the game what this is all about is granting or not granting permit to interconnect regardless of whether anybody really wants to use it. I'm wondering whether say, number one, Sea Breeze could sell the permit or whether the permit could be transferred to some other entity by way of Sea Breeze. For example, being acquired by another corporation or merged with another corporation.

MR. KORSNESS: Well, I can definitely state I don't know the answer to that. So we'll find out.

MR. WISE: I'll answer as an engineer, not a lawyer because I'm an engineer, not a lawyer. It would seem that a permit is very much like a patent, for instance. So the group of permits that make up this project could, in fact, be or the project could, in fact, be sold. If that does happen whoever buys the project has to follow permits. The permits are what the project is. And if an entity buys the project they would look at all of the permits and all of the conditions and all of the commitments that have been made with respect to the project. They would factor that into how much they are willing to pay for the project. Does that help?

MR. GAWBER: It makes sense.

MS. MASON: Our time for the hour hearing is at about 2 minutes.

MR. KORSNESS: You can also submit comments in writing to us before you leave today or via e-mail or BPA's web site and they will also be incorporated into the record and the EIS. So if you choose not to speak formally during this hearing then you can submit comments in other ways.

DR. PELL: It doesn't matter how you comment. Your comment will be given equal weight regardless if it is written or oral or e-mail. There's no bias in how you submit your comment. Any way you submit it will receive equal value.

MR. KORSNESS: We can go ahead and go past 6:30, so don't worry about that. Are there other comments, questions, things we need to consider in our EIS?

MS. LAWSON: Another question about decibel levels for the drilling site, what is your understanding of that?

MR. WISE: We're looking at and I know that we did some work on this for the EIS, about 100 decibels. It was 90 decibel. So it is without mitigation. So we're actually looking at -- Stacy's going to come up with the exact numbers. It is

important to present both scenarios, sort of how loud the machines would be without any noise abatement and then, you know, using noise abatement what levels could we realistically expect to achieve. So that's the information that's in the EIS.

MS. LAWSON: Is there vibration that's felt at the surface level?

MR. WISE: If you were standing about say 6 feet from the drill that's going in the ground you might feel some vibration. But that tapers off. That fades away dramatically as you move away from that location. So this is a technology that's used very commonly in cities to put in fiber optic lines, sewer lines, natural gas lines. It is something that is very common in the urban environment.

MS. LAWSON: There are many things that are common in the urban environment that are unpleasant.

MR. WISE: I think the point I wanted to make is we're not breaking new ground, so to speak. Really what we're doing here is using something that's been used before.

MS. MASON: It says 90 to 95 decibels unmitigated and slightly louder than typical construction noise levels.

DR. PELL: Let me just add for purposes of the record, I was commenting before about you're not having read the EIS. If you get the chance the summary is not very long. At least if you can turn the pages on the summary and get a feel for what's in the document I think you'll find it is worth your time.

MS. LAWSON: I will.

MR. KORSNESS: Other questions or comments?

MS. LAWSON: What time estimate do you have for building the converter station in terms of length of time?

MR. WISE: Duration of the construction?

MS. LAWSON: Yes.

MR. WISE: For that part of the project?

MS. LAWSON: Yeah.

MR. WISE: That's actually the most time-consuming part of the project. And I think it is about 10 months. Much of that time is taken up with transporting materials to the site, moving specific components of the place and testing them. The trenching itself will take considerably less time.

MS. MASON: There's a breakdown. There's a document, it has a breakdown of the different time frames for the different parts of the

construction. And some happens concurrently. So you can't add it all up. It says 10 months.

MR. WISE: And it is also important to note that a lot of that construction is within an enclosed building and the enclosed building around the converter station is designed to contain the noise of what goes on inside. So we wouldn't expect a lot of disturbance associated with that work.

MS. LAWSON: We have so much construction going on on campus right now I don't think it would be noticed. There's an increase.

MR. KORSNESS: Any last questions or comments?

MR. BUTLER: What's the difference between option A and option B up there on the south side of the existing --

MR. KORSNESS: I can explain that. We show here option A and option B is for the alternating current cable running from the DC converter station under the street up to the expanded BPA substation yard. And there's two routes we have looked at. One would be going up the street and going in perpendicular. One is starting from the corner of this part of the property and heading in a diagonal in the substation. And we haven't decided which -- BPA hasn't

decided which it will allow yet. Although currently preferred option is option A because it disturbs the least amount of BPA property and allows for expansion or other use of this area for storm water detention ponds or other things that we might need to put there.

MS. LAWSON: Will Sea Breeze foot the bill for that expansion as opposed to BPA?

MR. KORSNESS: I'm not sure we have made the determination on that.

MR. WISE: I think that's still in negotiations.

MR. KORSNESS: If we can assign it prior to accommodating the interconnection then Sea Breeze will pay for it. If it involves expansion of the network, BPA network to the benefit of the network specifically, then BPA will pay for that. So it will be part both ways.

MR. GAWBER: Again, what is the duration of the permission to interconnect? Are there any dates associated with it at all?

MR. KORSNESS: I'll be corrected if I'm wrong, I believe it would need -- would be good until enough time passes such that we feel we need to reconsider the environmental impacts or reliability impacts to the system.

DR. PELL: For the presidential permit it is once a presidential permit is issued it is good indefinitely until such time there's a change in operating conditions in which the applicant or whoever now owns the permit would have to come back as long as they don't change their operation.

MR. KORSNESS: As an example, if we gave the okay for the interconnection and nothing happened for 5 years and then 5 years from now they wanted to build, I would imagine that some portions of the EIS would need to be revisited such as plant and animal species and so on just to update it to the latest conditions and so on.

Any last questions or comments? Thank you very much for participating in the formal hearing process. We're still open for another hour. So if you have other question or would like to talk to us individually we're still here and available. So at this point I will go ahead and close the formal hearing and recording part of the process.

(Hearing concluded at 6:45 p.m.)

REPORTER'S CERTIFICATE

I, JORI L. MOORE, the undersigned Certified Court reporter and Notary Public, do hereby certify that the sworn testimony and/or proceeding transcript of which is attached, was given before me at the time and place stated therein; that any and/or all witness(es) were by me duly sworn to testify to the truth; that the sworn testimony and/or proceedings were by me stenographically recorded and transcribed under my supervision, to the best of my ability; that the foregoing transcript contains a full, true, and accurate record of all the sworn testimony and/or proceedings given and occuring at the time and place stated in the transcript; that I am in no way related to any party to the matter, nor to any counsel, nor do I have any financial interest in the event of the cause.

WITNESS MY HAND AND SEAL this 1st day of May, 2007

JORI L. MOORE
Certified Court Reporter
CCR No. 1993
Notary Public in and for the
State of Washington, residing in Yakima County
Commission expires 10/10/08

WASHINGTON STATE DEPARTMENT OF
Natural Resources

DOUG SUTHERLAND
Commissioner of Public Lands

July 5, 2007

Stacy Mason, Bonneville Power Administration
Environmental Project Lead
KEC-4, P.O. Box 3621
Portland, Oregon 97208-3621

SUBJECT: Juan de Fuca Cable Project

Dear Ms. Mason:

Even though the following comments are being provided after the close date for the most recent phase of environmental review, I hope you will incorporate them into current and future documentation and plans for this project. Thank you for providing the Washington State Department of Natural Resources (DNR) with the opportunity to comment on the draft Environmental Impact Statement (EIS) for the proposed Juan de Fuca Cable project. DNR is a participating agency in this project as the manager of state-owned aquatic lands located within and surrounding the proposed project area. DNR hopes that BPA and Sea Breeze Corporation consider this belated comment letter.

DNR manages over 2.4 million acres of state-owned aquatic lands and attached resources in Washington State. Resources located upon state-owned aquatic lands include submerged aquatic vegetation, benthic invertebrates, and valuable materials and minerals. As manager of state owned aquatic lands, DNR shall strive to provide a balance of public benefits for all citizens of the state. These public benefits are varied, and include:

OLYMPIC REGION ▮ 411 TILLICUM LN ▮ FORKS WA 98331-9271
FAX: (360) 374-5446 ▮ TTY: (360) 374-2819 ▮ TEL: (360) 374-6131
Equal Opportunity/Affirmative Action Employer

1. Encouraging direct public use and access;
2. Fostering water-dependent uses;
3. Ensuring environmental protection; and
4. Utilizing renewable resources (Revised Code of Washington [RCW] 79.105.030).

As the proposed project moves forward through the permitting process, Sea Breeze will need to continue to maintain coordination with DNR on the development of a use authorization for any state-owned aquatic lands the cable will encumber. A successful meeting on this subject occurred on April 10, 2007, between Sea Breeze Corporation and the DNR in Port Angeles.

DNR staff will follow up with Sea Breeze as this project moves forward. At this time, DNR has the following comments on the project:

Application to Use State Owned Aquatic Lands

A complete application to use state owned aquatic lands will be required prior to any pre-construction or construction work in the right-of-way on state owned aquatic lands. Please contact the District Office to obtain this application, or download the document from the DNR website (www.dnr.gov).

DNR Survey

An aquatic lands survey defining the boundaries of the state-owned aquatic lands to be leased is required prior to issuing a use authorization. If Sea Breeze Corporation is developing an "as-built" survey, please work with DNR to ensure that the details meet DNR Survey Guidance for state-owned aquatic lands.

Preference Rights

As discussed on April 10, 2007, the upland owner has preference rights to certain areas of state-owned aquatic lands, specifically 1st class tidelands in harbor areas.

In this situation, it appears Sea Breeze will be exiting in a harbor area. The upland owner will need to be included in discussions about using this location. Please ensure Sea Breeze is working with DNR on this issue.

Method of Submarine Cable Installation

In the nearshore environment, horizontal directional drilling (HDD) is the preferred method of submarine cable installation in order to minimize impacts. The installation of submarine cables in locations where other utilities are also located is also preferred. Shoreline contours should be returned to as near pre-construction condition as possible.

Cable Exposure

The method of installation in the marine environment has not been determined. The cable may be trenched, or Sea Breeze might rest the cable on top of aquatic lands. These details will be required before DNR can issue a use authorization.

Natural Resources Damages

If damages to natural resources on state-owned aquatic land are unavoidable, DNR would request monetary compensation for said resources, based upon fair market value.

In areas where commercial or recreational shellfish beds could be located, populations surveys will need to be conducted. Assessments for disturbed or damaged shellfish and geoduck may be added to the value established to procure the cable easement. Geoduck beds have been identified in the pathway of the cable installation and harvesting could occur in the future. DNR will request that the Juan de Fuca cable is buried four feet below the subtidal geoduck beds in order to avoid any future interference with commercial geoduck harvesting.

Thank you, again, for the opportunity to comment. Please include me in future opportunities to comment on projects potentially impacting state land. If you have any questions, feel free to contact me at (360) 457-2570 ext 221

Sincerely,

Martha Hurd

Martha Hurd
Straits District Manager, Orca Straits District
Aquatics Program, Washington Department of Natural Resources
919 N Township St
Sedro Woolley, WA 98282

c: Region File, Washington Department of Natural Resources, Orca Straits District
ERC File, Washington Department of Natural Resources, Division; Attn: Elizabeth Ellis, Planner
Sea Breeze Corporation, Attn: Jason Day-Environmental Planner

lm/

U.S. DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION

CONVERSATION RECORD

TIME	DATE *(MM/DD/YYYY)*
	5/23/07

LOCATION OF VISIT/CONFERENCE
BPA offices

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU
Brian Pettyjohn

ORGANIZATION/OFFICE | TELEPHONE NUMBER

TYPE
- ☐ Visit
- ☐ Conference
- ☒ Telephone
  - ☒ Incoming
  - ☐ Outgoing
- ☐ Other *(Specify)*

ROUTING		
NAME	ORG. CODE	INITIALS
Korsness, Mark	**TEP**	
Asgharian, Maryam	**DKC**	

SUBJECT
Port Angeles-Juan de Fuca transmission project

SUMMARY

Mark Korsness spoke to Brian Pettyjon and he made the following statements: He is a home owner on Liberty Street in Port Angeles. He states that he is not very happy with how Sea Breeze brushed off his concerns at the meeting at the College, and is not very happy with how a representative from Sea Breeze (a young man with a wide open collar) treated him at his front door. He has three project comments. 1. He wants the cable to go on a different street. 2. He wants the construction impacts to be minimized. 3. He and his neighbors are willing to spend lots of money to stop or change the project.

Maryam Asgharian also spoke to Brian and he made the following statements: Sea Breeze approached our neighborhood in the wrong way with an attitude, telling us that this project would be built and we had limited time to react.
I am now concerned about impacts and my neighbors and I are prepared to take action to delay or stop the project from coming up our street. We are opposed to blasting taking place near our homes on our street.

BONNEVILLE POWER ADMINISTRATION
PO BOX 3621 PORTLAND, OREGON 97208-3621

DOE/BP-3825 October 2007