

PART 2
Additional and Revised Tables

Part 2 Additional and Revised Tables

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TABLE 2-1

Summary of Affected Environment, and Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
<p>Chapter 3.2 Geology, Soil, and Seismicity</p>	<p>The Energy Facility site is located in a subbasin of the larger Klamath Basin in south-central Oregon. The Klamath Basin is a composite graben that forms the westernmost structural trough of the Basin and Range physiographic province. The Klamath graben is bounded by predominantly north- to northwest-striking normal faults.</p>	<p>3.2.1 Landslides present a low risk to the proposed Energy Facility.</p> <p><u>Mitigation</u></p> <p>If, upon further evaluation, the risk of landslide increases, additional mitigation measures would be implemented, including further adjustment of the transmission tower locations and installation of instrumentation on the towers to monitor for movement.</p> <p>3.2.2 The Energy Facility would have a moderate impact on land identified as high-value soil in Klamath County.</p> <p><u>Mitigation</u></p> <p>The proposed project would restore 91 acres of fallow land to high-quality deer habitat. Another 145 acres of habitat would be improved in the wildlife mitigation area. In addition, a facility retirement and site restoration approach would support restoration of the Energy Facility site to its current agricultural use. The approach uses topsoil salvaging and replacement, and standard farming practices.</p> <p>3.2.3 Limited erosion would occur during construction with the implementation of best management practices (BMPs).</p> <p>3.2.4 Soil erosion during operation of the Facility would be limited by stormwater control features and implementation of BMPs from a National Pollutant Discharge Elimination System (NPDES) permit and an erosion and sediment control plan.</p> <p>3.2.5 The risk to human safety and harm to physical property as a result of seismic hazard would be minimal at the Energy Facility.</p> <p><u>Mitigation</u></p> <p>Facilities would be constructed to Uniform Building Code standards for seismic design.</p>	<p>No changes to existing conditions would occur.</p>

¹ Includes a summary of mitigation measures required by the Oregon Energy Facility Siting Council (EFSC)

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		<p>3.2.6 For the process wastewater management alternative involving beneficial use of the water for irrigated pasture, projected loading rates of total dissolved solids (TDS) would be limited to prevent buildup of salts in soil. The projected loading rates of the individual constituents of the process water do not indicate any other significant soil or crop hazard resulting from irrigation by process wastewater or salt-tolerant species.</p> <p><u>Mitigation</u></p> <p>Agricultural soil would not be adversely impacted by the land application of process wastewater. The process wastewater would be applied to the pasture at agronomic rates during the irrigation season and at an instantaneous application rate less than the infiltration rate of the soil. Irrigation would not be conducted during periods of frozen or saturated soil to prevent erosion and generation of surface runoff. The process wastewater quality would generally be of equal or better quality than the shallow groundwater and Lost River water used for irrigation to lands around the beneficial use area.</p>	
		<p><u>EFSC Mitigation Requirements</u></p> <p><u>D.4(1) The certificate holder shall implement the Agricultural and Forestry Practices Impact Mitigation Plan included as Attachment K-5 to the Application for Site Certification (ASC).</u></p> <p><u>D.4(5) The certificate holder shall rehabilitate all construction areas not occupied by the facility or used for mitigation of Facility-related impacts in accordance with the Agricultural and Forestry Practices Impact Mitigation Plan (ASC, Exhibit K, Attachment K-5) and the Revegetation Plan (ASC, Exhibit P, Attachment P-1). The certificate holder shall make these rehabilitated areas and other lands owned or controlled by the certificate holder available for ongoing agricultural and wildlife uses.</u></p> <p><u>D.5(1) If the certificate holder does not have subsurface information for design of the transmission lines that is acceptable to the Department D and the Oregon Department of Geology and Mineral Industries ("DOGAMI"), then the certificate holder shall drill exploratory borings at critical locations during final design of the proposed transmission lines.</u></p>	

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		<p><u>D.5 (2) Before beginning construction of the Facility, the certificate holder shall provide the Department and DOGAMI with a geotechnical report containing results of geotechnical analyses and recommendations for the design of the Energy Facility, transmission lines and other related or supporting facilities</u></p> <p><u>D.5(8) The certificate holder shall recalculate the maximum expected ground motion based on the results of post-certification field work using at least three attenuation relationships that are appropriate for the local geology and provide a recommended mean PGA and a range of ground motions, and shall provide the engineering analyses, support data and calculations to the Department and DOGAMI at least 30 days prior to finalizing site design.</u></p> <p><u>D.5 (9) The certificate holder shall design, engineer and construct the Facility to avoid dangers to human safety presented by non-seismic or aseismic hazards affecting the site. As used in this condition, “non-seismic or aseismic hazards” includes settlement, landslides, groundwater, flooding, and erosion.</u></p> <p><u>D.6(3) Throughout construction of the Facility and post-construction restoration, the certificate holder shall use temporary erosion and sediment control measures, such as silt fences, straw bales, mulch, and slope breakers.</u></p> <p><u>D.6(4) During construction of the Facility, the certificate holder shall water or cover exposed soil and stockpiles.</u></p> <p><u>D.6(5) Throughout construction of the Facility and post-construction restoration, the certificate holder shall install permanent erosion control measures, as necessary.</u></p> <p><u>D.6(6) During construction of the Facility, the certificate holder shall strip and separately store topsoil for replacement and replanting after installation of pipelines not buried in roads.</u></p> <p><u>D.8(6) The certificate holder shall use best management practices (BMPs) for topsoil protection, erosion and sediment control at the Energy Facility site and along the transmission line easement to avoid or minimize impacts to water quality, wetlands, and riparian areas.</u></p>	

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		<p>D.8(29) Where feasible, the certificate holder shall leave slash piles along the transmission line right of way as habitat for reptiles, small mammals and birds.</p> <p>D.8(15) The certificate holder shall establish the topographic position of the energy facility to minimize indirect effects of noise and ambient light on adjacent habitats.</p> <p>D.10(1) During construction of the facility, the Certificate Holder shall control dust through the application of water or by other equally effective method.</p> <p>E.1.e(3) The certificate holder should retain the services of a registered professional geologist licensed by the State of Oregon to be onsite during the drilling of any new observation or supply wells.</p> <p><u>E.1.b(5) During construction of the Facility, the certificate holder shall dispose of all excess soils and materials in a upland locations.</u></p> <p>E.1.d(7)The certificate holder shall designate an appropriately trained supervisor to coordinate and carry out all necessary functions related to maintenance and cooperation of waste collection, treatment, and disposal facilities.</p> <p>E.1.d(8) Unless otherwise permitted by the DEQ, the certificate holder shall not dispose of solid wastes, brines, construction wastes or other wastes at the energy facility site.</p> <p><u>E.1.d(33) Unless approved otherwise in writing by the DEQ, the certificate holder shall maintain a deep-rooted permanent grass cover on the drainfields and shall periodically cut the grass cover to maintain it in the growth cycle to ensure maximum evapotranspiration. No Activities that may adversely affect the soil or the functioning of the system are in these areas should be avoided. Such activities would include, but not be limited to, vehicular traffic, covering the area with asphalt or concrete, filling, cutting, or other</u></p> <p><u>F.2(10) The certificate holder shall notify the Department within 72 hours of any occurrence involving the Facility if: (a) There is an attempt</u></p>	

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		<p>by anyone to interfere with its safe operation; (b) A natural event such as an earthquake, flood, tsunami or tornado, or a human-caused event such as a fire or explosion, affects or threatens to affect the public health and safety or the environment; or, (c) There is any fatal injury at the Facility.</p>	
<p>Chapter 3.3 Hydrology and Water Quality</p>	<p>The only perennial surface water body in the Facility vicinity is the Lost River. Intermittent seasonal drainages also exist within the area. In addition, shallow and deep aquifers underlie the area.</p>	<p>3.3.1 Water for the Energy Facility would be diverted from a deep system aquifer, which does not appear to be hydraulically connected to surface water bodies.</p> <p><u>Mitigation</u></p> <p>No mitigation is proposed for the water withdrawal from the deep zone aquifer, but as an additional layer of protection, the water right would require operational monitoring and appropriate mitigation if any impacts are discovered to the shallow zone aquifer or surface water.</p> <p>The existing and two new water supply wells would be cased and sealed through the shallow zone aquifer and 1,100 feet of non-water bearing volcanic rock to a depth of approximately 1,500 feet below the ground surface (bgs)</p> <p>No water would be diverted from the Lost River.</p> <p><u>Mitigation</u></p> <p>To reduce water requirements the Energy Facility would be designed to be air cooled. To further reduce water requirements, water would be recycled and reused from the plant drains, evaporative cooler blowdown, and heat recovery steam generator (HRSG) blowdown.</p> <p>3.3.2 Wastewater and stormwater discharge during Facility construction and operation could affect surface and groundwater quality.</p> <p><u>Mitigation</u></p> <p>BMPs for management of stormwater would be used to safeguard water quality during construction and operation. Onsite stormwater would be recycled (plant drains system) or discharged to an infiltration basin (storm sewer system). Wastewater management would be by one of three <u>two</u> options: beneficial use of the water for irrigated pasture or an evaporation pond, or storage and hauling to an offsite wastewater treatment plant</p>	<p>No changes to existing conditions would occur.</p>

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		<p>(WWTP).</p> <p>3.3.3 Chemical spills at the proposed Energy Facility could affect surface and groundwater quality.</p> <p><i>Mitigation</i></p> <p>BMPs and compliance with applicable regulations would avoid or minimize such impacts.</p> <p>EFSC Mitigation Requirements</p> <p><u>D.4 (11) The certificate holder shall submit a final drainage plan to Klamath County' Director of Public Works. The plan will meet all applicable requirements of Klamath County LDC Article 73, and the Energy Facility will be operated so that there is no adverse runoff from the Energy Facility site.</u></p> <p><u>D.8(18) During construction of the related or supporting natural gas and water pipelines, the certificate holder shall ensure that side cast material remains within the construction corridors.</u></p> <p><u>D.8(19) During construction of the related or supporting natural gas and water pipelines, the certificate holder shall use silt fencing and other barriers to limit lateral spread of soil when material must be side cast in habitat areas within the construction corridor.</u></p> <p><u>D.6(1) The certificate holder shall design, engineer and construct the Facility to avoid dangers to human safety presented by nonseismic or a seismic hazards affecting the site. As used in this condition, "non-seismic or a seismic hazards" includes settlement, landslides, groundwater, flooding, and erosion.</u></p> <p>D.6(8) Before beginning operation of the facility, the certificate holder shall obtain a NPDES Storm Water Discharge General Permit #1200-Z (for industrial activities) from the Oregon Department of Environmental Quality.</p> <p>D.8(6) The certificate holder shall use best management practices (BMPs) for topsoil protection, erosion and sediment control at the energy facility site and along the transmission line ROW to avoid and/or minimize impacts to water quality, wetlands, and riparian areas.</p>	

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		<p>D.8(30) The certificate holder shall consult with the Department of Fish and Wildlife to determine appropriate design and placement of several water collection devices (guzzlers) along the transmission line right of way.</p> <p><u>E.1.b(3) During construction of the Facility, the certificate holder shall coordinate with DSL, the Corps of Engineers, ODFW, and the Department for any proposed impacts to waters of the state.</u></p> <p><u>E.1.b(4) During construction of the Facility, the certificate holder shall minimize construction impacts to wetlands and jurisdictional waters by using the narrowest possible construction corridors.</u></p> <p><u>E.1.d(9) If the certificate holder constructs and operates only one 580-MW power block, the total amount of process water generated by the certificate holder shall not exceed 12.2 million gallons per calendar year.</u></p> <p><u>E.1.d(10) When and if the certificate holder constructs two 580-MW power blocks, the total amount of process water generated by the certificate holder shall not exceed 24.3 million gallons per calendar year.</u></p> <p><u>E.1.d(11) The certificate holder shall ensure that no process wastewater is discharged to surface waters of the State of Oregon.</u></p> <p><u>E.1.d(12) During operation of the process wastewater irrigation system, the certificate holder shall ensure that all process wastewater is irrigated on the designated irrigation site at agronomic rates specified in the irrigation plan required by Condition 1, Schedule C, of the draft WPCF Permit (Attachment C to this Order). The certificate holder shall ensure that all process wastewater is contained on the irrigation site with no runoff from the approved, designated irrigation site.</u></p> <p><u>E.1.d(13) During operation of the process wastewater irrigation system, the certificate holder shall ensure that irrigation occurs only during the months of April through September.</u></p> <p><u>E.1.d(14) The certificate holder shall ensure that no irrigation of process wastewater occurs until DEQ approves an irrigation management plan required by condition 1, 2 Schedule C, of the draft WPCF Permit</u></p>	

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		<p><u>(Attachment C to this Order).</u></p> <p><u>E.1.d(15) During operation of the process wastewater irrigation system, the certificate holder shall ensure that the monthly average total dissolved solids in the irrigated process wastewater do not exceed 210 mg/l. 78</u></p> <p><u>E.1.d(16) During operation of the process wastewater irrigation system, the certificate holder shall ensure that all process wastewater is distributed on land for dissipation by evapotranspiration and controlled seepage by following sound irrigation practices so as to prevent impairment of existing or potential beneficial uses of groundwater.</u></p> <p><u>E.1.d(17) During operation of the process wastewater irrigation system, unless otherwise approved as a component of the irrigation management plan required by Condition 1, Schedule C of the draft WPCF Permit (Attachment C to this Order), the certificate holder shall not apply fertilizer to the irrigation site or allow forage animals to graze on it.</u></p> <p><u>E.1.d(18) During operation of the process wastewater irrigation system, irrigation of effluent shall be considered failing under the following conditions: (a) Crop growth is stunted due to excessive salt build-up within the soil profile; or(b) Run-off from or excessive ponding routinely occurs on the irrigation site as a result of process wastewater irrigation; or(c) Groundwater monitoring conducted in accordance with the groundwater and soil-monitoring plan indicates that irrigation of process wastewater is causing an increase in total dissolved solids or other contaminants that could impair existing or potential beneficial uses of groundwater.</u></p> <p><u>E.1.d(19) During operation of the process wastewater irrigation system, the certificate holder shall ensure that no brines or waste solids from any ion exchange unit or other supply water treatment system is discharged into the process wastewater to be irrigated. All brines or other concentrated wastewater and solids shall be disposed in a manner approved in writing by the DEQ.</u></p> <p><u>E.1.d(20) During operation of the process wastewater irrigation system, within days of written notification by the DEQ that the effluent irrigation system is failing and that the failure cannot be corrected by</u></p>	

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		<p><u>modifications to the system, the certificate holder shall construct and begin operating an evaporation pond for the disposal of process wastewater, in accordance with Condition 2, Schedule C, of the draft WPCF Permit (Attachment C to this Order).</u></p> <p><u>E.1.d(21) During operation of the process wastewater evaporation ponds, the certificate holder shall ensure that all process wastewater is disposed of in one or more sealed, non-overflow evaporation ponds.</u></p> <p><u>E.1.d(22) The certificate holder shall ensure that no storm water from plant drains and processing areas (including transformer and switch yards) or from fuel or material storage is discharged to the seepage disposal system. Storm water meeting these conditions shall be contained, treated and reused as process water. All other storm water such as parking lot and roof drain runoff and runoff from graveled or vegetated surfaces shall be collected in a 2.3 acre-foot storm water pond and then discharged to a 4.7-acre infiltration basin for disposal.</u></p> <p><u>E.1.d(25) Before beginning construction of the Energy Facility, the certificate holder shall mark and fence off the area designated for the septic system and its repair area to ensure that it is not disturbed by construction activities not associated with the construction of the septic system.</u></p> <p><u>E.1.d(26) The certificate holder shall ensure that the septic tank and drainfield system are installed by a DEQ-licensed sewage disposal service.</u></p> <p><u>E.1.d(27) Before beginning construction of the septic tank and drainfield, the certificate holder shall submit detailed construction plans to the DEQ for written approval. No construction shall begin until the plans have been approved in writing. Prior to covering the septic system, the DEQ shall be notified so that the system may be inspected and approved. The certificate holder shall provide the DEQ with as-built plans of the system following completion of the system. No domestic plumbing in any structure shall be used until the septic system installation has been approved by the DEQ and the system has been adequately covered.</u></p> <p><u>E.1.d(28) The certificate holder shall ensure that only sources of domestic waste (sewage) are connected to the septic tank and</u></p>	

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		<p><u>drainfield.</u></p> <p><u>E.1.d(29) Before beginning operation of the Energy Facility, the certificate holder shall dye test all drains to ensure that industrial wastewater and sewage plumbing are not interconnected. The certificate holder shall provide to DEQ a written certification that the dye test has been conducted and no interconnections exist.</u></p> <p><u>E.1.d(30) The certificate holder shall ensure that the septic tank and drainfield system are designed and constructed in accordance with the requirements of OAR Chapter 340, Division 71, and, unless otherwise approved in writing by the DEQ, sized to accommodate a monthly average daily flow of 700 gallons per day (gpd).</u></p> <p><u>E.1.d(31) The certificate holder shall inspect the drainfield monthly to ensure that there is no surfacing sewage. If surfacing sewage is discovered, the certificate holder shall notify the DEQ within 24 hours during the work week.</u></p> <p><u>E.1.d(32) The certificate holder shall inspect the septic tank annually to determine the accumulation of solids and shall pump the septic tank as necessary to remove solids. Septic tanks shall be pumped either when sludge and scum volume exceeds 35 percent of the liquid capacity of the tanks or every 5 years, whichever occurs first. Septic tanks shall only be pumped by a DEQ licensed sewage disposal service with an approved septage management plan. Septic tank effluent screens are to be cleaned when 25 percent of the screen surface becomes clogged or annually, whichever is less. All septage/sludge (biosolids) shall be managed by a sewage disposal service which is licensed in accordance with OAR 340-71-600. 6</u></p> <p><u>E.1.d(34) Upon retirement of the Facility, the certificate holder shall decommission the septic tank according to requirements of OAR Chapter 340, Division 71.</u></p> <p><u>E.1.e(2) Prior to any groundwater use, well KLAM 51920 (Babson well) shall be reconstructed by the certificate holder to ensure that well construction allows no commingling of groundwater between the shallow water bearing zones and the deep water bearing zones. The final casing depth and cement seal depth should extend to a minimum of 750 feet below ground surface (bgs) to take advantage of the</u></p>	

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		<p><u>relatively straight portion of the borehole, and seal installation shall maximize entering of the casing within the borehole. If well KLAM 51920 will not be used by the certificate holder, then KLAM 51920 should be properly reconstructed to seal off either the shallow or deep water bearing zones, or the well should be permanently abandoned. All new supply wells shall only produce groundwater from the deep basalt water bearing zones. Continuous, non-perforated casing and continuous cement seal from land surface to the final casing depth should be required for all new supply wells. The final casing and cement seal depth of all new supply wells should extend to the top of the deep water bearing zones, which in KLAM 51920 is at a depth 1,580 feet bgs, unless an alternative well casing and cement seal design is approved by the [Water Resources] Department.</u></p> <p><u>E.1.e(3) The certificate holder should retain the services of a registered professional geologist licensed by the State of Oregon to be onsite during the drilling of any new observation or supply wells.</u></p> <p><u>E.1.e(4) The certificate holder should construct two onsite observation wells between the supply wells and existing onsite well KLAM 10814 (MW1). No observation well should be located within 100 feet of any groundwater supply well. One observation well should be constructed in order to monitor water levels within the shallow basalt water-bearing zones below the sediments. One observation well should be constructed in order to monitor water levels within the deep basalt water-bearing zones, which in KLAM 51920 is at a depth 1,580 feet bgs. [Water Resources] Department groundwater staff should approve the design of each observation well. The preferred casing diameter for each observation well is 6 inches. The observation wells should be completed prior to any onsite groundwater use. (a) To monitor the effect of water use, the certificate holder shall make and report water level measurements for the following four wells: (i) To monitor the effect of water use, the certificate holder shall make and report water level measurements for the following four wells: (ii)The new onsite observation well completed in the deep basalt water-bearing zones. (iii) The existing onsite well KLAM 10814 (MW1). The existing offsite well KLAM 50318 (Bonanza Big Springs well), or an approved alternate well if access to KLAM 50318 is denied. (b) Water levels should be measured at all four wells by use of a continuous electronic recorder. The frequency of water level data recording shall be at intervals no less</u></p>	

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		<p><u>frequent than every two hours. The water level in each of the four wells should also be measured once each month by hand to ensure accuracy of water level recorder equipment. (c) The certificate holder should make and report annual static water level measurements on each supply well and the four observation wells. Static water level measurements are those made at the end of a 5-day long no-pumping period occurring in the first two weeks of March of each year, or other period as approved by the [Water Resources] Department. (d) The certificate holder should install and maintain a barometric pressure transducer of sufficient resolution to allow correction of water level data for barometric responses. Barometric pressure should be measured and recorded at the same frequency as the water level data recording. (e) A registered professional geologist licensed by the State of Oregon should make all hand measurements, and maintain continuous water level recording instruments, at each well. Reports for all water level measurements should be submitted to the [Water Resources] Department by April 15 of each year. The recorder data should be submitted in both graphical and electronic formats acceptable to the [Water Resources] Department. Hand measurements should be submitted on [Water Resources] Department approved forms. The certificate holder should make available all water level data as requested by [Water Resources] Department staff. (f) If the submitted water level data are deemed by [Water Resources] Department groundwater staff to be inconsistent, missing, or in error, the [Water Resources] Department may choose to collect additional water level data from the four observation and three supply wells. If it is necessary for [Water Resources] Department groundwater staff to intervene in the monitoring program to collect additional water level data, the [Water Resources] Department would do so at the certificate holder's expense. The [Water Resources] Department would assess the certificate holder the actual and reasonable costs including labor, water level monitoring equipment, travel, lodging, and per diem related to the intervention. The certificate holder should be required to allow [Water Resources] Department staff to access all wells for the purposes of water level data collection.</u></p> <p><u>E.1.e(5) Measurements must be made according to the schedule and standards below. (a) Before Groundwater Use Takes Place: (i) Prior to any onsite groundwater use, for each of the four observation wells (KLAM 10814, KLAM 50318, the new shallow and deep basalt water-</u></p>	

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		<p>bearing zones observation wells), the certificate holder shall make and report water level measurements for at least 14 days before any use begins, unless otherwise approved by the [Water Resources] Department. (b) After Use of Water has Begun: (i) For each of the four observation wells (KLAM 10814, KLAM 50318, the new shallow and deep basalt water-bearing zones observation wells), the certificate holder shall be required to collect continuous water level data at time intervals no less frequent than every two hours (water level recorder readings), and make monthly hand measurements. The certificate holder shall also measure annual static water levels from each of the supply wells and the four observation wells. Static water level measurements are those made at the end of a 5-day long no-pumping period occurring in the first two weeks of March of each year, or other period as approved by the [Water Resources] Department. The first annual static water level measurement from the observation well completed in the deep basalt water-bearing zones after any groundwater use has begun under this permit should establish the reference level. The reference level will be used to compare future annual static water level measurements. These data should be reported to (c) Measurement Standards: (i) A registered professional geologist licensed by the State of Oregon shall make all hand measurements, and maintain continuous electronic water level recording instruments, at each well. The individual performing the measurements should be required to: (a) Identify each well with its associated measurement; and (b) Measure and report manual water levels, to the nearest hundredth of a foot, as depth to water below ground surface; and (c) Measure and report electronic water levels, to the nearest five hundredths of a foot (0.05 foot), as depth to water below ground surface; and (d) Specify the method used to obtain each measurement; and (e) Certify the accuracy of all measurements and calculations submitted to the [Water Resources] Department; and (f) Provide the land surface elevation at each wellhead to the nearest hundredth of a foot. The certificate holder user shall discontinue use of, or reduce the rate or volume of withdrawal from, the supply wells, as directed by the [Water Resources] Department if static water level measurements in the deep water bearing zones observation well reveals a water level decline of 25 or 20 more feet below the reference level as measured in the deep basalt water bearing zones, attributable to the certificate holder's use, unless the [Water 22 Resources] Department determines the resource can</p>	

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		<p><u>withstand those production rates and water level declines.</u></p> <p><u>E.1.e(6) Prior to any groundwater use from the reconstructed KLAM 51920 (Babson well), groundwater permit G12451, in the name of Denis G. and Rose M. Babson, Trustees for the Babson Family Trust, shall be voluntarily canceled.</u></p> <p><u>E.1.e(7) f substantial interference with a senior water right occurs due to withdrawal of water from any well being used by the certificate holder, then use of water from the well(s) shall be discontinued or reduced and/or the schedule of withdrawal should be regulated until or unless the [Water Resources] Department approves or implements alternative administrative action to mitigate the interference.</u></p> <p><u>E.1.e(8) If monitoring indicates appropriations under this right interfere with shallow basalt groundwater wells, and/or affect Bonanza Springs, then use of water from the well(s) under this right shall be discontinued or reduced and/or the schedule of withdrawals shall be regulated until or unless the [Water Resources] Department approves or implements alternative administrative action to mitigate the interference. Mitigation should include, but not be limited to: <input type="checkbox"/>The development of water from a different source not connected to Bonanza Springs or the senior right, <input type="checkbox"/>Development of a replacement source for, and acceptable to, the injured right, 2 <input type="checkbox"/>Acquisition and subsequent cancellation of a sufficient portion of a pre-1990 groundwater right, the exercise of which interferes with Bonanza Springs, <input type="checkbox"/>Transfer of a sufficient portion of a pre-1990 groundwater right, the exercise of which interferes with Bonanza Springs, to the POA's of this 7 right to replace an equivalent reduction in pumping under this right, 8 <input type="checkbox"/>Transfer of a pre-1990 groundwater right to the POA's of this right to completely replace appropriations authorized hereunder, <input type="checkbox"/>Acquisition of a pre-1990 groundwater right and the conveyance of water from its POA to the place of use identified in this right, <input type="checkbox"/>Artificially recharge enough water to eliminate the injury or the impact to Bonanza Springs.</u></p>	
Vegetation and Wildlife	The project area is located within the Klamath Ecological Province (East Cascades Ecoregion), on the eastern side of the Cascade Mountains. This region is characterized by large basins surrounded by ancient lake terraces and basaltic	<p>3.4.1 Construction and operation of the proposed Energy Facility could cause a temporary or permanent loss of vegetation and wildlife habitat.</p> <p>The proposed project would restore 91 acres of fallow land to high-quality deer habitat and another 145 acres of habitat would be improved in the wildlife mitigation area. Mitigation measures would be implemented during</p>	No changes to existing conditions would occur.

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Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
	<p>fault block mountains. Elevations range from around 4,000 to 8,400 feet. The soil in the area is derived from basaltic parent material and generally have loamy surface horizons overlaying loamy to clayey subsurface horizons. The climate is characterized by warm, dry summers and cool, moist winters. The average annual precipitation in Klamath County is 14 inches, of which only 27 percent occurs during the growing season.</p>	<p>construction to limit disturbed areas to those needed to ensure practical and safe working conditions, to identify off-limits area, and to revegetate disturbed areas.</p> <p>3.4.2 Construction and operation of the proposed Energy Facility would create noise and lighting that could disturb wildlife.</p> <p>BMPs would be implemented to reduce disturbances. Workers would receive training regarding wildlife and habitat and safe vehicle speeds.</p> <p>3.4.3 Bald eagles and other birds could be injured or killed by collisions with power lines.</p> <p>Bird flight diverters would be installed.</p> <p>3.4.4 Construction and operation of the proposed Energy Facility would disturb less than 0.5 acre of wetlands.</p> <p>Directional boring techniques and a minimum amount of fill would be used to avoid impacts to wetlands.</p> <p>3.4.5 For the process wastewater management alternative involving beneficial use of the water for irrigated pasture, constituents in the process wastewater would not be expected to be toxic to wildlife.</p> <p>A Screening-Level Ecological Risk Assessment (ERA) following U.S. Environmental Protection Agency (EPA) and Oregon Department of Environmental Quality (ODEQ) guidance was conducted. The results of the ERA indicate that none of the constituents evaluated would be considered to present significant risk to ecological receptors.</p> <p>EFSC Mitigation Requirements</p> <p>D.4(3) The certificate holder shall construct temporary fencing and gates around construction areas to avoid conflicts with livestock.</p> <p>D.4(29) The certificate holder shall coordinate construction and operation of the pipeline to address access, revegetation, and timing issues with the dairy. In addition, the certificate holder shall not use herbicides during construction or operation of the Facility along the portion of the pipeline route near the dairy. During construction of the</p>	

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Summary of Affected Environment, and Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p><u>pipeline, the certificate holder shall maintain reasonable access for farm operations across the pipeline corridor.</u></p> <p><u>D.6(7) Upon completion of construction of in an area, the certificate holder shall restore vegetation in accordance with the Habitat Mitigation and Natural Area Revegetation Plan outlined in the ASC, Exhibit P, Attachment P-1, and the PROPOSED ORDER, COB ENERGY FACILITY MARCH 16, 2004 PAGE 188 Agricultural and Forestry Practices Impact Mitigation Plan outlined in the ASC, Exhibit K, Attachment K-5.</u></p> <p><u>D.6(9) Upon completion of retirement of the Facility, the certificate holder shall restore vegetation in accordance with the Habitat Mitigation and Natural Area Revegetation Plan outlined in the ASC, Exhibit P, Attachment P-1, and the Agricultural and Forestry Practices Impact Mitigation Plan outlined in the ASC, Exhibit K, Attachment K-5.</u></p> <p><u>D.8(1) The certificate holder shall, to the extent practicable, avoid and, where avoidance is not possible, minimize construction and operation disturbance to areas of native vegetation and areas that provide important wildlife habitat. With respect to construction of the Facility, including, but not limited to, all pipelines, electric transmission lines, the irrigated pasture area, evaporation ponds, access roads, and temporary laydown areas, the certificate holder shall mitigate for possible impacts to wildlife by measures including, but not limited to, the following: (a) Preparing maps to show sensitive areas that are off-limits during the construction phase. (b) Minimizing road construction and vehicle use where possible. (c) Posting signs around the perimeters of any sensitive habitat areas to be avoided. (d) Posting speed limit signs throughout the construction zone. (e) Providing environmental training to all construction personnel, including all construction contractors and their personnel, to inform them of wildlife and habitat issues. Training shall include information about sensitive wildlife, plants, and habitat areas as well as the required precautions to avoid and minimize impacts. (f) Identifying sensitive habitat areas in the field with appropriate signs and flagging. (g) Instructing all construction personnel, including all construction contractors and their personnel, to watch out for wildlife while driving through the Facility site, to maintain reasonable driving speeds so as not to harass or accidentally strike wildlife, and to be particularly cautious and drive at slower speeds in a period from one hour before sunset to one hour after sunrise when some wildlife species</u></p>	

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Summary of Affected Environment, ~~and~~ Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p><u>are the most active. (h) Requiring all construction personnel, including all construction contractors and their personnel, to report any injured or dead wildlife detected at the Facility site. (i) Using certified “weed free” seed mixes and mulches for restoration and revegetation. (j) Using wildlife watering troughs to encourage use of mitigation areas by wildlife. (k) Using preventative measures to reduce the introduction of noxious weeds by construction, e.g., washing vehicles before bringing them to the site and other best management practices. (l) Limiting grading and clearing of vegetation to the minimum extent necessary for practical and safe working areas.</u></p> <p><u>D.8(2) The certificate holder shall site and construct the Facility to minimize impacts to vegetation and habitat. (a) The certificate holder shall minimize impacts to natural vegetation and wildlife habitat by locating the Energy Facility site in a fallow agricultural field. (b) The certificate holder shall return the Energy Facility site to an agricultural field upon retirement of the Facility.</u></p> <p><u>D.8(3) To the extent practicable, the certificate holder shall site the transmission towers to minimize habitat impacts by avoiding densely wooded areas within the ponderosa pine habitat.</u></p> <p><u>D.8(10) The certificate holder shall restore temporary disturbance areas by returning the areas to their original grade and seeding, with appropriate seed mixes as recommended by ODFW and as shown in Table P-7 (ASC, Exhibit P, Attachment P-1), and by mulching the areas with straw. The certificate holder shall obtain ODFW concurrence before making any changes to the proposed seed mix.</u></p> <p><u>D.8(11) During construction of the related or supporting transmission line and maintenance of the right-of-way, the certificate holder shall limit clearing of vegetation to only that needed to prevent contact with the transmission line. The certificate holder shall not remove lower growing tree and shrub species. PROPOSED ORDER, COB ENERGY FACILITY MARCH 16, 2004</u></p> <p><u>D.8(12) The certificate holder shall mitigate for permanent impacts to 179.9 acres by restoring about 240 acres of otherwise undisturbed land</u></p>	

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Summary of Affected Environment, and Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p><u>under the control of the certificate holder. As mitigation for permanent impacts to 77 acres of Habitat Category 2, the certificate holder shall restore 90 acres to high-quality deer habitat through the establishment of preferred winter browse species such as big sagebrush, antelope bitterbrush, and curl-leaf mountain mahogany. In addition, the certificate holder shall establish native grasses and forbs in some areas. As mitigation for 29.9 acres of Habitat Category 3 and 73 acres of Habitat Category 4, the certificate holder shall restore 150 acres to sagebrush-steppe habitat; enhance existing juniper woodland habitat through establishment of preferred browse species such as sagebrush, antelope bitterbrush, and curl-leaf mountain mahogany; and selectively remove juniper trees. (ASC, Exhibit P, pages P-18 through P-19).</u></p> <p><u>D.8(13) The certificate shall locate the 31-acre irrigated pasture area adjacent to, but separate from, any mitigation areas.</u></p> <p><u>D.8(16) The certificate holder shall fence the evaporation pond(s) to preclude their use by wildlife. In addition, the certificate holder shall equip the evaporation pond(s) with a net meeting ODFW requirements to prevent access by raptors and other birds.</u></p> <p><u>D.8(21) The certificate holder shall monitor revegetated areas for a period of five years and shall ensure that new vegetation has an 80 percent survival rate.</u></p> <p><u>D.8(17) The certificate holder shall install a chain-link fence around the infiltration basin to prevent debris, such as windblown vegetation or leaf litter, from entering and accumulating on the basin bottom. The fence shall also serve to prevent wildlife from entering the basin.</u></p> <p>D.8(18) During construction of the related or supporting natural gas and water pipelines, the certificate holder shall ensure that side cast material remains within the construction corridors.</p> <p>D.8(19) During construction of the related or supporting natural gas and water pipelines, the certificate holder shall use silt fencing and other barriers to limit lateral spread of soil when material must be side cast in habitat areas within the construction corridor.</p> <p><u>D.8(22) The certificate holder shall monitor revegetated areas for a period of five years and shall ensure that new vegetation has an 80</u></p>	

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Summary of Affected Environment, and Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p>percent survival rate.</p> <p>D.8(23) During the five-year reporting period, the certificate holder shall submit an annual monitoring report to ODFW and the Department. Within one year after completion of construction of the Facility, the certificate holder shall provide to ODFW and the Department a summary report that identifies the revegetation actions it took and the results of revegetation monitoring conducted to that time.</p> <p>D.8(24) Within three months after completion of the final annual monitoring survey, the certificate holder shall provide to ODFW and the Department a report that presents the results of its revegetation monitoring.</p> <p>D.8(25) If revegetation is not successful at establishing appropriate plant cover and controlling erosion, the Department may require the certificate holder to take remedial actions.</p> <p>D.8(26) The certificate holder shall not perform any construction of the transmission line during the critical deer winter range season of December 1 – March 31 unless it receives prior approval from the Department of Energy and Department of Fish and Wildlife.</p> <p>D.8(27) The certificate holder shall monitor the transmission line access road from December 1 to March 31 to ensure the integrity of access road gates and prevent public access during critical deer winter range season. The monitoring shall occur at least once every two weeks during the designated period.</p> <p>D.8(28) Where feasible, the certificate holder shall leave up to four large-diameter snags per acre in the ponderosa pine habitat along the transmission line right of way as habitat for cavity dependant wildlife.</p> <p>D.8(29) Where feasible, the certificate holder shall leave slash piles along the transmission line right of way as habitat for reptiles, small mammals and birds.</p> <p>D.8(30) The certificate holder shall consult with the Department of Fish and Wildlife to determine appropriate design and placement of several water collection devices (guzzlers) along the transmission line right of way.</p>	

TABLE 2-1

Summary of Affected Environment, and Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p><u>D.8(31) The certificate holder shall locate transmission line towers as far away from pygmy rabbit burrows as is feasible. Any towers located near burrows shall have anti-perching devices installed to reduce potential for raptor predation.</u></p> <p><u>D.9(2) After completion of construction of the Facility, the certificate holder shall plant suitable vegetative species for bald eagle forage habitat.</u></p> <p><u>D.9(4) The certificate holder shall equip the evaporation pond(s) with a net meeting ODFW requirements to prevent access by raptors and other birds.</u></p> <p><u>D.9(1) Before beginning construction of the transmission line, the certificate holder shall employ measures to protect raptors in the design and construction of transmission lines. The certificate holder shall employ bird flight diverters on the top of static wires to make them more visible, reducing the potential for collision.</u></p> <p><u>D.9(3) The certificate holder shall fence the evaporation pond(s) and infiltration basin to preclude their use by wildlife.</u></p> <p><u>D.9(5) The certificate holder shall design all energized transmission conductors with either a minimum separation of nine feet or other measures to reduce the potential for electrocution of raptors and other birds.</u></p> <p><u>D.9(6) The certificate holder shall design all energized transmission conductors with either a minimum separation of nine feet or other measures to reduce the potential for electrocution of raptors and other birds.</u></p> <p><u>E.1.d(5) Unless otherwise approved in writing by the DEQ, the certificate holder shall maintain a deep-rooted, permanent vegetative cover on the land irrigation area at all times. Vegetation shall be periodically cut and removed to ensure maximum evapotranspiration and nutrient capture.</u></p> <p><u>F.2(3) If the certificate holder becomes aware of a significant environmental change or impact attributable to the Facility, the certificate holder shall, as soon as possible, submit a written report to the Department describing the impact on the Facility and its ability to comply with any affected site certificate conditions.</u></p>	

TABLE 2-1

Summary of Affected Environment, and Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
Fish	<p>Surface waters within the project area support various species of fish, including one <u>two</u> federally and state-listed endangered species. Construction and operation of the Facility would not affect fisheries resources in the area.</p>	<p>3.5.1 Construction of new access roads along the electric transmission line corridor would result in less than 0.5 acre of impact to wetlands related to intermittent creeks.</p> <p>Construction during the dry season (if possible) is recommended as a mitigation measure to avoid the presence of fish and minimize erosion and sedimentation. Culverts would be installed.</p> <p>EFSC Mitigation Requirements</p> <p>D.8(30) The certificate holder shall consult with the Department of Fish and Wildlife to determine appropriate design and placement of several water collection devices (guzzlers) along the transmission line right of way.</p>	<p>No changes to existing conditions would occur.</p>
<p>3.6 Traffic and Circulation</p>	<p>The existing network of roads surrounding the proposed facility includes West Langell Valley Road, East Langell Valley Road, Harpold Road, Oregon Route (OR) 70 (ODOT #23), OR 50, and OR 140. These local roads currently have low average daily traffic volumes and low average yearly accident rates. Levels of service are generally A or B, which are considered a high level of operations. These five roads have a high-quality asphalt surface.</p>	<p>3.6.1 During construction, roadways in the vicinity of the Energy Facility would experience a decrease in level of service.</p> <p><u>Mitigation</u></p> <p>Construction activities would be scheduled during off-peak hours and a carpooling program would be offered.</p> <p>3.6.2 Vehicles weighing more than 80,000 pounds (maximum legal load limit) could cause some visible damage to county roads.</p> <p>Before and after conditions would be documented. If damage occurs, the proposed project would restore pavement to previous condition.</p> <p>3.6.3 Operation of the Energy Facility would generate additional traffic.</p> <p>No mitigation measures are recommended.</p> <p>EFSC Mitigation Requirements</p> <p>D.6(2) During construction of the Facility, the certificate holder shall limit haul trucks to designated roadways.</p> <p>D.8(4) The certificate holder shall construct new roads for the electric transmission line within the cleared easement where possible to</p>	<p>No changes to existing conditions would occur.</p>

TABLE 2-1

Summary of Affected Environment, and Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p><u>minimize additional clearing. Gates shall be installed on the new access roads to restrict unauthorized access. Construction vehicles shall remain on the road bed and road shoulder whenever possible.</u></p> <p><u>D.8(5) The certificate holder shall ensure that road construction is sited to take advantage of existing roads to the extent practicable.</u></p> <p><u>D.8(14) The certificate holder shall use West Langell Valley Road for access to the Facility site.</u></p> <p><u>D.13(2) During construction of the Facility, the certificate holder shall use advance signage and traffic diversion equipment when slow or wide loads are being delivered to the Facility site</u></p> <p><u>D.13(3) During construction of the Facility, to the extent possible, the certificate holder shall schedule construction activities so that constructed-related traffic will occur other than during roadway peak hours.</u></p> <p><u>D.13 (4) During construction of the Facility, in consultation with Klamath County and the Oregon Department of Transportation, the certificate holder shall provide detour plans and warning signs in advance of any foreseeable traffic disturbances. PROPOSED ORDER, COB ENERGY FACILITY MARCH 16, 2004</u></p> <p><u>D.13 (5) During construction of the Facility, the certificate holder when possible shall maintain a minimum of one travel lane on affected roadways.</u></p> <p><u>D.13(6) During construction of the Facility, the certificate holder shall arrange for licensed flaggers to direct traffic within the road right-of-way.</u></p> <p><u>D.13(7) During construction of the facility, the certificate holder shall offer a carpool program to minimize single occupancy vehicle use by construction workers.</u></p> <p><u>D.13(8) During construction of the Facility, the certificate holder shall offer a carpool program to minimize single-occupancy vehicle use by construction workers. (a) During construction of the Facility, the certificate holder shall monitor for damage to roadways resulting from vehicles delivering heavy loads to the Facility site. (b) After completion</u></p>	

TABLE 2-1

Summary of Affected Environment, and Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p><u>of construction of the Facility, the certificate holder shall videotape roadways affected by vehicles delivering heavy loads to the Facility site. (c) After completion of construction, the certificate holder shall make the pre- construction and post-construction videotapes available for viewing by the contractor, Klamath County, ODOT and the Department. (d) If the videotapes show there was damage to an affected roadway as a result of vehicles carrying heavy loads, the certificate holder shall restore the roadway to its previous condition.</u></p> <p><u>D.13(9)Before beginning construction of the Facility, the certificate holder shall submit to and obtain approval from the Department of Energy of its plan for transporting construction workers to and from the Facility site by bus ("Transportation Plan"). The plan may provide for centralized parking in a public location accessible to the majority of construction workers. However, the location must not cause significant traffic congestion in any area remote from the Facility site. If applicable, the plan must also explain the certificate holder's rationale for allowing certain construction workers to commute to the Facility site by private vehicle and demonstrate that the certificate holder's car pool program will minimize the use of single-occupancy vehicles by construction workers.17</u></p> <p><u>D.13(10) Before beginning construction of the Facility, the certificate holder shall fully implement the Transportation Plan. The Transportation Plan shall be in effect until completion of construction. 17-Any construction necessary to provide a centralized public parking space could require the space to be designated as a related or supporting Facility under the Siting Council's rules. PROPOSED ORDER, COB ENERGY FACILITY MARCH 16, 2004.</u></p>	
Air Quality	The proposed Facility is located in an area currently classified as attainment for all criteria air pollutants. The closest air quality data are collected at Klamath Falls, 34 miles to the northwest. Air quality in the project area is expected to be significantly better than Klamath Falls. Oregon Department of Environmental Quality (ODEQ) air quality data summaries available on the Web site indicate that the 24-hour National Ambient Air Quality Standard	<p>3.7.1 Construction would cause short-term emissions of fugitive dust and construction equipment exhaust.</p> <p>BMPs would be issued to control fugitive dust and other incidental emissions.</p> <p>3.7.2 Operations would not cause impacts.</p> <p>3.7.3. Operation of the Energy Facility would result in emissions of greenhouse gases.</p>	No changes to existing conditions would occur.

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Summary of Affected Environment, and Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
	<p>(NAAQS) for particulate matter less than 10 microns in diameter (PM₁₀) has not been exceeded at Klamath Falls since 1992. No exceedance of the annual PM₁₀ standard has occurred in the last 10 years. Monitoring for PM_{2.5} began in July 1998, and has not measured an exceedance of either the proposed annual or 24-hour NAAQS. There has been no exceedance of the 1-hour carbon monoxide (CO) NAAQS in the last 11 years, and the 8-hour NAAQS has not been exceeded since 1991.</p>	<p>The proposed project would pay approximately \$13.6 million to The Oregon Climate Trust, which would use these funds to finance CO₂ mitigation projects.</p> <p>3.7.4. Operation of the proposed Energy Facility would result in emissions of hazardous air pollutants.</p> <p>Emission-reducing equipment would be continuously monitored to minimize emissions.</p> <p>3.7.5. Operation of the Energy Facility could impact Air Quality-Related Values in federally managed Class I areas in the region; however, modeling results show pollutants and haze would <u>not</u> have a significant impact.</p> <p>No mitigation measures are recommended.</p> <p>3.7.6. Operation of the Energy Facility would not result in significant odor emissions.</p> <p>No mitigation measures are recommended.</p> <p>EFSC Mitigation Requirements</p> <p>D.15(1) The net carbon dioxide emissions rate for the non-base load power plant shall not exceed 0.675 pounds of carbon dioxide per kilowatt-hour of net electric power output, with carbon dioxide emissions and net electric power output measured on a new and clean basis, as defined in OAR 345-001-0010.</p> <p>D.15(2) The net carbon dioxide emissions rate for incremental emissions for the Facility operating with power augmentation shall not exceed 0.675 pounds of carbon dioxide per kilowatt-hour of net electric power output, with carbon dioxide emissions and net electric power output measured on a new and clean basis at the site during the times of year when the Facility is intended to operate with power augmentation, as the Department may modify such basis pursuant to Condition D.15.(12).</p> <p>E.1.a(1) The certificate holder complies with the appropriate carbon dioxide emissions standard and monetary offset rate in effect at the time the Department or Council makes its determination under this condition.</p>	

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Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p>E.1.a(2) During construction of the Energy Facility, transmission lines or other related or supporting facilities, the certificate holder shall require contractors to equip all combustion engine-powered equipment with exhaust mufflers.</p>	
<p>Scenic and Aesthetic Values</p>	<p>This is a predominantly undeveloped area devoted to forests and farming. A number of aesthetic and scenic resources, such as national forests, existing and proposed wilderness trails, and scenic highways surround the proposed Energy Facility.</p>	<p>3.8.1 Visual impacts to scenic and aesthetic resources could potentially result from the stacks and transmission towers for the electric transmission line; however, these Facility features would be in the background of any views. Impacts could also occur from the clearing of the right-of-way and access roads. The proposed Energy Facility would not impact designated scenic areas as described in Section 3.8.1.</p> <p>No mitigation measures other than those included in the proposed project, such as painting facilities to blend with the landscape and using nonglare, low-impact lighting, are recommended.</p> <p>3.8.2 Impacts from Facility lighting would be minimal.</p> <p>See mitigation <u>No mitigation measures for Impact 3.8.1 are recommended.</u></p>	<p>No changes to existing conditions would occur.</p>
<p>Cultural Resources</p>	<p>Three archaeological sites were identified during field surveys of the project area. All three sites are likely to be eligible for listing on the National Register of Historic Places (NRHP) and would qualify as an archaeological site under the Oregon statutes.</p> <p>Two of these sites (35-KL-2175 and PAS-3) are characterized by dispersed lithic scatter containing waste flakes (the by-product of stone tool manufacture), and tools.</p> <p>The remaining site (PAS-4) is a series of four, partially buried stone features that are of cultural and religious value to The Klamath Tribes.</p>	<p>3.9.1 None of three known cultural sites would be affected by construction and operation of the Facility.</p> <p>The electric transmission line and the water supply pipeline have been moved from their original locations to avoid any impacts.</p> <p>3.9.2 Unknown cultural resources could be adversely affected by the proposed project.</p> <p>A Cultural Resources Management Plan (CRMP) would be developed in coordination with The Klamath Tribes. The Plan would identify specific protocols and procedures for protecting known and unknown cultural resources. Archaeological monitoring would occur during construction to prevent accidental impacts to the known cultural sites and any resources discovered during construction.</p> <p>EFSC Mitigation Requirements</p> <p>D.11(1) Before beginning construction of the Facility, the certificate holder shall develop a Cultural Resources Management Plan ("CRMP") in consultation with Oregon Historic Preservation Office ("SHPO"), the</p>	<p>No changes to existing conditions would occur.</p>

TABLE 2-1

Summary of Affected Environment, and Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p>Confederated Klamath Tribes of the Klamath Indian Reservation, and the Klamath County Planning Department. The CRMP shall include protocols and procedures for protection of known cultural sites, including the identification of sites in the field and on project construction maps, and for accidental discovery of additional sites.</p> <p>D.11(2) During construction of the Facility, the certificate holder shall implement the CRMP, ensure that a qualified person instructs construction personnel in the identification of archaeological and cultural resources, and ensure that archaeological construction monitors are present to prevent accidental impacts to known cultural resources or to any newly discovered resources.</p> <p>D.11(3) During construction of the Facility, the certificate holder shall implement the CRMP, ensure that a qualified person instructs construction personnel in the identification of archaeological and cultural resources, and ensure that archaeological construction monitors are present to prevent accidental impacts to known cultural resources or to any newly discovered resources.</p>	
Land Use Plans and Policies	The Facility is located in a rural area where elevations range from approximately 4,000 to 8,400 feet. The majority of the lowland areas have been converted to agricultural use. The agricultural lands include cultivated crops, irrigated pasture, unimproved pasture, and fallow fields. There are a few developed areas with residential, agricultural, and industrial uses such as farm homes, dairies, the Gas Transmission Northwest (GTN) compressor station, and Captain Jack Substation.	<p>3.10.1 The proposed Facility would permanently disturb a total of 108.7 acres of land during the 30-year operating life of the Energy Facility, including an approximate 50.7 acres of land within the Klamath County Big Game Winter Range SRO.</p> <p>The proposed project would restore 91 acres of fallow field to habitat and improve another 145 acres of habitat in the wildlife mitigation area.</p> <p><u>The Department recommends that the Council make the following findings: (a) That the facility complies with the standards adopted by the Council pursuant to ORS 469.501; (b) That the Energy Facility is a non-base load gas plant that complies with the applicable carbon dioxide emissions standard, OAR 345-024-0550; (c) That except for those statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council, the facility complies with all other Oregon statutes and administrative rules identified in the Project Order, as amended, as applicable to the issuance of a site certificate for the proposed facility adopted by the Council or enacted by statute; and, (d) That the facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission, pursuant to ORS</u></p>	No changes to existing conditions would occur.

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Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p>469.503(4).</p> <p>3.10.2. Operations at the Energy Facility site would have limited, if any, impact on agricultural activities.</p> <p>No mitigation measures are recommended.</p> <p>3.10.3 Construction of the Energy Facility would temporarily impact agricultural activities.</p> <p>BMPs would be employed during construction to minimize and avoid impacts to agricultural activities.</p> <p>3.10.4 Construction of the Energy Facility could have temporary impacts to dairy operation.</p> <p>In addition to the BMPs that would be employed during construction to minimize and avoid impacts to agricultural activities, herbicides would not be used and activities would be coordinated with dairy owner.</p> <p>3.10.5 The Energy Facility would have permanent and temporary impacts to pasture land.</p> <p>BMPs would be employed during construction to minimize and avoid impacts to pasture land. In addition, temporary fences and gates would be constructed so that at convenient intervals livestock could cross construction areas, and permanent fences if damaged would be repaired or replaced.</p> <p>3.10.6 Construction impacts would occur to rangeland/woodlands along the natural gas pipeline, water supply pipeline, and the electric transmission line, and permanent impacts to rangeland/woodlands along the electric transmission line.</p> <p>BMPs would be employed during construction to minimize and avoid impacts to rangeland/woodlands. Additional mitigation measures would be implemented to avoid and repair impacts.</p> <p>3.10.7 Permanent impacts would occur to forest ranges along the electric transmission line.</p> <p>BMPs would be employed during construction to minimize and avoid impacts to forest ranges. Additional mitigation measures would be implemented to avoid and repair impacts.</p>	

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Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p>EFSC Mitigation Requirements</p> <p><u>D.4(2) Before beginning construction of the facility, the certificate holder shall consult with the owners of lands adjacent to the facility site and farmers operating on those lands to address potential conflicts with agricultural practices including (but not limited to) field access, timing of work, dust control, noxious weed control, and traffic control.</u></p> <p><u>D.4(21) In the event that any footing for a transmission tower is located on land with a slope exceeding 25 percent, the certificate holder shall submit engineering plans for such work to the Klamath County Department of Public Works for review and approval.</u></p> <p><u>D.4(30) The certificate holder shall complete all actions set forth in the Agricultural and Forestry Practices Impact Mitigation Plan and the Habitat and Natural Area Revegetation Plan.</u></p> <p><u>D.8(20) The certificate holder shall, as soon as practicable and appropriate, but in no event later than one year after completing construction in an area, implement the mitigation measures specified.</u></p> <p><u>E.1.b(1) Before beginning construction of the facility, the certificate holder shall provide to the Department plans showing proposed construction and access roads for the transmission line and location of spoils disposal sites.</u></p> <p><u>E.1.b(2) Before beginning construction of the facility, the certificate holder shall protect wetlands within the construction corridor with construction fencing. No equipment or machinery shall be allowed within fenced wetlands.</u></p> <p><u>E.1.b(6) During construction, operation and retirement of the facility, the certificate holder shall ensure that the total amount of material to be placed within wetlands is less than 50 cubic yards.</u></p> <p><u>E.1.b(7) After completion of construction of the facility, the certificate holder shall restore wetlands temporarily affected by construction activities to their original grade and shall seed all such wetlands with an appropriate wetland seed mix.</u></p> <p><u>E.1.b(8) During construction of the facility, the certificate holder shall use conventional bores to install the natural gas and water supply</u></p>	

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Summary of Affected Environment, and Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p><u>pipelines under agriculture drainages and canals, PROPOSED ORDER, COB ENERGY FACILITY MARCH 16, 2004</u></p> <p><u>E.1.c(1) During construction of the facility, the certificate holder shall use conventional bores to install the natural gas and water supply pipelines under agriculture drainages and canals, PROPOSED ORDER, COB ENERGY FACILITY MARCH 16, 2004</u></p> <p><u>E.1.d(3) At least 1 year before retirement of the Energy Facility, if evaporation ponds are in use, the certificate holder shall submit plans for decommissioning the evaporation ponds. The plans shall include a means for dewatering the evaporation ponds and properly disposing of all accumulated solids in a manner consistent with disposal requirements in effect at the time of decommissioning.</u></p>	
Socioeconomics	<p>Population has been growing in the vicinity of the Facility at less than 1 percent per year during the last decade, which was approximately one-half of the state's growth rate. In early 2002, the unemployment rate in Klamath County was approximately 13 percent, primarily owing to declines in the construction and mining sectors. In 2000, housing vacancy rates were around 3 percent for owner-occupied housing and 9 percent for rental housing.</p>	<p>3.11.1 The proposed Energy Facility would result in a limited short-term and long-term population increase.</p> <p>No mitigation measures are recommended.</p> <p>3.11.2 The proposed project would result in an increase in short-term and long-term employment opportunities in the area.</p> <p>No mitigation measures are recommended.</p> <p>3.11.3 The proposed Energy Facility would have a short-term impact on housing. New residents would likely settle in the communities within a 30-minute driving distance.</p> <p>No mitigation measures are recommended.</p>	<p>No changes to existing conditions would occur.</p>
Public Services and Utilities	<p>Water and sewer service is provided inside urban growth boundaries (UGBs) of the project area. Outside of UGBs, water is supplied by private wells and sewage goes to individual septic tanks. Solid waste is disposed of at two landfills. Police protection outside UGBs is provided by the Klamath County Sheriff and the Oregon State Patrol. Rural fire protection around Bonanza and Klamath Falls is provided by Klamath County Fire Districts #1, #4, and #5, and the Bonanza Rural Fire Protection District.</p>	<p>3.12.1 The proposed Energy Facility would have limited, if any, effects on the capacity of local utilities during construction, and no effects during operations.</p> <p>No mitigation measures are recommended.</p> <p>3.12.2 The proposed Energy Facility would not affect the level of service provided by local public services.</p> <p>Onsite security would be provided during construction. No other mitigation measures are recommended.</p>	<p>No changes to existing conditions would occur.</p>

TABLE 2-1

Summary of Affected Environment, and Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
	<p>Health care is available at the Merle West Medical Center in Klamath Falls; however, the closest trauma center is in Bend. The four school districts serving the project area report declining enrollment.</p>	<p>EFSC Mitigation Requirements</p> <p><u>D.14(1) The certificate holder shall set aside a total of 40.2 acres of land to accommodate the evaporation ponds, including the associated road and pipeline, that would serve as an alternative to land application of process wastewater. The final design and sizing of the evaporation ponds shall be subject to DEQ approval pursuant to Condition E1.d.(2).</u></p> <p><u>E.1.c(4) The certificate holder shall develop and implement a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the transmission line.</u></p> <p><u>E.1.d(2) Within 6 months following start-up of the Energy Facility, the certificate holder shall submit plans and specifications for sealed, non-overflow, evaporation ponds capable of accommodating both a single power block of 580 MW or double power block of 1,160 MW. The plans and specifications shall ensure that the evaporation pond is sealed so as to maintain a seepage rate of less than 10 -7 cm/sec. The plans and specifications shall also include a leak detection plan. Upon approval of the plans and specifications, the certificate holder shall maintain these plans on file until and if construction of the ponds is required by DEQ.</u></p> <p><u>E.1.d(4) The certificate holder shall meet the compliance dates that have been established in the schedule contained in the draft WPCF Permit (Attachment C to this Order). Either prior to or no later than 14 days following any lapsed compliance date, the certificate holder shall submit to the DEQ a notice of compliance or noncompliance with the established schedule. The DEQ may revise a schedule of compliance if it determines there is good and valid cause resulting from events over which the certificate holder has little or no control.</u></p> <p><u>J. Based on the above findings of fact, discussions and conclusions of law, the Department recommends that the Council determine that it shall approve the Application for a Site Certificate for the COB Energy Facility and that the chairperson of the Council shall execute the site certificate in the form of the "Site Certificate for the COB Energy Facility." The site certificate for the COB Energy Facility will be attached to this Proposed Order and incorporated by reference into this</u></p>	

TABLE 2-1

Summary of Affected Environment, and Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p>Proposed Order. The Department further recommends that the Council direct the Oregon Department of Environmental Quality to issue to the certificate holder a Water Pollution Control Facilities permit substantially in the form of attachment C to this Proposed Order and that it direct the Oregon Water Resources Department to issue to the certificate holder a Permit to Appropriate Public Waters substantially in the form of Attachment D to this Proposed Order.</p>	
Health and Safety	<p>The Energy Facility site consists primarily of scrub brush with limited cattle grazing. Limited industrial and commercial utility uses exist in the area. Development in the vicinity of the Energy Facility site consists of widely distributed residences. Intermittent noise includes traffic on local roads, agricultural activities, and distant overhead aircraft. Continuous noise is absent.</p>	<p>3.13.1 A natural gas leak could occur, posing a risk of fire.</p> <p>3.13.2 Diesel fuel could leak from the storage container, posing a fire risk and possible contamination of soil.</p> <p>3.13.3 Aqueous ammonia could spill or ammonia vapor could be released to the atmosphere, posing a health risk.</p> <p>3.13.4 Hazardous nonfuel substances could spill, with the potential to harm people at the Energy Facility and in the surrounding area.</p> <p>3.13.5 A fire could occur at the Energy Facility, posing a threat to workers and nearby people and structures.</p> <p>3.13.6 The high-voltage electric transmission line could cause electrical shocks directly and from induced charges.</p> <p>3.13.7 Electric and magnetic fields (EMFs) would increase but would be well within allowable limits.</p> <p>3.13.8 Operation of the proposed Energy Facility could affect noise levels but would be within limits allowed by state statute.</p> <p>3.13.9 Construction of the proposed Energy Facility could affect noise levels.</p> <p>Mitigation measures for the proposed project include compliance with applicable Federal, state, and local regulations governing health and safety and the handling and storage of hazardous materials and fuels. No mitigation measures are recommended beyond those proposed by the project. A barrier wall would be reserved as a contingency mitigation measure. The wall would be installed if a noise exceedance is detected</p>	<p>No changes to existing conditions would occur.</p>

TABLE 2-1

Summary of Affected Environment, and Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p>during Facility performance testing.</p> <p>EFSC Mitigation Requirements</p> <p><u>D.4(17) The certificate holder shall clear and maintain vegetation in the transmission line easement to prevent fire hazard, remove diseased and hazardous vegetation from the easement area, equip the transmission line with a shield wire near the top of transmission structures to shield the towers from lightning strikes, and store no flammable material within the easement area.</u></p> <p><u>D.5(4) The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. In no event shall the recommended seismic design parameters be any less than those prescribed by the Oregon Uniform Building Code. As used in this condition, "seismic hazard" includes ground shaking, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement, and subsidence.</u></p> <p>3.13.5 A fire could occur at the Energy Facility, posing a threat to workers and nearby people and structures.</p> <p><u>D.5 (7) The site-specific geotechnical investigation and report described in Condition D.5. above shall be completed and the report submitted to the Department prior to final plant design. In addition to being generally consistent with the discussion in the ASC, Exhibit H, pages H-6 through H-12, the geotechnical investigation, as a minimum, shall meet the following additional specifications: 9(a) Prior to the site investigation, the certificate holder shall consider faults 11 depicted by DOGAMI on the Bonanza quadrangle (issued 2003), the Lorella quadrangle (to be issued spring 2004) and the Bryant Mountain quadrangle (mapped 2003, to be issued spring 2004), IMS-20 "Geohazards of Klamath County, Oregon" and USGS open file report 02- 15301Weldon et al. 2002. 1617 (b) In addition to the references listed above, the certificate holder shall select 18 sites for paleoseismic paeleoseismic trenching based on stereo photography, research and field investigation. (c) At least 21 days prior to trenching, the certificate holder shall report to the Department and DOGAMI its selection of sites and the basis for that selection, including the results of stereo-photography. If DOGAMI is not</u></p>	

TABLE 2-1

Summary of Affected Environment, ~~and~~ Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p><u>able to comment on the selection of sites or to observe the trenching and its paleoseismic interpretation, the Department shall arrange, in consultation with DOGAMI, for the performance by an independent qualified registered geologist of those tasks DOGAMI is unable to perform. If the Department does not provide the certificate holder written notice of comments from DOGAMI or an independent qualified registered geologist within 21 days after such notification, the certificate holder may proceed with its investigation as planned. (d) The certificate holder shall, as a minimum, perform paleoseismic 34trenching on the Bryant Mountain Fault and the Klamath Graben Fault and 35shall reassess the MPE at those faults in terms of magnitude, location and maximum probable ground motion at the facility site. If field investigation indicates an MPE at those faults greater than the event assumed in the deterministic evaluation contained in the ASC, Exhibit H, the certificate holder shall incorporate the applicable design parameters in design of the facility. In addition to being generally consistent with the discussion in the ASC, 43 Exhibit H, the site investigation and report shall generally meet the specification in DOGAMI Open File Report O-00-04, "Guidelines for Engineering Geologic Report and Site-Specific Seismic Hazard Reports".</u></p> <p><u>D.6(10) The certificate holder shall ensure that ammonia-handling facilities have continuous tank level monitors, temperature and pressure monitors, alarms, check valves and emergency block valves. The certificate holder shall ensure that the ammonia storage tank has double containment and the piping from the tank is double-walled.</u></p> <p><u>D.6(11) The certificate holder shall store diesel oil in a commercially manufactured system with internal spill controls and secondary containment.</u></p> <p><u>D.6(12) The certificate holder shall equip all chemical storage tanks and locations storing large quantities of hazardous materials with secondary containment constructed of concrete or asphalt with berms around the perimeter. The secondary containment areas shall hold the volume of the largest tank or container in the area. The certificate holder or its primary contractor shall develop written procedures for each containment area.</u></p> <p><u>D.8(7) The certificate holder shall locate chemical storage, servicing of</u></p>	

TABLE 2-1

Summary of Affected Environment, ~~and~~ Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p><u>construction and maintenance equipment and vehicles, and overnight storage of wheeled vehicles at least 330 feet from any wetland or waterway.</u></p> <p><u>D.8(8) The certificate holder shall place waste material and spoils at least 100 feet from wetlands and waterways.</u></p> <p><u>D.8(9) Before beginning construction of the facility, the certificate holder shall prepare and implement a Spill Prevention Control and Countermeasure Plan.</u></p> <p><u>D.8(15) The certificate holder shall establish the topographic position of the Energy Facility to minimize indirect effects of noise and ambient light on adjacent habitats.</u></p> <p><u>D.10(1) During construction of the facility, the Certificate Holder shall control dust through the application of water or by other equally effective method.</u></p> <p><u>D.10(2) During construction of the facility, the Certificate Holder shall use directing and shielding devices on lights to minimize off-site glare. When there is no nighttime construction activity, the Certificate Holder shall minimize night lighting consistent with safety and maintenance requirements.</u></p> <p><u>D.10(3) During operation of the facility, the Certificate Holder shall use directing and shielding devices on lights to minimize off-site glare and shall minimize night lighting consistent with safety and maintenance requirements.</u></p> <p><u>D.10(4) The Certificate Holder shall use motion detection equipment rather than constant floodlights for security lighting.</u></p> <p><u>D.10(5) The Certificate Holder shall paint structures with low-glare paint in colors selected to complement the surrounding foreground and background colors.</u></p> <p><u>D.13(1) During construction of the facility, the certificate holder shall provide onsite chemical toilet service suitable for the size and composition of the construction workforce.</u></p> <p><u>D.13(11) During construction of the Energy Facility, the certificate</u></p>	

TABLE 2-1

Summary of Affected Environment, ~~and~~ Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p><u>holder shall construct a fire protection system within the buildings and yard areas of the Energy Facility site. (a) The fire protection system shall be constructed in accordance with National Fire Protection Association standards. (b) The system shall include a dedicated water storage system, hose stations, fire water pumps, fire detection system, and portable fire extinguishers located in accordance with National Fire Protection Association standards. (c) A dedicated reserve capacity of about 180,000 gallons in the raw water storage tank shall serve as the fire suppression water source. (d) Fire detection devices, including smoke detectors, heat detectors, manual alarm stations and indicating devices, as appropriate, shall be installed at key points throughout the Energy Facility. (e) Facility staff shall receive basic fire suppression training to enable staff to fight small fires that can be controlled or extinguished with rack hoses and fire extinguishers.</u></p> <p><u>E.1.a(3) During construction of the Energy Facility, transmission lines or other related or supporting facilities, the certificate holder shall establish a complaint response system at the construction manager's office to address noise complaints.</u></p> <p><u>E.1.a(4) Within two months after the start of commercial operation of the single-phase Energy Facility (or, if the certificate holder elects the two-phase construction alternative, within two months after the start of the commercial operation of the first phase and within two months after the start of commercial operation of the second phase, if applicable), the certificate holder shall retain a qualified noise specialist to measure noise levels associated with the Energy Facility operation. If the certificate holder elects the two-phase construction alternative, the measurements made after the start of commercial operation of the second phase shall be made with both first phase and second phase equipment operating at full load. (a) The specialist shall measure noise levels at receptors M1 and M2 between midnight and 4 a.m., to determine if actual plant noise levels are below 30.5 dBA. During this time period, the Energy Facility shall be operating at the maximum power production rate or the measurement results shall be considered invalid. Records of the facility operating conditions during the measurement period shall submitted along with the sound level data. PROPOSED ORDER, COB ENERGY FACILITY MARCH 16, 2004(b) The certificate holder shall report the results of the noise evaluation to the Department of Energy. (c) If actual noise levels do not comply with</u></p>	

TABLE 2-1

Summary of Affected Environment, ~~and~~ Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p><u>applicable DEQ regulations, the certificate holder shall take those actions necessary to comply with the regulations no later than eight months after the start of commercial operation of the single-phase Energy Facility or, if COB elects the two-phase construction alternative, no later than eight months after the start of commercial operation of each phase of the Energy Facility, if applicable.</u></p> <p><u>E.1.a(4) The certificate holder shall install silencers on short duration noise sources e.g. steam vents).</u></p> <p><u>E.1.c(2) The certificate holder shall design the transmission lines so that induced voltages resulting from the transmission lines are as low as reasonably achievable; including maintaining as great a conductor height as is reasonably practical at road crossings.</u></p> <p><u>E.1.c(3) The certificate holder shall develop and implement a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the transmission line.</u></p> <p><u>E.1.c(5) The certificate holder shall design, construct and operate the transmission lines in accordance with the requirements of the National Electrical Safety Code.</u></p> <p><u>E.1.c(6) The certificate holder shall take reasonable steps to reduce or manage exposure to electromagnetic fields (EMF), consistent with Council findings presented in the "Report of EMF Committee to the Energy Facility Siting Council," March 30, 1993, and subsequent findings. Effective on the date of this site certificate, the certificate holder shall provide information to the public, upon request, about EMF levels associated with the Energy Facility and related transmission lines.</u></p> <p><u>E.1.c(7) At least 30 days before beginning preparation of detailed design and specifications for the electrical transmission line or the natural gas pipeline, the certificate holder shall consult with the Oregon Public Utility Commission staff to ensure that its designs and specifications are consistent with applicable codes and standards.</u></p> <p><u>E.1.c(8) With respect to the related or supporting natural gas pipeline,</u></p>	

TABLE 2-1

Summary of Affected Environment, ~~and~~ Environmental Consequences, and Mitigation Measures¹

Environmental Resource	Existing Conditions	Impact of Proposed Action/Mitigation	Impact of No Action Alternative
		<p><u>the certificate holder shall design, construct and operate the pipeline in accordance with the requirements of the US Department of Transportation as set forth in Title 49, Code of Federal Regulations, Part 192.</u></p> <p><u>E.1.d(6) The certificate holder shall maintain in force at all times an adequate contingency plan for prevention and handling of spills and unplanned discharges. The certificate holder shall maintain a continuing program of employee orientation and education to ensure awareness of the necessity of good in-plant control and quick and proper action in the event of a spill or accident.</u></p> <p><u>E.1.d(7)The certificate holder shall designate an appropriately trained supervisor to coordinate and carry out all necessary functions related to maintenance and cooperation of waste collection, treatment, and disposal facilities.</u></p> <p><u>E.1.d(8) Unless otherwise permitted by the DEQ, the certificate holder shall not dispose of solid wastes, brines, construction wastes or other wastes at the Energy Facility site.</u></p> <p><u>E.1.d(23) During construction of the generation facility, the certificate holder shall ensure that all sewage is collected in chemical toilets located on site.</u></p> <p><u>E.1.d(24) The certificate holder shall ensure that chemical toilets are managed by a sewage disposal service licensed by the DEQ.</u></p>	

TABLE 2-2

Other Potential Sites and Vicinities for Development

Washington Area of Focus	MW / Tech	Township	Physical Attributes				
		Zoning	Site - General	Electrical	Substation	Fuel	Water
Dallesport, WA (Klickitat County)	TBD	Dallesport/Indust (Port Authority Site)	Approx 70 miles East of Portland.	BPA 500kv on site	b/w John Day and Hanford	NW Pipeline 6" lateral .5 from site. NW Pipeline 26" 12 miles north.	Columbia River adjacent
	<u>Comments:</u> On the north side of Columbia River with John Day Substation on the South Side. Optimal interconnect would be crossing the river. Increase of gas supply and pressure from 26" line 12 miles away makes gas questionable.						
Frederickson, WA (Pierce County)	TBD	Frederickson; industrial	Port of Tacoma Industrial Park	BPA 230 kV	b/w Tacoma and Cowlitz	Northwest Pipeline Corp 26" line within one mile	City or well
	<u>Comments:</u> Multiple plants proposed for this area. Overbuilding a serious concern from gas and electrical interconnection criteria. Water supply is limited and potentially represents a fatal flaw.						
Sunnyside West, WA (Yakima County)	TBD	Sunnyside/Ag	South central Washington	BPA 345 kV and 500 kV	345 kV b/w Bonneville and Midway; 500 kV b/w Hanford and Ostrander	Northwest Pipeline 10" line adjacent	County or well
	<u>Comments:</u> Gas supply and pressure are questionable, area largely rural and no public water lines present. Access to groundwater a concern and potential fatal flaw.						
Sunnyside East, WA (Yakima County)	TBD	Sunnyside/Ag	South central Washington	BPA 345 kV and 500 kV	345 kV b/w Big Eddy and Midway; 500 kV b/w John Day and Hanford	Northwest Pipeline Corp 10" line adjacent	County or well
	<u>Comments:</u> Same gas line as Sunnyside West. Water area largely rural and no public water lines present. Ability to obtain new or transfer exiting water right highly questionable						
Patterson, WA (Benton County)	TBD	Patterson/Ag (Currently fallow field)	Approx 140 miles East of Portland	BPA Horse Heaven 345kv Substation adjacent	BPA Horse Heaven sub is b/w McNary and Ross	NW Pipeline 26" lateral 1 miles North	Lake Umatilla (Columbia River) 1 mile South
	<u>Comments:</u> Gas lateral capacity is questionable on 26' distribution line. Ability to obtain surface water highly questionable.						
Plymouth , WA (Benton County)	TBD	Plymouth/TBD (Currently fallow field)	Approx 156 miles East of Portland	BPA 230 kV and 345kv on site	230 kV b/w Big Eddy and McNary; 345 kV b/w McNary and Ross	NW Pipeline Plymouth Meter Station adjacent (26")	Columbia River 1 mile South
	<u>Comments:</u> Unable to locate site large enough to support plant and adequate buffer.						
Goldendale, WA (Klickitat County)	TBD	Goldendale/ Ag	Approx 100 miles East of Portland	BPA 500kv on site	b/w John Day and Hanford	NW Goldendale Compressor Station (2 Miles)	Ground
	<u>Comments:</u> Another CCCT under construction. Open season for expansion of pressure of line closed. Project permitting was aggressively opposed.						
Oregon Area of Focus	MW / Tech	Township	Physical Attributes				
		Zoning	Site - General	Electrical	Adjacent Substation	Fuel	Water
Bonanza, OR (Klamath County)	Phase 1 - SC (4) FA=600MW Phase 2 - CC (2) 2 on 1 FA = 1100	Exclusive Farm Use	900 acre barren parcel at the foot of Bryant Mountain. Potential for multiple interconnections	Line Tap (3) 500kV lines – BPA, PGE and PacPower on site	7 miles north of Malin & Capt Jack Substation and the COB Trading Hub	PGT Malin compressor station within 4 miles (42", 36", 12")	Deep isolated well with 7kgpm flow 3.5 miles as the crow flies to site. Was permitted by OWRD as a separate source

Washington Area of Focus	MW / Tech	Township	Physical Attributes				
		Zoning	Site - General	Electrical	Substation	Fuel	Water
<u>Comments</u> - Flat site, gas supply adequate, At market transmission and permitable water. Best location to date.							
*Malin, OR (Klamath County)	TBD	AG	Topography of the area very high flowing hill or low marsh. No clear favorable location	Malin Sub BPA, PGE and PacPower. (2) 230kV & (3) 500kV	1 Mile from Malin Substation	PGT lines on site (42"&36")	Groundwater- no public water supply, Bureau of Reclamation has just cut off all surface withdraws.
<u>Comments:</u> Topography very difficult and high elevation. Will be OK for air dispersion but potential significant visual impacts. Permitting a new water permit or transfer of existing right maybe a fatal flaw. (* Further discussion included in response to question DEIS comment 29E).							
Troutdale, OR (Multnomah County)	TBD	Troutdale/Indust (Alcoa site from 3rd party)	Land is an issue for this area, very few small parcels	Troutdale Sub PAC & BPA	Big Eddy & Ostrander	Williams Reynolds meter station pipeline in vicinity	Columbia River adjacent
<u>Comments:</u> Site is on the border of Columbia Gorge Scenic Area. Gorge cumulative impact study being conducted by BPA is under way and including the project in that analysis and obtaining an air permit is a potential project fatal flaw.							
Albany, OR (Linn County)	TBD	Albany / Ag (under review)	Between Portland and Eugene	Tap 511 sub PacPower 230 kV and 115 kV sub; 2 x 230 kV; 2 x 115 kV	Albany, Tap 10	Williams meter station (34600 Midway) within one mile	Albany Water Treatment Facility (needs further investigation)
<u>Comments:</u> Williams natural gas pipeline is a 12 inch distribution line and does not have sufficient capacity or pressure to support a generating facility. Expansion would be necessary.							
Umatilla, OR (Umatilla County)	TBD	Current use Ag	Near Coyote Springs II and Hermiston projects	Line Tap BPA and PacifiCorp 500 kV and 230 kV	McNary	Williams and PGT pipelines in vicinity	Columbia River; needs further investigation
<u>Comments:</u> Area overbuilt from an electrical interconnection perspective. Ability to obtain or transfer water right from Columbia River highly questionable..							

TABLE 3.3-3
Estimated Water Use and Disposition During Operations

Process Where Flow Starts	Process Receiving Flow	Water System Flows (gpm)*		Final Disposition
		Peak	Average	
Water supply wells	Raw water storage tank	210	115	Storage
Raw water storage tank	Demineralization process	317	130	Land application or evaporation
	HRSG blowdown tanks	100	100	Land application or evaporation
	Evaporative coolers	216	0	Land application or evaporation
	Potable water/sanitary systems	1	1	Septic system
	Service water	5	5	Land application or evaporation
	Fire protection	3,000	N/A	Storage
Reverse osmosis Treatment	Demineralization process	159	65	Demineralized water storage
	Wastewater storage tank	159	65	Land Application evaporation, or haul offsite to WWTP
Demineralized Process	Water/steam cycle	66	65	Land application or evaporation
	Wastewater collection basin	93	0	Land application or evaporation
Water/steam cycle	HRSG blowdown tanks	23	23	Land application or evaporation
	Evaporation	43	42	Evaporation
Evaporative coolers	Evaporation	108	0	Evaporation
	Wastewater collection basin	108	0	Land application or evaporation
HRSG blowdown tanks	Evaporation	8	8	Evaporation
	Wastewater collection basin	214	214	Land application or evaporation
Wastewater collection basin	Raw water storage tank	115	115	Storage
Stormwater from disturbed areas on Energy Facility site	Stormwater pond	Variable	Variable	Infiltration
	Stormwater infiltration basin	Variable	Variable	
Stormwater run-on from undisturbed areas	Plant stormwater by-pass drainages	Variable	Variable	Existing drainages and West Langell Valley Road drainage ditch

* Rates are for two blocks (1,160 MW) and are with supplemental duct firing.
HRSG = heat recovery steam generator
WWTP = wastewater treatment plant

TABLE 3.3-5
Water Quality Comparison

Parameter	Units	Land Application Water Quality	Lost River (min,max,average ³)	Jan Wright Well (12/18/92)
pH	Standard units	7.5-9.0	7.70, 8.20, 7.92	8.12
Iron	mg/L	0.14	--	0.0235
Copper	mg/L	0.00	--	0.0033
Manganese	mg/L	0.02	--	0.0269
Calcium	mg/L	28.92	--	34.9
Magnesium	mg/L	11.74	--	15.8
Sodium	mg/L	20.12	14.50, 25.50, 20.00	34
Potassium	mg/L	4.22	--	3.03
Boron	mg/L	0.54	--	--
Silica	mg/L	71.12	--	45.2
Chloride	mg/L	4.14	2.40, 7.80, 4.54	3.25
Nitrate as N	mg/L	0.84	0.10, 0.26, 0.18	ND @ 0.007
Nitrite as N	mg/L	0.02	--	--
Ammonia as N	mg/L	0.00	0.02, 0.41, 0.16	--
Sulfate	mg/L	6.29	11, 22.90, 17.56	10.2
Total Alkalinity	mg/L as CaCO ₃	164.12	100, 130, 116.43	218
Fluoride	mg/L	0.20	--	--
Phosphorous	mg/L	0.05	--	--
Orthophosphate as P	mg/L	0.00	0.25, 1.30, 0.51	ND @ 0.032
Sulfite	mg/L	0.00	--	--
Oil and Grease	mg/L	0.00	--	--
TOC	mg/L	0.00	--	--
TDS ¹	mg/L	203	237, 367, 295 ⁴	261
TSS	mg/L	0.00	--	--
Phosphonates ²	mg/L	0.00	--	--
Polyacrylate ²	mg/L	0.00	--	--
Free Chlorine ²	mg/L	0.00	--	--

Notes:

¹ Includes treatment chemicals for the steam cycle.

² Reverse osmosis (RO) treatment not required, therefore the phosphonates, polyacrylate, and free chlorine are not present.

³ Data obtained from EPA STORET Database for Lost River Harpold Dam Station, 1968-1975 Irrigation months (June 1-Sept 30).

⁴ Calculated from Electrical Conductivity (Snoeyink and Jenkins, 1980 and Van Hoorn and vanAlpen, 1994).

Projected water quality from Burns and McDonnell September 9, 2003, water balance.

CaCO₃ = calcium carbonate.

mg/L = milligrams per liter.

ND = nondetect.

TDS = total dissolved solids.

TOC = total organic content.

TSS = total suspended solids.

TABLE 3.4-5
Special-Status Species Potentially Occurring Within the Analysis Area

Species	FWS	BLM	ODFW ODA	ONHP	Habitat Requirements	Potential Occurrence in Analysis Area
Plants						
American pillwort <i>Pilularia americana</i>	--	--	--	2	Vernal pools and along the margins of lakes, ponds and reservoirs at elevations below 5,500 feet	Not observed; Some habitat present, known to occur along margins of reservoirs east of analysis area.
Baker's globe mallow <i>Illium bakerii</i>	--	<u>SS</u>	--	1	Chaparral, sagebrush, <u>ponderosa pine</u> and juniper woodland habitats at elevations between 3,000 and 8,500 feet	Not Observed, Suitable habitat present
Bellinger's meadowfoam <i>Limnanthes floccosa</i> ssp. <i>Bellingeriana</i>	<u>SoC</u>	<u>SS</u>	C	1	Vernal pools, moist meadows and seeps in open pine-oak woodlands at elevations between 900 and 4,000 feet	Not observed; Limited habitat present
Blue-leaved penstemon <i>Penstemon glaucinus</i>	<u>SoC</u>	<u>SS</u>	--	1	High elevation lodgepole and white fir forests	No suitable habitat; All known populations occur on 6400 acres of Federal lands managed by the Fremont NF, Winema NF and the BLM.
Columbia yellowcress <i>Rorippa columbiae</i>	<u>SoC</u>	<u>SS</u>	C	1	Along streams, lakes, wet meadows and other seasonally saturated areas at elevations between 4,000 and 6,000 feet	Not observed; Suitable habitat present
Creeping woody rock cress <i>Arabis suffrutescens</i> var <i>horizontalis</i>	SoC	--	C	1	Sagebrush scrub, Yellow pine forest and red fir forest at elevations less than 5,000 feet	Not observed; Suitable habitat present
Disappearing monkeyflower <i>Mimulus evanescens</i>	SoC	<u>SS</u>	C	1	Great basin scrub, lower montane conifer forest, pinyon juniper woodland; gravelly, rocky; vernal moist areas at elevations between 4,000 and 6,000 feet	Not observed; Suitable habitat present
Flaccid sedge <i>Craex leptalea</i>	--	<u>TS</u>	--	3	Bogs, fens, marshes, swamps, seeps and wet meadows at elevations less than 2,500 feet	Not observed; Limited habitat present; above known elevation range of species

TABLE 3.4-5
Special-Status Species Potentially Occurring Within the Analysis Area

Species	FWS	BLM	ODFW ODA	ONHP	Habitat Requirements	Potential Occurrence in Analysis Area
Fringed campion <i>Silene nuda</i> ssp. <i>Insectivora</i>	--	<u>TS</u>	--	4	Meadows in ponderosa / lodgepole pine forest openings at elevations between 4,000 and 6,000 feet	Meadows in ponderosa / lodgepole pine forest openings
Greene's Mariposa lily <i>Calachortus</i> <i>greenei</i>	SoC	<u>SS</u>	C	1	Oak woodland, pinyon juniper woodland, coniferous forest, meadows and seeps, volcanic soil, at elevations between 3,000 and 6,500	Not observed; Suitable habitat present
Green-flowered wild ginger <i>Asarum wagneri</i>	--	<u>SS</u>	C	1	Mixed conifer and lodgepole pine forests at elevations ranging from 4,500 to 8,500 feet	Not observed; Limited habitat present
Green-tinged paintbrush <i>Castilleja chlorotica</i>	--	<u>SS</u>	--	1	Dry gravelly slopes, and grassy openings in ponderosa pine or lodgepole pine forests at elevations between 5,000 and 8,200 feet	Not observed; Suitable habitat present
Howell's false caraway <i>Perideridia howellii</i>	--	<u>TS</u>	--	4	Ponderosa pine, mixed conifer, meadows, along streams and on moist slopes at elevations between 2,000 and 5,000 feet	Not observed; Suitable habitat present
Lady slipper orchid <i>Cypripedium</i> <i>fasciculatum</i>	SoC	SMC <u>BS</u>	C	C/1	Open conifer forest at elevations, generally acidic soil, at elevations between 500 and 7,500 feet	Not observed; Limited habitat present
Least phacelia <i>Phacelia</i> <i>minutissima</i>	--	--	C	1	Open, ephemerally moist areas in meadows, sagebrush-steppe, lower montane forests and riparian areas at elevations between 4,000 and 8,000 feet	Not observed; Suitable habitat present
Lemmon's catchfly <i>Silene lemmonii</i>	--	--	--	3	Oak woodlands and conifer forests at elevations between 2,800 and 9,000 feet	Not observed; Suitable habitat present
Long-bearded Mariposa lily <i>Calachortus</i> <i>longebarbatus</i> <u><i>longebarbatus</i></u>	--	<u>TS</u>	--	1	Meadows or along the edges of ponderosa pine, lodgepole pine forests and in juniper woodlands at elevations between 4,000 and 6,000 feet	Meadows in ponderosa / lodgepole pine forest openings

TABLE 3.4-5
Special-Status Species Potentially Occurring Within the Analysis Area

Species	FWS	BLM	ODFW ODA	ONHP	Habitat Requirements	Potential Occurrence in Analysis Area
Mountain lady's slipper <i>Cypripedium montanum</i>	--	<u>TS</u> SMC		4	Mixed conifer forests and woodlands at elevations ranging from 300 to 6,000 feet	Not observed; Suitable habitat present
Mt. Mazama collomia <i>Collomia mazama</i>	--	--	--	1	Alpine meadows and on slopes in association with mixed conifer, true fir and lodgepole pine forests, generally on open or disturbed areas at elevations generally above 5,000 feet	No suitable habitat present
Newberry's gentian <i>Gentiana newberryi</i>	--	<u>AS</u>	--	2	Vernally wet to dry, subalpine and alpine meadows, along mountain streams at elevations between 5,000 and 12,000 feet	No suitable habitat present
Playa phacelia <i>Phacelia inundata</i>	SoC	--	--	1	Sagebrush scrub, yellow pine forests, alkali sinks and playas, on alkaline soil 4,500 to 6,000 feet.	Not observed; Limited habitat present
Profuse –flowered mensa mint <i>Pogogyne floribunda</i>	SoC	<u>SS</u>	--	1	Vernal pools, seasonal lakes and intermittent drainages at elevations between 3,200 and 5,000 feet	Not observed; limited habitat present
Prostrate buckwheat <i>Erigonum procidum</i>	SoC	--	C	1	Dry, rocky slopes, and flats within juniper-sagebrush and Jeffery pine woodlands at elevations between 4,000 and 8,500 feet	Not observed; Suitable habitat present
Rafinesque's pondweed <i>Potamogeton diversifolius</i>	--	--	--	2	Ponds, streams and reservoirs below 8,000 feet	Not observed; Limited habitat present
Red-root yampah <i>Perideridia erythrorhiza</i>	SoC	--	C	1	Meadows, pastures, and open areas in pine-oak woodlands at elevations less than 5,000 feet	Not observed; Suitable habitat present
Salt heliotrope <i>Heliotropum curvassavicum</i>	--	<u>TS</u>	--	3	Many different plant communities at elevations less than 7,000 feet, but is generally associated with saline soil	Not observed; Suitable habitat present

TABLE 3.4-5
Special-Status Species Potentially Occurring Within the Analysis Area

Species	FWS	BLM	ODFW ODA	ONHP	Habitat Requirements	Potential Occurrence in Analysis Area
Shockley's ivisia <i>Ivesia shockleyi</i>	--	--	--	2	Open gravelly, rocky areas associated with subalpine fir and pine forests, at elevations between 9,000 and 13,000 feet	No suitable habitat present
Short-podded thelypody <i>Thelypodium brachycarpum</i>	--	<u>AS</u>	--	2	Irrigated pasture, sagebrush shrub, pond and stream edges; adjacent to ponderosa pine forests; alkali soil at elevations between 3,000 and 6,500 feet	Not observed; Suitable habitat present
Slender bulrush <i>Scirpus heterochaetus</i>	--	<u>TS</u>	--	3	Marshes, swamps and around lake edges, in lower montane conifer forests at elevations around 5,000 feet	Not observed; Limited habitat present
Tricolor monkeyflower <i>Mimulus tricolor</i>	--	--	--	2	Moist flats on wet clay soil and in vernal pools within woodlands and grasslands, at elevations less than 5,000 feet	Not observed; Limited habitat present
Warner Mountain bedstraw <i>Gallium serpenticum</i> var. <i>warnerense</i>	--	--	--	2	Meadows and seeps, pinyon / juniper woodland, conifer forest and rocky talus at elevations between 4,500 and 9,000 feet	Not observed; Suitable habitat present

TABLE 3.4-5
Special-Status Species Potentially Occurring Within the Analysis Area

Species	FWS	BLM	ODFW ODA	ONHP	Habitat Requirements	Potential Occurrence in Analysis Area
United States Fish and Wildlife Service (FWS)						
SoC Federal Species of Concern						
Bureau of Land Management, Klamath Falls Resource Area Special Status Species (BLM)						
TS - Bureau Tracking Species						
AS - Bureau Assessment Species						
SS - Bureau Sensitive Species						
SMA Survey and Manage Category A Species						
SMB Survey and Manage Category B Species						
SMC Survey and Manage Category C Species						
Oregon Department of Fish and Wildlife (ODFW) / Oregon Department of Agriculture (ODA)						
C	Candidate for state listing as threatened or endangered					
V	Vulnerable species for which listing as threatened or endangered is not believed to be imminent					
U	Undetermined status; more information is needed to determine the conservation status of the species					
P	Peripheral or naturally rare species, species on the edge of their natural range in Oregon, or have naturally low populations within the state					
Oregon Natural Heritage Program (ONHP)						
1	Taxa that are threatened or endangered throughout their range					
2	Taxa that are threatened or endangered in Oregon, but more secure elsewhere					
3	Review list, taxa for which more information is needed to determine the conservation status					
4	Species that are of conservation concern, but are not currently threatened or endangered					

TABLE 3.6-4
 Estimated Truck Traffic at the Energy Facility During Operation

Delivery Type	Number and Occurrence of Trucks
Aqueous ammonia	2 per week
Condensed polisher waste	1 per month
Cleaning chemicals	1 per month
Trash pickup	1 per week
Sanitary waste	1 per year
Wastewater transport*	5 to 9 per day

* Applies only if storage and haul to wastewater treatment plant (WWTP) option is selected.

TABLE 3.6.5
Existing and Future Peak-Hour Traffic Volumes and LOS with and without Energy Facility Impacts

	2000 Existing PM Peak		2004 PM Peak without Energy Facility		2004 PM Peak with Energy Facility	
	Traffic Volumes	LOS	Traffic Volumes	LOS	Traffic Volumes [*]	LOS
West Langell Valley Road (south of Harpold Road)	40	A	45	A	65/83	A
Harpold Road (north of West Langell Valley Road)	40	A	45	A	65/83	A
Harpold Road (south of West Langell Valley Road)	40	A	45	A	65/65	A
East Langell Valley Road	40	A	45	A	65/65	A
OR 50 (east of Harpold Road)	150	A	165	A	185/185	A
OR 50 (west of Harpold Road)	150	A	165	A	185/185	A
OR 70 (east of Harpold Road/Carol Avenue)	190	A	210	A	230/230	A
OR 70 (west of Harpold Road)	90	A	100	A	120/138	A
OR 140 (east of OR 70)	310	B	342	B	360/360	B
OR 140 (west of OR 70)	330	B	365	B	385/403	B

~~*= 65/83: Traffic volume without process wastewater truck trips/traffic volume with process wastewater truck trips.~~

LOS = level of service

Estimated 1 percent growth factor for 2004.

Source: Oregon Department of Transportation

TABLE 3.8-1
Resources Identified as Scenic or Aesthetic

Resource	Jurisdiction	Applicable Plan Designation	Approximate Distance from Energy Facility (miles)	Approximate Distance from Southernmost Transmission Towers (miles)	Line of Sight to Stacks or Transmission Towers? (N = no, Y = yes)
Lava Beds National Monument	National Park Service	No scenic designation	22	17	N, Y
Sycan National Wild and Scenic River	USFS/Fremont and Winema NF	Wild and Scenic River	21	21	N, N
North Fork Sprague River (Wild and Scenic River)	USFS/Fremont and Winema NF	Wild and Scenic River, Scenic and Recreational Area	27	27	N, N
OC&E Woods Line State Trail	OPRD	Rails to Trails route, no scenic designation	9	8	Y, Y
Bloody Point	Modoc County	Historic Site with vista point	14	9	N, Y
Petroglyphs	Modoc County	Historic Site with vista point	22	16	N, Y
Battle of Scorpion Point	Modoc County	Historic Site with vista point	24	19	N, Y
Volcanic Legacy Scenic Byway (US 97 in Oregon)	ODOT/Klamath County	National Scenic Byway	21	20	Y, Y
US 97	Caltrans	Eligible Scenic Highway	21	20	N, N
SR 161	Caltrans	Eligible Scenic Highway	14	9	N, Y
SR139	Caltrans	Eligible Scenic Highway	14	9	N, Y
Modoc Volcanic Scenic Byway	USFS, Modoc County	National Scenic Byway	15	10	N, Y
Bear Valley National Wildlife Refuge Observation Area	USFWS	Wildlife observation, no scenic designation	28	25	N, N
Lower Klamath National Wildlife Refuge Wildlife Overlook	USFWS	Wildlife observation, no scenic designation	19	15	N, Y
Tulelake National Wildlife Refuge Wildlife Overlook	USFWS	Wildlife observation, no scenic designation	17	11	N, Y
Klamath Wildlife Refuge	ODFW	State Wildlife Refuge, no scenic designation	22	20	N, N
Miller Creek ACEC	BLM, Klamath Falls	BLM Area of Critical Environmental Concern with scenic value	10	10	Y, Y
<u>Alkali Lake</u>	<u>BLM, Klamath Falls</u>		<u>4</u>	<u>8</u>	<u>Y, Y</u>
<u>Yainax Butte</u>	<u>BLM, Klamath Falls</u>	<u>BLM Special Area</u>	<u>12</u>	<u>17</u>	<u>Y, Y</u>
Bumpheads Special Area	BLM, Klamath Falls	BLM Special Botanical/Habitat Area with scenic value	15	15	N, N

BLM = Bureau of Land Management
 NF = National Forest
 ODFW = Oregon Department of Fish and Wildlife
 ODOT = Oregon Department of Transportation
 OPRD = Oregon Parks and Recreation Department
 OSU = Oregon State University
 USFS = U.S. Forest Service
 USFWS = U.S. Fish and Wildlife Service