BEFORE THE
ENERGY FACILITY SITING COUNCIL
OF THE STATE OF OREGON

IN THE MATTER OF THE APPLICATION FOR A SITE CERTIFICATE FOR
THE TROUTDALE ENERGY CENTER

PROPOSED ORDER

Issued by

Oregon Department of Energy
625 Marion Street NE
Salem OR 97301-3742

December 16, 2013
# TABLE OF CONTENTS

1. INTRODUCTION .................................................................................................................. 1
2. PROPOSED FACILITY ............................................................................................................. 2
3. PROCEDURAL HISTORY ......................................................................................................... 8
4. STANDARDS FOR SITING FACILITIES ............................................................................. 10
5. GENERAL STANDARD OF REVIEW [OAR 345-022-0000] ............................................ 11
6. ORGANIZATIONAL EXPERTISE [OAR 345-022-0010] ....................................................... 16
7. Organizational Expertise: Findings of Fact ........................................................................... 17
8. Organizational Expertise: Conclusions of Law ...................................................................... 18
9. STRUCTURAL STANDARD [OAR 345-022-0020] ................................................................. 19
10. Structural Standard: Findings of Fact .................................................................................... 19
11. Structural Standard: Conclusions of Law ............................................................................ 27
12. SOIL PROTECTION [OAR 345-022-0022] ........................................................................ 27
13. Soil Protection: Findings of Fact ............................................................................................ 27
14. Soil Protection: Conclusions of Law ....................................................................................... 31
15. LAND USE [OAR 345-022-0030] .......................................................................................... 32
16. Land Use: Findings of Fact  .................................................................................................... 33
17. Land Use: Conclusions of Law ............................................................................................... 85
18. PROTECTED AREAS [OAR 345-022-0040] ...................................................................... 85
19. Protected Areas: Findings of Fact .......................................................................................... 88
20. Protected Areas within the Analysis Area ............................................................................ 88
21. Types of Impacts to Protected Areas ..................................................................................... 90
22. Potential Impacts to Protected Areas and Proposed Mitigation ........................................... 96
23. Protected Areas: Conclusions of Law ................................................................................... 114
24. RETIREMENT AND FINANCIAL ASSURANCE [OAR 345-022-0050] .............................. 114
26. Restoration of the Site Following Ceasation of Construction or Operations ......................... 115
27. Applicant’s Likelihood of Obtaining a Bond or Letter of Credit ........................................ 120
28. Retirement and Financial Assurance: Conclusions of Law ................................................. 121
29. FISH AND WILDLIFE HABITAT [OAR 345-022-0060] ..................................................... 121
30. Fish and Wildlife Habitat: Findings of Fact .......................................................................... 121
31. Habitat Categories within the Analysis Area ....................................................................... 122
32. Potential Types of Impacts and Proposed Avoidance or Minimization ............................... 123
33. Impacts to Specific Habitat and Proposed Mitigation ......................................................... 130
34. Fish and Wildlife Habitat: Conclusions of Law ................................................................... 136
35. THREATENED AND ENDANGERED SPECIES [OAR 345-022-0070] ............................. 136
36. Threatened and Endangered Species: Findings of Fact ...................................................... 136
37. Threatened and Endangered Species: Conclusions of Law ............................................... 152
38. SCENIC RESOURCES [OAR 345-022-0080] ..................................................................... 152
39. Scenic Resources: Findings Of Fact ...................................................................................... 152
40. Scenic Resources within the Analysis Area ........................................................................... 153
41. Types of Potential Impacts to Scenic Resources ................................................................ 156
42. Potential Impacts to Scenic Resources and Values and Proposed Mitigation ..................... 160
43. Scenic Resources: Conclusions of Law ................................................................................ 189
44. RECREATION [OAR 345-022-0100] ................................................................................... 189
45. Recreation: Findings of Fact ............................................................................................... 190

Troutdale Energy Center
Proposed Order
December 16, 2013
V. PROPOSED CONCLUSIONS AND ORDER .......................................................... 267

List of Tables
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52

TABLE 1: DEADLINES FOR BEGINNING AND COMPLETING CONSTRUCTION .......................................................... 13
TABLE 2: MCE SOURCE CHARACTERIZATION PARAMETERS ........................................................................... 22
TABLE 3: TREE REPLACEMENT MITIGATION OPTION 1: .................................................................................. 43
TABLE 4: TABLE 19.85.020.A (EXCERPT) LAND USES TYPES PERMITTED IN THE GENERAL INDUSTRIAL DISTRICT ..... 67
TABLE 5: PROTECTED AREAS WITHIN THE 20-MILE ANALYSIS AREA ......................................................... 88
TABLE 6: APPLICANT’S SITE RESTORATION COST ESTIMATE ........................................................................... 116
TABLE7: LISTED AND CANDIDATE PLANT SPECIES WITH POTENTIAL TO OCCUR WITHIN ANALYSIS AREA .......... 138
TABLE 8: PROTECTED OR CANDIDATE WILDLIFE SPECIES WITH POTENTIAL TO OCCUR WITHIN ANALYSIS AREA ... 144
TABLE 9: PROTECTED OR CANDIDATE FISH SPECIES WITH POTENTIAL TO OCCUR WITHIN ANALYSIS AREA .......... 147
TABLE 10: SCENIC RESOURCES IDENTIFIED IN LOCAL, STATE, AND FEDERAL LAND USE AND MANAGEMENT PLANS THAT PERTAIN TO LANDS WITHIN 10 MILES OF THE SITE BOUNDARY ................................................. 154
TABLE 11: CARBON DIOXIDE STANDARD FOR TROUTDALE ENERGY CENTER ................................................. 245
TABLE 12: STATISTICAL NOISE LIMITS FOR INDUSTRIAL AND COMMERCIAL NOISE SOURCES .......................... 259

Troutdale Energy Center
Proposed Order
December 16, 2013
List of Appendices

1. Appendix A: Vicinity Map
2. Appendix B: Overview Site Plan
3. Appendix C: Index of Comments on the Draft Proposed Order
4. Appendix D: Habitat Mitigation and Monitoring Plan
5. Appendix E: Map of Areas Recommended for Shovel Testing for Cultural Resources
6. Appendix F: Draft Memorandum of Understanding with The Climate Trust

Acronyms and Abbreviations

ACEC  Area of Critical Environmental Concern
ACFM  Ash Creek Forest Management, LLC
ADA   Americans with Disabilities Act
ALF   Airport Landing Field overlay district (City of Troutdale)
APLIC  Avian Powerline Interaction Committee
Applicant  Troutdale Energy Center, LLC
ASC   Application for Site Certificate filed on March 22, 2013
BLM   Bureau of Land Management
BMP   Best Management Practice
BPA   Bonneville Power Administration
Btu   British thermal units
CO₂  Carbon dioxide
Council  Oregon Energy Facility Siting Council
CTG   Combustion turbine generator
CUP   Conditional Use Permit
CWM   Compensatory Wetland Mitigation
dBA   A-weighted decibels (sound pressure level)
Department  Oregon Department of Energy
DEQ   Department of Environmental Quality
DLCD  Department of Land Conservation and Development
DOGAMI Department of Geology and Mineral Industries
DPO   Draft Proposed Order
DSL   Department of State Lands
EFSC  Oregon Energy Facility Siting Council
EIF   Energy Investors Funds
EMF   Electric and magnetic Fields
EPA   Environmental Protection Agency
EPC   Engineering, Procurement and Construction
EPRI  Electric Power Research Institute
ESCP  Erosion and Sediment Control Plan
F-2   Agricultural Holding zone (City of Fairview)
FAA   Federal Aviation Administration
FLMA  Flood Management Area (City of Troutdale)
FMC   Fairview Municipal Code
GFES  Gresham Fire and Emergency Services
1 GI     General Industrial zone (Cities of Troutdale and Fairview)
2 gpd    Gallons per day
3 HMP    Habitat Mitigation Plan (Appendix D)
4 HRSG   Heat recovery steam generator
5 I-84   Interstate 84
6 ISO    International Organization for Standardization
7 km     Kilometer
8 kV     Kilovolt(s)
9 kV/m   Kilovolts per meter
10 KVA    Key Viewing Area
11 LCDC   Land Conservation and Development Commission
12 MCC    Motor Control Center
13 MCDD   Multnomah County Drainage District #1
14 MCE    Maximum Considered Earthquake
15 mG    Milligauss
16 MPH    Miles per hour
17 MW     Megawatt(s)
18 NOI    Notice of Intent
19 NPDES  National Pollutant Discharge Elimination System
20 NWI    National Wetlands Inventory
21 NWR    National Wildlife Refuge
22 O&M    Operations and Maintenance
23 OAR    Oregon Administrative Rule
24 ODA    Oregon Department of Agriculture
25 ODF    Oregon Department of Forestry
26 ODOE   Oregon Department of Energy
27 ODFW   Oregon Department of Fish and Wildlife
28 ODOT   Oregon Department of Transportation
29 ORPRD  Oregon Parks and Recreation Department
30 OPUC   Oregon Public Utility Commission
31 ORBIG  Oregon Biodiversity Information Center
32 ORS    Oregon Revised Statute
33 OSSC   Oregon Structural Specialty Code
34 OWRD   Oregon Water Resources Department
35 pASC   preliminary Application for Site Certificate
36 PGA    Peak Ground Acceleration
37 PGE    Portland General Electric
38 PNWHF  Pacific Northwest Hydrography Framework
39 PP&L   Pacific Power and Light
40 PPMS   Power Plant Management Services, LLC
41 R      Residential zone (City of Fairview)
42 RAI    Request for Additional Information
43 ROD    Record of Decision (EPA)
44 ROW    Right-of-way
45 RQ     Reportable quantity
46 SAG    Special Advisory Group
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<td>Vegetation Corridor and Slope District (City of Troutdale)</td>
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<td>WHMMP</td>
<td>Wildlife and Habitat Monitoring and Mitigation Plan (Appendix D)</td>
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I. INTRODUCTION

This Proposed Order addresses the application for a site certificate (ASC) for the construction and operation of the proposed Troutdale Energy Center, a 652-megawatt natural gas fueled energy generating facility, proposed to be located in the cities of Troutdale and Fairview, Oregon. The applicant, Troutdale Energy Center, LLC (TEC, or Applicant), is a wholly owned subsidiary of Development Partners Funding I, LLC. The Oregon Department of Energy (Department) issues this Proposed Order in accordance with Oregon Revised Statute (ORS) 469.370(4), based on its review of the application, the draft proposed order, testimony given at the public hearing, and after consulting with other agencies. Based upon the analysis and conclusions contained in this Proposed Order, the Department recommends that the Energy Facility Siting Council (EFSC, or Council) grant the site certificate for the facility, subject to the conditions stated in this Proposed Order.

It is the public policy of the State of Oregon that “the siting, construction and operation of energy facilities shall be accomplished in a manner consistent with protection of the public health and safety and in compliance with the energy policy and air, water, solid waste, land use and other environmental protection policies of this state.”\(^1\) ORS 469.320 requires a site certificate from the Energy Facility Siting Council (Council) before construction of a “facility.” ORS 469.300(14) defines “facility” as an “energy facility together with any related or supporting facilities.” The proposed Troutdale Energy Center qualifies as an “energy facility” under the definition in ORS 469.300(11)(a). Unless otherwise specified, the definitions in ORS 469.300 and Oregon Administrative Rule (OAR) 345-001-0010 apply to terms used in this Proposed Order.

A site certificate is a binding agreement between the State of Oregon and the applicant, authorizing the applicant to construct and operate a facility on an approved site, incorporating all conditions imposed by the Council on the applicant. A site certificate issued by the Council binds the state and all counties, cities and political subdivisions of Oregon. Once the Council issues the site certificate, the responsible state agency or local government must issue any necessary permits that are addressed in the site certificate without further proceedings.\(^2\) The Council has continued authority over the site for which the site certificate is issued and may inspect the site at any time in order to ensure that the facility is operated consistently with the terms and conditions of the site certificate.\(^3\) Under OAR 345-027-0020(1), the Council may not change the conditions of the site certificate, except as provided in OAR Chapter 345, Division 27.

Based upon its review, including conclusions contained in this Proposed Order, the Department recommends that the Council grant the site certificate for the Troutdale Energy Center, subject to the conditions set forth in this order.

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\(^1\) ORS 469.310.  
\(^2\) ORS 469.401(3).  
\(^3\) ORS 469.430.
Council Process

The Department issues this Proposed Order on the application for site certificate in accordance with ORS 469.370(4). The Proposed Order takes into consideration the comments of the Council and public comments made at the public hearing on the Draft Proposed Order, and agency consultation. Concurrent with the issuance of the Notice of Proposed Order, the Department issues a Contested Case Notice. The contested case notice specifies a deadline for requests to participate as a party in the contested case, the date of the prehearing conference, and the time and place of the hearing. Only those persons who commented orally at the public hearing or in writing on the record of the public hearing may request to become parties to the contested case, and only those issues raised on the record of the public hearing with “sufficient specificity to afford the Council, the Department, and the applicant an adequate opportunity to respond to each issue” can be considered in the contested case.

At the conclusion of the contested case proceeding, the Council must decide whether to grant a site certificate and issue a final order either approving or rejecting the application based on the standards adopted under ORS 469.501, and any additional state statutes, rules, or local government ordinances determined to be applicable to the proposed facility.

The Council’s final order is subject to judicial review by the Oregon Supreme Court. Only a party to the contested case may request judicial review and the only issues that may be subject to judicial review are issues that parties to the contested case have raised. A petition for judicial review must be filed with the Supreme Court within 60 days after the date of service of the Council’s final order or within 30 days after the date the petition for rehearing is denied or deemed denied.

II. PROPOSED FACILITY

II.A: Location and Site Boundary

Exhibit B (General Information) and Exhibit C (Location) of the application provide the description of the proposed facility. The proposed facility is located in the City of Troutdale, Oregon, at the Troutdale Reynolds Industrial Park (TRIP). The applicant generally proposes to locate the generating plant and most related or supporting facilities on Lot 3 of the TRIP plat and carry out construction staging on Lot 6 of the plat. The site is owned by the Port of

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4 ORS 469.370(4).
5 ORS 469.370(3).
6 ORS 469.370(7).
7 ORS 469.403.
8 Comments from the City of Troutdale note that Lot 6 has not been recorded yet and is still part of Tract D of the plat of Troutdale Reynolds Industrial Park. Comment letter from Elizabeth McCallum, Senior Planner, City of Troutdale, May 1, 2013. The ASC does not rely on Lot 6 as a recorded lot, only as a reference point to
Portland and is currently unused and vacant. The applicant holds an exclusive and irrevocable option to purchase site from the Port of Portland.

The applicant proposes two utility corridors, which are included within the site boundary. One corridor is an 80-foot-wide easement for the proposed 230-kilovolt (kV) overhead transmission line between the main facility site and the point of interconnection, to be selected by the applicant from among three potential routes under consideration. A second utility corridor would be a 20-foot-wide easement to run two underground process water pipelines between the main facility and the City of Troutdale Water Pollution Control Facility (WPCF).

As defined by OAR 345-001-0010, the “site boundary” is the perimeter of the site of the energy facility, its related or supporting facilities, all temporary staging areas, and all corridors. The site boundary for the proposed facility encompasses approximately 80.7 acres; approximately 20.7 acres of this total area comprises the transmission and water line utility corridors.

The energy facility would encompass all or portions of the following:

- Township 1N Range 3E Section 23
- Township 1N Range 3E Section 24

II.B: Project Overview

ORS 469.300(11)(a)(A) defines the “energy facility” in this case as “an electric power generating plant with a nominal electric generating capacity of 25 MW [megawatts] or more, including, but not limited to...combustion turbine power plant.” The proposed facility is a natural gas-fueled combined-cycle and simple-cycle “electric power generating plant.” The proposed facility would consist of two generator blocks. The combined-cycle generator block would be capable of generating up to 447 MW of electrical power. The simple-cycle generator block, which would consist of two simple-cycle turbines, would be capable of generating up to 205 MW. The total nominal electrical generating capacity of the energy facility would be up to 652 MW. The two generator blocks would be housed in separate buildings.

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10 Final ASC, Section B.1, p. B-1.
11 The facility “site”, as defined under ORS 469.300, includes all land upon which the energy facility and its related or supporting facilities are located.
12 Final ASC, Section B.1, p. B-1.
13 Final ASC, Section B.2.2.1, p. B-3.
Combined Cycle Generator Block

The combined-cycle power plant would include a Mitsubishi M501 GAC combustion turbine or other similar unit, consisting of a combustion turbine generator (CTG); heat recovery steam generator; steam turbine generator; condenser; cooling tower; auxiliary boiler; and electrical systems.\(^{14}\)

Simple-Cycle Generator Block

The simple-cycle plant configuration would use two GE LMS 100 (or other similar unit) generating units, each with a wet cooling tower for the intercooler (described below) and cooling for the CTG auxiliaries. The simple-cycle unit would consist of the following components: CTG; selective catalytic reduction (SCR) module; cooling tower; and electrical systems.\(^{15}\)

Transmission Interconnection

A step-up transformer would be connected to each CTG to step up the CTG output voltage to 230 kV.\(^{16}\) West of the generation facility, the output from each step-up transformer would be tied into a fenced-in radial bus switchyard. The switchyard would contain a breaker and two disconnect switches for safety and maintenance operations, along with a modular electrical building to house communications and electrical equipment.\(^{17}\) A 230-kV overhead transmission line would be installed to connect the facility with the Portland General Electric (PGE) Blue Lake Substation, the Pacific Power and Light (PP&L) Troutdale Substation, or the Bonneville Power Administration (BPA) Troutdale Substation. The maximum transmission line length would be approximately 1.8 miles depending on the selected interconnection point.\(^{18}\)

Fuel Consumption

Natural gas consumption for the full planned 652-MW facility would be approximately 5.3 million pounds mass per day. Gas would be transmitted to the facility via the Northwest Pipeline’s Camas/Eugene Loop Line natural gas transmission pipeline, which is located along the eastern site boundary.\(^{19}\) As backup in the case of an interruption in gas supply, the facility would use ultra-low sulfur diesel (ULSD) for up to 720 hours per year.\(^{20}\)

\(^{14}\) Final ASC, Section B.2.2, p. B-3.
\(^{15}\) Final ASC, Section B.2.3, p. B-6.
\(^{16}\) Final ASC, Section B.2.2, p. B-3.
\(^{17}\) Final ASC, Section B.3.3, p. B-15.
\(^{19}\) Final ASC, Section B.2.6.1, p. B-11.
Water Consumption

Potable water would be supplied from the existing City of Troutdale potable water system.21 Sanitary sewers would connect to the existing City of Troutdale sanitary sewer line.22 For process (cooling and boiler) use, the facility would obtain reclaimed water derived from the City of Troutdale’s WPCF,23 and would return treated process wastewater to the WPCF.24 During periods of low water flow, or when ambient conditions include extremely high temperatures, the facility would purchase groundwater from the Port of Portland.25

Fuel and Chemical Storage

Fuel and chemical storage would be contained on site. Storage would include a steel aboveground storage tank for ULSD, a steel tank for aqueous ammonia used for facility emissions control, and a holding tank for wash water used to clean compressor blades in the CTG. Miscellaneous water treatment chemicals, cleaning chemicals, and lubricants would be stored in the water treatment building and the warehouse building.26

II.C: Related and Supporting Facilities

The proposed facility would include the following related or supporting facilities:

- Gas metering station and natural gas pipeline
- Switchyard and overhead transmission line
- Process water and wastewater pipelines
- Potable water and sanitary sewer lines
- Fuel oil storage tank
- Accessory buildings
- Roads, parking areas, and other paved surfaces
- Telephone, communications, security, and lighting systems
- Temporary construction areas

Gas Metering Station and Natural Gas Pipeline

The proposed facility would interconnect with the existing Northwest Pipeline Camas/Eugene Loop Line natural gas transmission pipeline, located along the eastern boundary of Lot 3. A new ultrasonic flow gas metering station would be installed along the existing pipeline, and an

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22 Final ASC, Section B.3.8, p. B-17.
23 Final ASC Section B.3.5, p. B-16.
24 Final ASC, Section B.3.6, p. B-16.
25 Final ASC, Section B.3.5, p. B-16.
26 Final ASC, Section B.2.4, p. B-8.
approximately 10-inch-diameter underground pipeline would extend approximately 150 feet from the gas tie-in to the new metering station. A 48-square-foot electrical building would be located near the new metering station to house necessary computer, communications, and electrical equipment.27

**Switchyard and Overhead Transmission Line**

Electrical power generated by the facility would be transmitted from the step-up transformers into a new 230-kV alternating-current open-air switchyard. Equipment would include a small control building, vertical steel support structures and electrical bus work, high-voltage circuit breakers, high-voltage disconnect switches, and related equipment.28

To connect the switchyard to the electrical grid, a 230-kV overhead transmission line would be installed to the point of interconnection. Three existing interconnection substations are under consideration by the applicant, with a maximum transmission line length of approximately 1.8 miles. Regardless of which route is selected, the line would be constructed using steel monopole structures to meet National Electrical Safety Code (NESC) design standards and Avian Protection Guidelines.29

**Process Water and Wastewater Pipeline**

Estimated process make-up water required for facility operations would be between 3.0 and 5.5 million gallons of water per day (mgd). Process water would consist of reclaimed water derived from the effluent of the City of Troutdale’s WPCF, with supplemental supply from groundwater provided by the Port of Portland.30 Supply from the City WPCF would require construction of an approximately 24-inch-diameter reclaimed water line, extending approximately 0.5 mile.31

Process wastewater would consist of (1) water treatment system wastes, (2) CTG water wash wastes, and (3) cooling tower blowdown. Steam cycle blowdown also would be generated, but it would be mixed with service water and sent to the cooling tower. CTG water wash wastes would be captured in a tank to be trucked offsite for disposal. Water treatment system wastes

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29 The existing substation ultimately selected for interconnection would likely require upgrades, including disconnect(s) and breaker(s) along with additional bussing. These improvements would be undertaken by the entity owning and controlling the substation and are not evaluated in this Draft Proposed Order.
31 Groundwater wells and associated piping would be permitted and installed by the Port of Portland using existing water rights for the use of various current or potential future Port occupants and are not within EFSC jurisdiction.
and cooling tower blowdown would either evaporate or be treated and sent offsite through a new 8-inch wastewater pipe routed back to the WPCF.\textsuperscript{32}

**Potable Water and Sanitary Sewer Lines**

An estimated 8,640 gallons per day (gpd) of potable water would be supplied to the facility using the existing City of Troutdale potable water system, via a new connection to existing line at the southwest corner of the facility site.\textsuperscript{32} Sanitary waste discharge, estimated at 750 gpd, would be disposed via a new connection to the existing City of Troutdale sanitary sewer line.\textsuperscript{34} Both the existing potable water and sanitary sewer lines are located along the southern edge of the site.

**Fuel Oil Storage Tank**

A 2.2-million-gallon steel tank would be used to hold ULSD as secondary backup fuel for the Facility. The tank would be located inside a bermed secondary containment area in case of inadvertent leaks or spills.\textsuperscript{35}

**Accessory Buildings**

Accessory buildings would include an administration/warehouse building, a water treatment building, and a control building.\textsuperscript{36}

**Roads, Parking Areas, and Other Paved Surfaces**

A new private access road would be constructed to connect NW Swigert Way to two proposed parking areas.\textsuperscript{37} The parking areas would provide a total of 18 spaces.\textsuperscript{38} The applicant states that the Port of Portland will extend NW Swigert Way south to NW Graham Road as part of the Port’s Phase II development of TRIP. This road extension will be undertaken by the Port as part of its normal expansion plans and is therefore not considered a related and supporting facility.

**Telephone, Communications, Security, and Lighting Systems**

\textsuperscript{32} Final ASC, Section B.3.6, pp. B-16 and B-17.
\textsuperscript{33} Final ASC, Section B.3.7, p. B-17.
\textsuperscript{34} Final ASC, Section B.3.9, p. B-17.
\textsuperscript{35} Final ASC, Section B.2.4, p. B-8, and Section B.3.11, p. B-18.
\textsuperscript{36} Final ASC, Section B.3.12, p. B-18.
\textsuperscript{37} Final ASC, Section K.2.1, p. K-3.
\textsuperscript{38} Final ASC, Section B.13, p. B-18.
Troutdale Energy Center  
Proposed Order

A main trunk line would be installed from a local telephone/internet service provider to a patch panel located within the facility. In addition, a plant-wide communication and emergency notification system would be installed.\textsuperscript{39}

The immediate facility site, not including the access roads, would be secured by a 6-foot-high chain-link fence. The entrance into the facility along the access road would include a security gate operated remotely from the administration building. Facility lighting would be provided to enhance safety and security.\textsuperscript{40}

\textit{Temporary Construction Areas}

Construction of the facility would require the temporary use of areas outside the facility footprint. Construction offices, construction parking, equipment storage, laydown, and temporary storage of soil would occupy approximately 30 acres within the identified site boundary, primarily on Lot 6, within TRIP immediately south of Lot 3.\textsuperscript{41}

\textbf{III. PROCEDURAL HISTORY}

\textbf{III.A: Notice of Intent}

On November 22, 2011 the applicant filed a Notice of Intent (NOI) with the Department to submit an application for site certificate for the Troutdale Energy Center. The Department distributed the NOI for agency comments on January 6, 2012 and issued a public notice on the NOI on January 12, 2012. The Department opened a comment period on the NOI through February 3, 2012.

On December 9, 2011 the Council appointed the cities of Troutdale and Fairview as Special Advisory Groups for the proposed facility.\textsuperscript{42}

The Department held a public information meeting on the proposed facility at Mt. Hood Community College on January 26, 2012.

\textsuperscript{39} Final ASC, Section B.14, p. B-19.  
\textsuperscript{40} Final ASC, Section B.15, p. B-19.  
\textsuperscript{41} Final ASC, Section B.1.1, p. B-1. In comments on the application for site certificate, the City of Troutdale indicated that the area identified in the application as “Lot 6” has not been recorded, and is still part of Tract D of the plat of TRIP. The Department nevertheless uses Lot 6 in this Draft Proposed Order because Lot 6 is a clearly delineated area in figures submitted by the applicant, and used in the application solely for descriptive purposes.  
\textsuperscript{42} Order Appointing the City of Troutdale and the City of Fairview as Special Advisory Groups for the Troutdale Energy Center, Energy Facility Siting Council, December 9, 2011.
The Department issued the project order for the facility on April 20, 2012, specifying the state statutes, administrative rules, and local, state, and tribal permitting requirements applicable to the construction and operation of the Troutdale Energy Center.

III.B: Application for Site Certificate

The applicant submitted a preliminary Application for Site Certificate (pASC) for the proposed facility to the Department on July 23, 2012. The Department distributed the pASC to reviewing agencies and requested comments on the completeness of the pASC through August 22, 2012. On September 20, 2012, the Department notified the applicant that the pASC was incomplete and issued a request for additional information (RAI). The applicant provided additional information in responses to the RAI in sections received on October 22, 2012, October 31, 2012, February 5, 2013, and February 28, 2013. The Department determined the application to be complete on March 18, 2013 and filed a complete application for site certificate on March 22, 2013.

Copies of the complete application for site certificate were distributed to reviewing agencies on April 1, 2013. On April 3, 2013, the Department issued a public notice on the complete application. The Department held a public information meeting on April 24, 2013, at the Sam Cox Building in Glenn Otto Community Park in Troutdale.

At the close of the comment period on the application for site certificate on May 1, 2013, the Department had received eight comments on the Application for Site Certificate from state, federal, and local agencies.

III.C: Draft Proposed Order

On August 26, 2013, the Department issued a Draft Proposed Order (DPO) containing staff’s analysis of the application and draft proposed findings of fact and conditions of approval related to the application’s compliance with each of the applicable standards. In the DPO, the Department recommends that the Council grant the site certificate subject to proposed conditions. Pursuant to OAR 345-015-0220, the Department sent notice of the DPO and public hearing on the DPO to persons on the Council’s general mailing list, the special mailing list for the Troutdale Energy Center, reviewing agencies, and an updated list of property owners. The Oregonian and Gresham Outlook newspapers published notice of the DPO in their August 27, 2013 issues. The Department accepted written comments on the DPO from August 26 through September 26, 2013.
On September 26, 2013, hearing officer J. Kevin Shuba conducted a public hearing on the DPO in Gresham, Oregon. The Department received a total of 264 comments on the Draft Proposed Order. At the Council’s request, following the public hearing Mr. Shuba submitted a report summarizing the issues raised in these comments.

Several comments raised issues outside the scope of the Council’s review such as economic impacts, the format of the DPO, other potential sites for the facility, and whether the applicant would be able to find customers for electricity generated by the facility. Appendix C of this order includes an index of comments on the DPO. Substantive issues raised in comments on the DPO are discussed in discussion of the applicable standards in Section IV of this Proposed Order.

Pursuant to OAR 345-015-230(1), the Council reviewed the Draft Proposed Order at its November 15, 2013 meeting and provided comments to staff on the DPO.

The Department prepared this proposed order, taking into consideration comments of the Council, comments made at the public hearing, and written comments received before the close of the record on the public hearing.

IV. STANDARDS FOR SITING FACILITIES

To issue a site certificate for a proposed facility, the Council must determine that “the Facility complies with the standards adopted by the Council pursuant to ORS 469.501, or the overall public benefits of the Facility outweigh the damage to the resources protected by the standards the Facility does not meet.” The Council must decide whether the proposed facility complies with all other applicable Oregon statutes and administrative rules identified in the project order for the proposed facility, excluding requirements governing design or operational issues that do not relate to siting and excluding compliance with requirements of federally delegated programs. In addition, the Council must include in the site certificate “conditions for the protection of the public health and safety, for the time for completion of construction, and to

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43 Council members Wolfe, Beyeler, Mohlis, and Jenkins attended the hearing in person; a recording of the hearing was subsequently provided to Council members Sumner and Senn; Council member Dowlin recused herself from considering the application due to an actual conflict.

44 The Department received 45 written comments prior to the September 26 hearing and 203 written comments and 16 oral comments at the hearing. Of the 203 written comments received at the hearing, 181 were email responses to an “action alert” submitted by Friends of the Columbia Gorge.

45 Several comments raised questions about whether the proposed facility would be able to find customers for the electricity produced. The Council’s “Need for a facility” standard at OAR 345-023-0005 applies only to non-generating facilities, not facilities that would generate electric power such as Troutdale Energy Center.

46 ORS 469.503(1).

47 ORS 469.401(4) and 469.503(3).
ensure compliance with the standards, statutes and rules described in ORS 469.501 and ORS 469.503."\(^{48}\)

The Council does not have jurisdiction for determining compliance with federal law and regulations administered by federal agencies. Under ORS 469.503(3), the Council also does not have jurisdiction for determining compliance with statutes and rules for which the federal government has delegated the decision on compliance to a state agency other than the Council. Nevertheless, the Council may consider these programs in the context of its own standards to ensure public health and safety, resource efficiency, and protection of the environment.

The Council also does not have jurisdiction over matters that are not included in and governed by the site certificate or amended site certificate. Such matters include design-specific construction or operating standards and practices that do not relate to siting, as well as matters relating to employee health and safety, building code compliance, wage and hour or other labor regulations, or local government fees and charges.\(^{49}\) Nevertheless, the Council may rely on the determinations of compliance and the conditions in the permits issued by these state agencies and local governments in deciding whether the facility meets other standards and requirements under its jurisdiction.

Under ORS 469.310 the Council is charged with ensuring that the “siting, construction and operation of energy facilities shall be accomplished in a manner consistent with protection of the public health and safety.” ORS 469.401(2) further provides that “the site certificate shall contain conditions for the protection of the public health and safety.” The Council ensures the protection of public health and safety by adopting findings of fact, conclusions of law, and conditions of approval concerning the proposed facility’s compliance with the Council’s Standards for Siting Facilities at OAR 345, Division 22, 24, 26, and 27.

IV.A. General Standard of Review [OAR 345-022-0000]

Under ORS 469.310 the Council is charged with ensuring that the “siting, construction and operation of energy facilities shall be accomplished in a manner consistent with protection of the public health and safety.” ORS 469.401(2) further provides that “the site certificate shall contain conditions for the protection of the public health and safety.” The Council ensures the protection of public health and safety by adopting findings of fact, conclusions of law, and conditions of approval concerning the proposed facility’s compliance with the Council’s Standards for Siting Facilities at OAR 345, Division 22, 24, 26, and 27.

(1) To issue a site certificate for a proposed facility or to amend a site certificate, the Council shall determine that the preponderance of evidence on the record supports the following conclusions:

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\(^{48}\) ORS 469.401(2).
\(^{49}\) ORS 469.401(4).

Troutdale Energy Center
Proposed Order
December 16, 2013
(a) The facility complies with the requirements of the Oregon Energy Facility Siting statutes, ORS 469.300 to ORS 469.570 and 469.590 to 469.619, and the standards adopted by the Council pursuant to ORS 469.501 or the overall public benefits of the facility outweigh the damage to the resources protected by the standards the facility does not meet as described in section (2);

(b) Except as provided in OAR 345-022-0030 for land use compliance and 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. If the Council finds that applicable Oregon statutes and rules, other than those involving federally delegated programs, would impose conflicting requirements, the Council shall resolve the conflict consistent with the public interest. In resolving the conflict, the Council cannot waive any applicable state statute.

* * *

(4) In making determinations regarding compliance with statutes, rules and ordinances normally administered by other agencies or compliance with requirement of the Council statutes if other agencies have special expertise, the Department of Energy shall consult such other agencies during the notice of intent, site certificate application and site certificate amendment processes. Nothing in these rules is intended to interfere with the state’s implementation of programs delegated to it by the federal government.

OAR 345-022-0000 requires the Council to find that a preponderance of evidence on the record supports the conclusion that the facility complies with the requirements of the Oregon Energy Facility Siting statutes and the siting standards adopted by the Council. In this report, the Department recommends proposed findings of fact and conclusions of law based on a staff evaluation of the proposed facility’s compliance with all statutes and administrative rules and ordinances applicable to the issuance of a site certificate, and incorporating comments from the Council, reviewing agencies and the public.

OAR 345-022-0000(2) and (3) establish criteria the Council may use to make a balancing determination when the applicant has shown that the proposed facility cannot meet Council standards or has shown that there is no reasonable way to meet the Council standards through mitigation or avoidance of the damage to protected resources. The applicant does not assert that the proposed Troutdale Energy Center cannot meet an applicable Council standard. Therefore, OAR 345-022-0000(2) and (3) do not apply to the facility.
A. Certificate Expiration [OAR 345-027-0000]

Under OAR 345-015-0085(9), a site certificate is effective upon execution by the Council Chair and the applicant. ORS 469.370(12) requires the Council to “specify in the site certificate the date by which construction of the facility must begin. ORS 469.401(2) requires that the site certificate contain a condition “for the time for completion of construction.” Under OAR 345-027-0000, the certificate holder must begin construction on the facility no later than the construction beginning date specified by Council in the site certificate, unless an amendment is requested and granted.50

In Exhibit C, the applicant proposes a construction schedule of approximately two years, beginning in January, 2013. Although some early milestones on the applicant’s timeline have already passed at the time of this report, the applicant also states that it anticipates issuing a notice to proceed for construction to its contractor “following the completion of facility permitting.” Since the year 2000, the Council has approved three site certificates for natural gas cogeneration facilities; Port Westward Generating Project in 2002, Klamath Generation Facility in 2005, and Carty Generating Station in 2012. The deadlines for beginning and completing construction in each of the original site certificates for these facilities are shown in Table 1 below.

Table 1: Deadlines for Beginning and Completing Construction

<table>
<thead>
<tr>
<th>Facility (Year)</th>
<th>Deadline to begin construction</th>
<th>Deadline to complete construction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port Westward Generating Project (2002)51</td>
<td>2 years from effective date of site certificate</td>
<td>5 years from effective date of site certificate</td>
</tr>
<tr>
<td>Klamath Generation Facility (2005)52</td>
<td>2 years from effective date of site certificate</td>
<td>5 years from effective date of site certificate</td>
</tr>
<tr>
<td>Carty Generating Station (2012)53</td>
<td>3 years from effective date of site certificate (Block 1)</td>
<td>3 years from beginning of construction (Block 1)</td>
</tr>
</tbody>
</table>

In approving the construction beginning and ending deadlines for Carty Generating Station, the Council found that allowing a three-year window for completion of construction of each proposed phase would “minimize the permitted construction window as much as possible while still allowing a realistic period to construct both phases of the facility.”54 Although the applicant

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50 Site Certificate for the Port Westward Generating Project, November 8, 2002, p. 34.
51 Site Certificate for the Klamath Generation Facility, September 27, 2005, p. 17.
does not propose to construct Troutdale Energy Center in two separate phases, the
Department believes that the Council’s general approach in establishing construction deadlines
for Carty Generating Station could be effectively applied to the proposed Troutdale Energy
Center.

Accordingly, and in compliance with OAR 345-027-0000 and OAR 345-027-0020(4), the
Department recommends that the Council adopt the following conditions:

**Condition A.1:** The certificate holder shall begin construction of the facility within three
years after the effective date of the site certificate.

**Condition A.2:** The certificate holder shall complete construction of the facility within five
years after the effective date of the site certificate. Construction is complete when:

1. The facility is substantially complete as defined by the certificate holder’s
   construction contract documents;

2. Acceptance testing has been satisfactorily completed; and

3. The energy facility is ready to begin continuous operation consistent with the site
certificate.

The certificate holder shall promptly notify the Oregon Department of Energy of the date of
completion of construction.

**B. Mandatory Conditions in Site Certificates [OAR 345-027-0020]**

OAR 345-027-0020 lists certain conditions that the Council must adopt in every applicable site
certificate. Some mandatory conditions directly implement a Council standard, and are listed in
this report within the discussion on the relevant standard. Mandatory conditions that are not
otherwise addressed in the evaluation of compliance with specific standards are discussed
below, in the context of the Council’s General Standard of Review.

The following mandatory conditions are required pursuant to OAR 345-027-0020:

**Condition A.3 [OAR 345-027-0020(2)]:** The certificate holder shall submit a legal description
of the site to the Department of Energy within 90 days after beginning operation of the
facility. The legal description required by this rule means a description of metes and bounds
or a description of the site by reference to a map and geographic data that clearly and
specifically identify the outer boundaries that contain all parts of the facility.
Condition A.4 [OAR 345-027-0020(3)]: The certificate holder shall design, construct, operate, and retire the facility:

(1) Substantially as described in the site certificate;
(2) In compliance with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances in effect at the time the site certificate is issued; and
(3) In compliance with all applicable permit requirements of other state agencies.

Condition A.5 [OAR 345-27-0020(5)]: Except as necessary for the initial survey or as otherwise allowed for wind energy facilities, transmission lines or pipelines under this section, the certificate holder shall not begin construction, as defined in OAR 345-001-0010, or create a clearing on any part of the site until the certificate holder has construction rights on all parts of the site. For the purpose of this condition, “construction rights” means the legal right to engage in construction activities. * * * * *.

Condition A.6 [OAR 345-027-0020(6)]: 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 any affected site certificate conditions.

Condition A.7 [OAR 345-027-0020(15)]: Before any transfer of ownership of the facility or ownership of the site certificate holder, the certificate holder shall inform the Department of the proposed new owners. The requirements of OAR 345-027-0100 apply to any transfer of ownership that requires a transfer of the site certificate.

C. Site Specific Conditions [OAR 345-027-0023]

In addition to mandatory conditions imposed on all facilities, the Council has adopted “site specific” conditions at OAR 345-027-0023 that the Council may include in the site certificate to address issues specific to certain facility types or proposed features of facilities, such as related or supporting facilities.

Because the proposed facility includes a 230-kv transmission line as a related or supporting facility, the Department recommends that the Council adopt Conditions O.1 and O.2, as appropriate to the facility pursuant to OAR 345-027-0023, in the discussion of Siting Standards for Transmission Lines in Section IV.O of this proposed order.
D. Construction and Operation Rules for Facilities [OAR Chapter 345, Division 26]

The Council has adopted specific rules at Chapter 345, Division 26 of the Oregon Administrative Rules to ensure that construction, operation, and retirement of facilities are accomplished in a manner consistent with the protection of the public health, safety, and welfare and protection of the environment. These rules include requirements for compliance plans, inspections, reporting, and notification of incidents. The certificate holder is bound by and must construct, operate, and retire the facility in accordance with all applicable rules adopted by the Council in OAR Chapter 345, Division 26.

IV.B. Organizational Expertise [OAR 345-022-0010]

1) To issue a site certificate, the Council must find that the applicant has the organizational expertise to construct, operate and retire the proposed facility in compliance with Council standards and conditions of the site certificate. To conclude that the applicant has this expertise, the Council must find that the applicant has demonstrated the ability to design, construct and operate the proposed facility in compliance with site certificate conditions and in a manner that protects public health and safety and has demonstrated the ability to restore the site to a useful, non-hazardous condition. The Council may consider the applicant’s experience, the applicant’s access to technical expertise and the applicant’s past performance in constructing, operating and retiring other facilities, including, but not limited to, the number and severity of regulatory citations issued to the applicant.

(2) The Council may base its findings under section (1) on a rebuttable presumption that an applicant has organizational, managerial and technical expertise, if the applicant has an ISO 9000 or ISO 14000 certified program and proposes to design, construct and operate the facility according to that program.

(3) If the applicant does not itself obtain a state or local government permit or approval for which the Council would ordinarily determine compliance but instead relies on a permit or approval issued to a third party, the Council, to issue a site certificate, must find that the third party has, or has a reasonable likelihood of obtaining, the necessary permit or approval, and that the applicant has, or has a reasonable likelihood of entering into, a contractual or other arrangement with the third party for access to the resource or service secured by that permit or approval.

(4) If the applicant relies on a permit or approval issued to a third party and the third party does not have the necessary permit or approval at the time the Council issues the site certificate, the Council may issue the site certificate subject to the condition that the certificate holder shall not commence construction or operation as appropriate until the third party has obtained the necessary permit or approval and the applicant has a
contract or other arrangement for access to the resource or service secured by that permit or approval.

IV.B.1. Organizational Expertise: Findings of Fact

The applicant does not propose to design, construct, and operate the proposed facility in accordance with an International Organization for Standardization (ISO) 9000 or ISO 14000 certified program. The applicant states that it will not rely on any third-party permit approval for state, local, or federal permits required for construction or operation of the facility. Therefore, the requirements of OAR 345-022-0010(2), (3), and (4) do not apply to the proposed facility.

The applicant provides evidence about its organizational expertise in Exhibits A and D and about permits needed for construction and operation of the proposed facility in Exhibit E of the ASC.

The applicant, Troutdale Energy Center, LLC, is a wholly-owned subsidiary of Development Partners Funding I, LLC. Development Partners was formed in March 2008 in partnership with Energy Investors Funds (EIF). The applicant states that EIF currently has over 3,600 megawatts of capacity in operation and under construction, as well as an additional 2,875 megawatts under development. In Exhibit D, the applicant lists eleven gas-fired power plants that EIF and Development Partners have developed and brought online since 1989. This list includes plants in New York, California, Oklahoma, Mississippi, Massachusetts, and Texas, totaling over 7,000 megawatts in generating capacity. Development Partners has not previously developed an energy facility in Oregon. The Department recommends that the Council find that the applicant’s experience developing similar facilities in North America provides the experience necessary to design, construct, and operate the proposed facility in compliance with Council standards.

The applicant has selected Kiewit Power Constructors to design and construct the facility. The applicant states that Kiewit has designed “more than 25 simple- and combined-cycle power plants across North America” since 1997. On the construction side, the applicant describes Kiewit as having installed “more than 8,500 MW of simple- and combined-cycle projects across North America” since the early 1990s. The Department recommends that the Council find that Kiewit Power Constructors’ experience designing and constructing similar facilities in North America demonstrates the ability to provide the applicant with the technical expertise necessary to design and construct the facility in compliance with Council standards.

55 Final ASC, Section D.7, pp. D-3 and D-4.
56 Final ASC, Sections E.5 and E.6, p. E-6.
57 Final ASC, Section D.2, p. D-1.
58 Final ASC, Section D.4.4, p. D-3.
59 Final ASC, Section D.4.4, p. D-3.
The applicant has selected a Development Partners affiliate, Power Plant Management Services, LLC (PPMS), to provide “operations and maintenance (O & M) contractor interface, construction interface, due diligence support, and permitting support for the facility.” PPMS currently manages 19 electric generation facilities totaling 4,814 MW. The Department recommends that the Council find that PPMS’s experience operating electric generation facilities demonstrates the ability to provide the applicant with the technical expertise necessary to design and construct the facility in compliance with Council standards.

In order to ensure that the applicant has access to the technical expertise necessary to design, engineer, and construct the facility, the Department recommends that the Council adopt the following condition:

**Condition B.1:** The certificate holder shall contract with qualified contractors to design, engineer, and construct the facility, as described in Exhibit D of the Application for Site Certificate. If the certificate holder proposes to change any major contractors, the applicant shall submit their identification and qualifications to the Department for review and written approval of their qualifications prior to their work on the facility.

The application does not include specific evidence of the applicant’s past experience with retiring energy facilities. However, the applicant has established its ability to retire the Facility to a useful, non-hazardous condition in Exhibit W of the ASC, which is evaluated in Section IV.G (Retirement and Financial Assurance) of this proposed order.

Based on the evidence in the record, the Department recommends that the Council find that the applicant has demonstrated that it has the organizational expertise to design, construct, and operate the proposed facility in compliance with site certificate conditions and in a manner that protects the public health and safety and has demonstrated the ability to restore the site to a useful, non-hazardous condition.

**IV.B.2 Organizational Expertise: Conclusions of Law**

Based on the foregoing findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the proposed facility complies with the Council’s Siting Standards for Organizational Expertise.
I.V.C. Structural Standard [OAR 345-022-0020]

(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that:

(a) The applicant, through appropriate site-specific study, has adequately characterized the site as to the Maximum Considered Earthquake Ground Motion as shown for the site in the 2009 International Building Code and maximum probable ground motion, taking into account ground failure and amplification for the site specific soil profile under the maximum credible and maximum probable seismic events; and

(b) The applicant can 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 maximum probable ground motion events. As used in this rule "seismic hazard" includes ground shaking, ground failure, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement, and subsidence;

(c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and

(d) The applicant can design, engineer and construct the facility to avoid dangers to human safety presented by the hazards identified in subsection (c).

(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

(3) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

IV.C.1. Structural Standard: Findings of Fact

OAR 345-022-0020 requires the Council to find that the applicant has adequately characterized the potential seismic, geological, and soil hazards of the site, and that the applicant can design, engineer, and construct the facility to avoid dangers to human safety from these hazards. The Council does not preempt the jurisdiction of any state or local government over matters related...
to building code compliance,\textsuperscript{61} and the Structural Standard requires that the applicant
demonstrate the ability to design, engineer, and construct the facility to avoid dangers to
human safety from identified hazards. In addition, the Council has adopted mandatory site
certificate conditions at OAR 345-027-0020(12)-(14) that require a certificate holder to actually
carry out the design, engineering, and construction practices proposed in order to meet the
Structural Standard.

OAR 345-022-0020(2) and (3) do not apply to this application because the proposed facility
would not produce power from wind, solar or geothermal energy and the facility is not a special
criteria Facility as defined in OAR 345-015-0310. Therefore, the standards in OAR 345-022-
0020(1)(a) through (d) apply to the proposed facility. The \textit{Project Order} identifies the analysis
area for the Structural Standard as the area within the site boundary.

The applicant provides information regarding the seismic characteristics of the site and possible
seismic and geological hazards in Exhibit H of the ASC. The following sections discuss the
evidence provided in the application as they apply to each sub-section of OAR 345-022-0020.

\begin{quote}
\textbf{A. The applicant, through appropriate site-specific study, has adequately characterized the site as to the Maximum Considered Earthquake Ground Motion as shown for the site in the 2009 International Building Code and maximum probable ground motion, taking into account ground failure and amplification for the site specific soil profile under the maximum credible and maximum probable seismic events.}
\end{quote}

The applicant retained CH2M HILL Engineers, Inc., to conduct a seismic hazard assessment for
the facility vicinity, based on a literature review of local and regional seismic hazards and
groundwater conditions reported in site-specific geotechnical evaluations. In Exhibit H, the
applicant lists the specific tasks carried out to support the seismic hazard analysis,\textsuperscript{62} the
professional literature used to characterize the site,\textsuperscript{63} and the geotechnical data reports used to
assess geologic conditions in the project vicinity.\textsuperscript{64}

The applicant also describes a preliminary geotechnical report prepared for the site in October
2011 by GeoDesign, Inc. The GeoDesign report recommends additional subsurface
investigations at a later stage in the development process to confirm soil conditions and
provide final design recommendations.\textsuperscript{65} The applicant provides evidence of consultation with
the Oregon Department of Geology and Mineral Industries (DOGAMI) on the geologic
characteristics of the site and proposed methodology for the site-specific studies recommended

\textsuperscript{61} ORS 469.401(3).
\textsuperscript{62} Final ASC, Section H.3.1, p. H-3.
\textsuperscript{63} Final ASC, Section H.12, pp. H-17 and H-18.
\textsuperscript{64} Final ASC, Section H.3.2, p. H-4.
\textsuperscript{65} Final ASC, Section H.3.3, p. H-5.
by the applicant’s consultants. Based on the GeoDesign report and consultation with DOGAMI, the applicant proposes additional investigational activities to inform the design of foundations for the facility and all related and supporting structures, including the overhead transmission lines.

In order to ensure that the applicant conducts these additional site specific studies, the Department recommends that the Council adopt the following condition:

**Condition C.1:** Prior to beginning construction, the applicant shall complete an investigation of subsurface soil and geologic conditions to identify geological or geotechnical hazards, and prepare an investigation report, which must be approved by the Department. The investigation must include the following activities:

1) Reviewing available data from previous geotechnical explorations in the project vicinity such as boring logs, test pit logs, cone penetration test (CPT) sounding logs, etc.

2) Reviewing available geotechnical information from published sources such as geologic maps and as much site-specific information as possible pertaining to the age of faults and most recent events.

3) Conducting geotechnical field borings to characterize soil and groundwater conditions and tower locations, buried utility corridors, and other locations that appear to have weak soils or poor foundation conditions. The geotechnical investigation may include soil borings, CPT tests, Standard Penetration Test (SPT) strength testing, test pits, infiltration tests, and possibly geophysical testing.

4) Collecting soil samples for classification and laboratory testing and conducting laboratory tests on selected soil samples.

5) Installing piezometers to monitor groundwater, unless existing groundwater monitoring piezometers can be used to obtain current groundwater elevation information for the site.

6) Evaluating soil for liquefaction potential, post-liquefaction-induced settlement, and reduced soil strength resulting from seismic events.

7) Evaluating corrosion properties of the onsite soils by collecting samples and conducting laboratory testing for resistivity, pH, moisture, texture, and sulfate content.

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66 Final ASC, Section H.4, p. H-5.
68 Final ASC, Section H.10, p. H-16.
Based on the evidence in the record, and subject to compliance with this condition, the Department recommends that the Council find that the applicant has conducted appropriate site-specific studies of seismic hazards that are expected to result from maximum probable ground motion events.

In Exhibit H, the applicant identifies the potential sources of seismic hazards at the site and has identified the MCE for earthquake sources with a mean PGA greater than 0.05. The applicant considered seismic hazards from three earthquake sources; Cascadia Subduction Zone (CSZ) interplate events, CSZ intraslab events, and crustal events. The applicant’s consultant calculated the maximum credible earthquake (MCE) for each of the identified sources of seismic hazard, which the applicant summarizes in the following MCE Source Characterization Parameters table.

<table>
<thead>
<tr>
<th>Earthquake Source</th>
<th>Maximum Moment Magnitude</th>
<th>Epicentral Distance (miles [km])</th>
</tr>
</thead>
<tbody>
<tr>
<td>Random Hazard (Shallow Gridded WUS)</td>
<td>6.0</td>
<td>10 [17]</td>
</tr>
<tr>
<td>Crustal</td>
<td>6.8 to 7.1</td>
<td>10 to 36 [17 to 58]</td>
</tr>
<tr>
<td>Intraslab</td>
<td>7.2</td>
<td>34 to 41 [55 to 66]</td>
</tr>
<tr>
<td>Interplate</td>
<td>9.0</td>
<td>68 to 100 [110 to 160]</td>
</tr>
</tbody>
</table>

Note: The magnitudes for all crustal events are determined from the fault length/distance by Wells and Coppersmith (1994). Epicentral Distance values listed are closest distance to the fault rupture, where known.

The applicant relies on a probabilistic seismic hazard analysis developed by the 2011 U.S. Geological Survey (USGS) National Seismic Hazard Mapping project to estimate peak ground accelerations expected at the site for a 500-year recurrence interval and for a 5,000-year recurrence interval. The applicant uses existing subsurface information, such as a preliminary review of borings drilled for adjacent facilities, geologic mapping, and nearby well logs, to develop seismic design parameters based on Site Class E (soft soil profile). The site soil profile identified by the applicant is discussed in further detail in Section IV.D of this proposed order.

70 Final ASC, Section H.7.1, p. H-10.
The applicant states that Seismic Design Parameters for the facility in Table H-1 of the application were developed in accordance with the 2009 International Building Code and based on existing subsurface information. These parameters include calculations of peak horizontal ground acceleration on bedrock, soil amplification factor, and peak horizontal ground acceleration at ground surface. The applicant describes the Site Class E soil profile as conservative, and notes that additional site-specific geotechnical studies may “improve or worsen” the actual site class determination.\(^{72}\)

Based on the evidence in the record, the Department recommends that the Council find that the applicant’s characterization of seismic hazards has taken into account ground failure and amplification for the site specific soil profile.

The Department recommends that the Council find that the applicant has adequately characterized seismic hazards that are expected to result from maximum probable ground motion events, based on appropriate site-specific studies and taking into account ground failure and amplification for the site specific soil profile.

**B. The applicant can 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 maximum probable ground motion events.** As used in this rule "seismic hazard" includes ground shaking, ground failure, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement, and subsidence.

In Exhibit H, the applicant proposes measures to avoid or mitigate potential dangers to human safety expected to result from a maximum probable ground shaking event. The applicant commits to design the facility to meet or exceed minimum design standards required in the 2009 IBC, with current amendments by the Oregon Structural Specialty Code and local agencies.

The applicant describes the terrain at the facility site as flat and therefore not prone to seismically induced landslides or slope hazards associated with saturated soils.\(^{73}\) The applicant proposes a number of possible mitigation measures to address other seismic hazards identified during design of the facility. These measures include:

- Designing flexible connections and conduits between facility structures and piping and duct banks;
- Designing mat foundations to minimize the effects of differential settlements;
- Designing deep foundations to transfer structural loads below the zone of liquefiable material;

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\(^{72}\) Final ASC, Section H.7, p. H-7.
\(^{73}\) Final ASC, Section H.9, pp. H-15 and H-16.
• Strengthening or stiffening structures to resist predicted ground movements;
• Performing soil stabilization to eliminate or reduce liquefaction potential at the facility.\textsuperscript{74}

In order to ensure that the applicant implements the safe design, engineering, and construction of the facility as presented in the application, including appropriate mitigation measures, the following condition is mandated by OAR 345-027-0020(12):

**Condition C.2:** 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. As used in this condition, “seismic hazard” includes ground shaking, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement, and subsidence.

Based on the evidence in the record and subject to compliance with this condition, the Department recommends that the Council find that the applicant can 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 maximum probable ground motion events.

*C. The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility.*

In Exhibit H, the applicant describes potential non-seismic geological and soil hazards at the site, including flooding and channel migration, landslides, volcanic eruptions, and soil impacts. CH2M HILL assessed the risk of these potential hazards, and characterized the risks of non-seismic geological hazards at the site as low to very low.\textsuperscript{75}

Exhibit H explains that the nearest active volcano to the site is Mount Hood, located 35 miles to the southeast. Mount St. Helens and Mount Adams are active volcanoes located further from the site (45 to 62 miles). Impacts to the site from volcanic eruption could potentially include lahars and mudflows, pyroclastic flows (explosive hot ash), and ash fallout, depending on the prevailing wind direction at the time of eruption.\textsuperscript{76}

The application further explains that the site lies on flat ground, near the Sandy River and within the confines of a levee system constructed by the U.S. Army Corps of Engineers. Because

\textsuperscript{74} Final ASC, Section H.9, p. H-15.
\textsuperscript{75} Final ASC, Section H.10, pp. H-16 and H-17.
\textsuperscript{76} Final ASC, Section H.8, p. H-14.
of the levee system, the Federal Emergency Management Agency indicates that the site is not within the 100-year flood zone.\(^{77}\)

The application characterizes several potential soil hazards, including low-strength shallow soils, shrinking-swelling soils, and erosion. Soils on site generally lack clay and are anticipated to have low shrink-swell potential, and erosion risk is low due to the relatively flat nature of the site. Shallow site soils were extensively modified during brownfield site reclamation. In 2008, very limited testing for the corrosion potential of soil to depths of 15 feet below grade indicated corrosive soil conditions on site.\(^{78}\)

In order to ensure that characterizations used to design, engineer, and construct the facility are updated to reflect any unexpected non-seismic hazards identified by later onsite investigation, the following two conditions are mandated under OAR 345-027-0020(13) and (14):

**Condition C.3:** The certificate holder shall notify the Department, the State Building Codes Division, and the Department of Geology and Mineral Industries promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate. After the Department receives the notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division and to propose mitigation actions.

**Condition C.4:** The certificate holder shall notify the Department, the State Building Codes Division, and the Department of Geology and Mineral Industries promptly if shear zones, artesian aquifers, deformations, or clastic dikes are found at or in the vicinity of the site.

Based on the evidence in the record, and subject to compliance with these conditions, the Department recommends that the Council find that the applicant has adequately characterized the potential geological and soil hazards of the site and its vicinity, based on appropriate site-specific study.

*D. The applicant can design, engineer and construct the facility to avoid dangers to human safety presented by the hazards identified in subsection (c).*

In Exhibit H, the applicant proposes measures to avoid or mitigate potential dangers to human safety that could result from soil erosion, corrosive or weak soils, and volcanic eruptions.

The applicant states that the site is near the “distal hazard zone,” with an estimated 30-minute travel time for lahars flowing down the Sandy River in the event of a Mount Hood volcanic eruption. The applicant describes early warning and emergency response coordination in place.

\(^{77}\) Final ASC, Section H.8, p. H-14.
\(^{78}\) Final ASC, Section H.8, p. H-15.
through the USGS Volcanic Activity Alert-Notification System and the Mount Hood Coordination Plan. The applicant states that in the event of a volcanic eruption that could impact facility components, the facility would be shut down until safe operating conditions return. In order to prevent dangers to human safety in the event of a volcanic eruption, the Department recommends that the Council adopt the following two conditions:

**Condition C.5:** In the event that the USGS-Cascade Volcano Observatory (CVO) issues a Volcano Alert during construction of the facility, the certificate holder shall immediately cease all construction activity for the duration of the Alert or until the Department grants permission to resume construction.

**Condition C.6:** In the event that the USGS-Cascade Volcano Observatory (CVO) issues a Volcano Alert during operation of the facility, the certificate holder shall shut down the facility for the duration of the Alert or until the Department grants permission to resume operation.

If the site-specific geotechnical evaluation required by Condition C.1 identifies low-strength shallow soils, collapsible soils, or swelling soils, the applicant proposes to implement soil improvement techniques such as soil mixing, over-excavation and replacement with structural fill, or using deep foundations (piles or piers) to ensure structure stability. In order to ensure that the site certificate holder fully implements soil improvement techniques recommended by the site-specific geotechnical investigation, the Department recommends that the Council adopt the following condition:

**Condition C.7:** Prior to beginning construction, the certificate holder shall submit a written plan, subject to approval by the Department, for implementing soil improvement techniques identified in the site-specific geotechnical evaluation.

Exhibit H indicates that limited corrosion potential testing conducted in 2008 indicated corrosive soil conditions. The applicant proposes to conduct a more detailed evaluation of soil corrosiveness during the site-specific geotechnical investigation, and as necessary, to protect facility structures through a variety of corrosion-protection measures. In order to ensure that the site certificate holder fully implements corrosion-protection measures identified by the site-specific geotechnical investigation, the Department recommends that the Council adopt the following condition:

**Condition C.8:** Prior to beginning construction, the certificate holder shall submit a written plan, subject to approval by the Department, for implementing corrosion-protection measures identified in the site-specific geotechnical investigation.

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79 Final ASC, Section H.10, p. H-17.
81 Final ASC, Section H.10, p. H-16.
Based on the evidence in the record, and subject to compliance with these conditions, the
Department recommends that the Council find that the applicant can design, engineer, and
construct the facility to avoid dangers to human safety presented by the geological and soils
hazards identified in OAR 345-022-0020(c).

IV.C.2. Structural Standard: Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the
mandatory and recommended site certificate conditions, the Department recommends that the
Council find that the proposed facility complies with the Council’s Structural standard.

IV.D. Soil Protection [OAR 345-022-0022]

To issue a site certificate, the Council must find that the design, construction and operation
of the facility, taking into account mitigation, are not likely to result in a significant adverse
impact to soils including, but not limited to, erosion and chemical factors such as salt
deposition from cooling towers, land application of liquid effluent, and chemical spills.

IV.D.1. Soil Protection: Findings of Fact

The soil protection standard requires the Council to identify any significant adverse impact to
soils, such as erosion and chemical factors. Adverse impacts to soils can affect crop production
on adjacent agricultural lands, native vegetation, fish and wildlife habitat, and water quality.
Construction and operation of the facility can adversely affect soils by means of erosion,
compaction and chemical spills. The applicant provides information regarding potential soil
impacts in Exhibit G, Exhibit I, and Exhibit Z of the application. The Project Order defines the
analysis area for the soil protection standard as the area within the site boundary.

A. Existing Soil Conditions

The applicant used the Natural Resources Conservation Service web-based soil survey, the Soil
Survey of Multnomah County, and the results of onsite and site vicinity geotechnical subsurface
investigations to identify soils at the site. In Exhibit I, the applicant notes that native soils in
portions of the site have been modified first due to industrial development, and more recently
site reclamation. The applicant describes a native soil profile at the site consisting of the Faloma
silt loam, constituted by mixed silty and sandy alluvium. The applicant states that native soils in
portions of the site have been modified due to industrial development and site reclamation,
and that fill materials are present in some areas at depths up to 16 feet thick. The applicant
describes upper fill materials as fine to coarse-grained sand with a varying fraction of silt.

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82 Final ASC, Section I.1, p. I-1.
83 Final ASC, Section I.2.1, p. I-1.
Along the proposed transmission line alignments, the applicant identifies soil units consist of the Faloma silt loam, Rafton silt loam, and Sauvie silty clay loam, with fill materials similar to those found on Lot 3.\textsuperscript{84}

**B. Anticipated Soil Impacts from Construction of the Facility**

The applicant states that unavoidable permanent impacts to soils will result from the placement of structures within the facility’s 16.5-acre footprint. The applicant also identifies temporary, construction-related disturbances on an additional 5.6 acres of Lot 3 and 17.9 acres of Lot 6. In addition, the applicant describes an area of disturbance along the transmission line corridor that would be disturbed for pole placement. The transmission line would result in a permanent disturbance of up to 1,400 square feet and a temporary disturbance of up to 5.3 acres, depending on the route selected.\textsuperscript{85}

**C. Potential Soil Impacts from Erosion**

The applicant represents that the facility would have minimal soil impacts due to the erosion control measures that would be required under a NPDES 1200-C construction permit for the facility as well as the low wind erosion potential of onsite native soils (Wind Erodibility Group 5).

The applicant identifies several potential dust sources during construction of the facility, including access and maintenance roads, temporary staging areas, and pipeline and trench excavations.\textsuperscript{86} The applicant proposes to mitigate the potential impacts from fugitive dust through implementation of best management practices, including applying water to disturbed grounds and roads during construction, implementing wheel wash and vehicle scrape for construction vehicles, and imposing construction and operation speed limits on site roads.\textsuperscript{87} In order to ensure implementation of the applicant’s proposed mitigation measures, the Department recommends that the Council adopt the following condition:

**Condition D.1:** The certificate holder shall implement best management practices to control fugitive dust in accordance with Oregon Department of Environmental Quality regulations for Ambient Air Quality Standards and applicable Prevention of Significant Deterioration increment standards.

To further minimize soil impacts, the applicant must comply with the requirements of an NPDES 1200-C stormwater permit and the associated Erosion and Sediment Control Plan (ESCP), which describes best management practices (BMPs) for erosion and sediment control, spill prevention

\textsuperscript{84} Final ASC, Section I.2.2, p. I-2.
\textsuperscript{85} Final ASC, Section I.4, p. I-3.
\textsuperscript{86} Final ASC, Section I.4, p. I-4.
\textsuperscript{87} Final ASC, Section I.5.2, pp. I-6 and I-7.
and response procedures, regular maintenance for vehicles and equipment, employee training
on spill prevention and proper disposal procedures. Proposed BMPs include the use of a
stabilized construction entrance/exit, preservation of existing vegetation where practicable, silt
fencing, straw wattles, mulching, revegetation, and traffic management. The Department has
reviewed the BMPs contained in the ESCP and finds that their implementation during
construction of the facility would minimize possible impacts from erosion or other impacts to
soils. The NPDES 1200-C permit itself is a federal permit issued in Oregon by the Department of
Environmental Quality. To ensure that the ESCP is followed, the Department recommends the
Council adopt the following condition:

**Condition D.2:** The certificate holder shall comply with an Erosion and Sediment Control
Plan (ESCP) satisfactory to the Oregon Department of Environmental Quality and as
required under the National Pollutant Discharge Elimination System (NPDES) Construction
Stormwater Discharge General Permit #1200-C. The certificate holder shall include in the
ESCP any procedures necessary to meet local erosion and sediment control requirements or
storm water management requirements.

The applicant describes the use of heavy equipment and haul trucks during construction,
potentially causing soil compaction and other disturbances. In order to implement mitigation
measures proposed by the applicant to prevent impacts to soils from haul truck traffic during
construction, the Department recommends that the Council adopt the following conditions:

**Condition D.3:** The certificate holder shall install a stabilized construction entrance and exit
at locations where exposed, disturbed land or newly constructed roads intersect paved
roads.

**Condition D.4:** During construction, the certificate holder shall, to the extent practicable,
limit truck traffic to improved road surfaces. Within 60 days of completing construction, the
applicant shall mitigate any areas of soil compaction by measures to include scarification
and reseeding.

Based on the evidence in the record, and subject to mitigation, the Department recommends
that the Council find that erosion resulting from the design, construction, and operation of the
facility is unlikely to result in a significant adverse impact to soils.

**D. Potential Soil Impacts from Salt Deposition from Cooling Towers**

The applicant discusses potential impacts from the evaporative cooling tower, including
deposition of solids, in Exhibit Z. The exhaust stream (plume) from the cooling tower for the
proposed facility is primarily gaseous water vapor, but a fraction of the plume is water in liquid

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89 Final ASC, Section I.4, pp. I-3 and I-4.
form, referred to as “drift.” Drift is analyzed separately because unlike the vapor, which is pure water, the drift contains entrained salts and other dissolved solids. As the plume cools and condenses, entrained solids are deposited on the ground. Excessive salt deposits may have an adverse effect on the capacity of soils to support vegetation. Exhibit Z includes an analysis of the potential for soil impacts from cooling tower drift using the CALPUFF computer model. The CALPUFF model predicts seasonal/annual impacts from cooling tower plumes, including impacts related to drift, fogging, and icing.\(^\text{90}\)

The CALPUFF results presented by the applicant predicted that the peak salt deposition values of 0.58 milligrams per square meter per year (mg/m\(^2\)/yr) would only occur on the facility site. Peak offsite salt deposition would decrease with distance from the cooling tower.\(^\text{91}\) For the purpose of comparison, the applicant provided research on average salt concentrations in non-saline irrigation water which showed that at typical irrigation rates apply an average of 1,133,700 mg per square meter per year of salt to crop land. Based on this evidence, the Department concurs with the applicant’s conclusion that the maximum average annual salt deposition from the proposed facility contributes an inconsequential amount of salt to this total. The applicant proposes to limit the emission and deposition of entrained solids through the use of high-efficiency drift eliminators.\(^\text{92}\)

Based on the evidence in the record, and subject to mitigation, the Department recommends that the Council find that salt deposition from cooling towers resulting from the design, construction, and operation of the facility is unlikely to result in a significant adverse impact to soils.

\textit{E. Potential Soil Impacts from Land Application of Liquid Effluent}

The applicant does not propose to apply process water or other effluent to soils.\(^\text{93}\) The applicant proposes to capture combustion turbine generator water wash wastes in a tank and truck them offsite for disposal. The applicant proposes to discharge water treatment system wastes and cooling tower blowdown, after necessary treatment, to the Sandy River through the City of Troutdale Water Pollution Control Facility existing outfall to the river.

Based on the evidence in the record the Department recommends that the Council find that design, construction, and operation of the facility is unlikely to result in a significant adverse impact to soils from land application of liquid effluent.

\(^{90}\) Final ASC, Section Z.2, pp. Z-4 and Z-5.  
\(^{91}\) Final ASC, Section Z.2, p. Z-4.  
\(^{92}\) Final ASC, Section I.4, p. I-4.  
\(^{93}\) Final ASC, Section I.5.2, p. I-6.
F. Potential Soil Impacts from Chemical Spills

Hazardous materials would be stored and used at the proposed facility during construction and operation. In order to minimize the chance of accidental release into the environment and to prevent the development of any conditions on the site that would preclude restoration of the site, the applicant proposes to use and store hazardous materials according to a site-specific materials management and monitoring plan. In order to ensure implementation of the preventive measures contained in this plan, the Department recommends that the Council adopt the following condition:

**Condition D.5:** The certificate holder shall develop and implement a site-specific materials management and monitoring plan. The certificate holder shall submit a copy of this plan to the Department for review and approval prior to the commencement of construction of the facility.

In order to ensure that the Department can monitor cleanup and mitigation of any spills of hazardous materials, the Department recommends that the Council adopt the following condition:

**Condition D.6:** If a reportable release of hazardous material occurs during construction or operation of the facility, the certificate holder shall notify the Department within 72 hours, clean up the release, and dispose of any contaminated soil or other materials according to applicable regulations. The certificate holder shall make spill control and containment kits readily available in areas containing fuel oil, lubricating oil, hydraulic oil, and chemicals, as well as chemical unloading areas. The spill kits shall be equipped with sorbent materials, temporary containment booms, drums, and disposal bags.

Based on the evidence in the record, and subject to mitigation, the Department recommends that the Council find that chemical spills resulting from the design, construction, and operation of the facility are unlikely to result in a significant adverse impact to soils.

IV.D.2 Soil Protection: Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the proposed facility complies with the Council’s Siting Standards for Soil Protection.

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94 Final ASC, Section I.5.2, pp. I-5 and I-6.
IV.E. Land Use [OAR 345-022-0030]

(1) To issue a site certificate, the Council must find that the proposed facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission.

(2) The Council shall find that a proposed facility complies with section (1) if:

(b) The applicant elects to obtain a Council determination under ORS 469.504(1)(b) and the Council determines that:

(A) The proposed facility complies with applicable substantive criteria as described in section (3) and the facility complies with any Land Conservation and Development Commission administrative rules and goals and any land use statutes directly applicable to the facility under ORS 197.646(3);

(B) For a proposed facility that does not comply with one or more of the applicable substantive criteria as described in section (3), the facility otherwise complies with the statewide planning goals or an exception to any applicable statewide planning goal is justified under section (4); or

(C) For a proposed facility that the Council decides, under sections (3) or (6), to evaluate against the statewide planning goals, the proposed facility complies with the applicable statewide planning goals or that an exception to any applicable statewide planning goal is justified under section (4).

(3) As used in this rule, the “applicable substantive criteria” are criteria from the affected local government’s acknowledged comprehensive plan and land use ordinances that are required by the statewide planning goals and that are in effect on the date the applicant submits the application. If the special advisory group recommends applicable substantive criteria, as described under OAR 345-021-0050, the Council shall apply them. If the special advisory group does not recommend applicable substantive criteria, the Council shall decide either to make its own determination of the applicable substantive criteria and apply them or to evaluate the proposed facility against the statewide planning goals.

(4) The Council may find goal compliance for a proposed facility that does not otherwise comply with one or more statewide planning goals by taking an exception to the applicable goal. Notwithstanding the requirements of ORS 197.732, the statewide planning goal pertaining to the exception process or any rules of the Land Conservation and Development Commission pertaining to the exception process, the Council may take an exception to a goal if the Council finds:
(a) The land subject to the exception is physically developed to the extent that the land is no longer available for uses allowed by the applicable goal;

(b) The land subject to the exception is irrevocably committed as described by the rules of the Land Conservation and Development Commission to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable; or

(c) The following standards are met:

   (A) Reasons justify why the state policy embodied in the applicable goal should not apply;

   (B) The significant environmental, economic, social and energy consequences anticipated as a result of the proposed facility have been identified and adverse impacts will be mitigated in accordance with rules of the Council applicable to the siting of the proposed facility; and

   (C) The proposed facility is compatible with other adjacent uses or will be made compatible through measures designed to reduce adverse impacts.

IV.E.1. Land Use: Findings of Fact

OAR 345-022-0030 (Land Use Standard) implements the requirements in ORS 469.504 for evaluating a proposed energy facility’s compliance with Oregon’s statewide planning goals. Exhibit K of the application addresses the Council’s Land Use Standard. The Project Order identifies the analysis area for the Land Use standard as the area within the site boundary and 0.5 miles from the site boundary.

An applicant for a site certificate may elect to address the Council’s Land Use standard by obtaining local land use approvals under ORS 469.504(1)(a) (“Land use path A”) or by obtaining a Council determination under ORS 469.504(1)(b) (“Land use path B”). The applicant has elected to address the Land Use standard by obtaining a Council determination under “land use path B.” To find that the proposed facility would comply with statewide planning goals, the Council must determine that the facility complies with applicable substantive criteria from the affected local government’s acknowledged comprehensive plan and land use regulations in effect on the date that the applicant submits a preliminary application for site certificate, as well as any Land Development and Conservation Commission rules or land use statutes that
apply directly to the facility under ORS 197.646.\textsuperscript{95} The applicant submitted a preliminary Application for Site Certificate on July 23, 2012.

The facility would lie primarily within the jurisdiction of the City of Troutdale and partially within the jurisdiction of the City of Fairview. Pursuant to ORS 469.480(1), the Council appointed the cities of Troutdale and Fairview as Special Advisory Groups for the review of the facility.\textsuperscript{96} Under ORS 469.504(5), the Council must apply the applicable substantive criteria recommended by the Special Advisory Groups. On April 25, 2012, a Senior Planner for the City of Troutdale identified the applicable substantive criteria provided by the Troutdale Development Code (TDC) and Troutdale Municipal Code (TMC) on behalf of the City of Troutdale.\textsuperscript{97} In addition to the applicable substantive criteria, the planner identified a series of construction standards, building codes, easements, and agency regulations that the City of Troutdale deemed applicable to the proposed facility. In Exhibit K, the applicant notes:

"Unlike other recent EFSC Site Certificate applications, the Facility is proposed within the two metropolitan urban areas [Troutdale and Fairview], each having sophisticated land use and building regulations addressing a host of discretionary land use and ministerial design considerations. [Exhibit K] analyzes both discretionary land use criteria as well as code requirements that are most likely applicable at the ministerial, building permit phase of the development. The Applicant anticipates that the cities of Troutdale and Fairview will be involved in the siting, construction, and post-construction processes, with a need for enhanced coordination with the Oregon Department of Energy (ODOE) in order to ensure that the Facility remains consistent with applicable local standards and criteria, addressed within the Council’s jurisdictional framework."\textsuperscript{98}

The Department recognizes the complexity of distinguishing between discretionary and ministerial approvals and requirements as described by the applicant. ORS 469.401(4) provides that matters such as building code compliance and “other design or operational issues that do not relate to siting the facility” are not included in the site certificate and remain in the jurisdiction of the appropriate state agency or local government. As the applicant states, Exhibit K provides information on compliance with many requirements that are not within the Council’s jurisdiction, and would be implemented as ministerial determination at the building permit phase. DPO Comments from the City of Troutdale recommend several site certificate conditions for the purpose of implementing these ministerial requirements.\textsuperscript{99} Under ORS 469.401(4), the City retains jurisdiction over these requirements. Accordingly, except for

\textsuperscript{95} OAR 345-021-0010(1)(k)(A).
\textsuperscript{96} "Order Appointing Special Advisory Groups for the Proposed Troutdale Energy Center Power Project," December 9, 2011.
\textsuperscript{97} Final ASC, Attachment K-1.
\textsuperscript{98} Final ASC, Section K.5.1, p. K-7.
\textsuperscript{99} Agency comment on the DPO from Elizabeth McCallum, City of Troutdale, September 23, 2013.
necessary contextual discussion, the Department refrains from providing a detailed evaluation of those local, non-jurisdictional criteria in this proposed order.

The portion of the facility inside the City of Troutdale consists of three distinct components: (1) the natural gas-fired power plant and all related structures and equipment proposed on Lot 3; (2) the 230-kV transmission line proposed routes extending from Lot 3, routed generally to the west; and (3) the process water ROW and piping extending from Lot 3, routed generally to the southeast. All of these proposed components are within the City of Troutdale’s General Industrial (GI) zone. Development of these facility components within the City of Troutdale would require a design review, Type III variance from height restrictions for outdoor lighting, and a tree removal permit.

The portion of the project inside the City of Fairview is a 0.3-mile segment of transmission line alternative Route 1, which enters the City of Fairview before it crosses NE Marine Drive. The proposed path of this transmission line would cross the Residential (R), Agricultural Holding (F-2), and General Industrial (GI) zoning districts within the City of Fairview. The applicant provides a letter from a Senior Planner for the City of Fairview providing land use requirements related to the proposed facility. Because the letter does not expressly convey this information on behalf of the Fairview City Council, the Council must determine and apply applicable substantive criteria pursuant to ORS 469.504(5). The Department has reviewed the requirements provided by City of Fairview staff. Based on this review and the expertise of the Senior Planner providing likely land use requirements for the proposed facility, the Department recommends that the Council determine that these requirements constitute applicable substantive criteria for the City of Fairview and apply them to the Council’s review of the proposed facility’s compliance with the Land Use standard. The City of Fairview states that a conditional use permit and site design review would be required for this portion of the facility.

Because the Council will make the land use decisions under land use “Path B,” each city’s issuance of related land use permits and approvals would be governed by the site certificate. In accordance with ORS 469.401(3), after issuance of the site certificate, the cities of Troutdale and Fairview shall “upon submission by the applicant of the proper applications and the payment of proper fees, but without hearings or other proceedings” promptly issue the related land use permits and approvals, subject only to the conditions set forth in the site certificate. The Department’s analysis in this section first considers whether the proposed facility is a permitted use and would comply with general requirements within applicable zoning districts. The Department then considers the land use approvals the facility would need to obtain, and

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100 Final ASC, Figure K-1.
101 Final ASC, Section K.5.1, Table K-1, p. K-7.
102 Final ASC, Figure K-11.
103 Final ASC, Attachment K-2.
104 Final ASC, Section K.5.1, Table K-1, p. K-7.
evaluates whether the facility would comply with the applicable substantive criteria required to obtain that approval.

The facility would require the following land use permits or approvals from the City of Troutdale:

- Design Review
- Type III Variance (Lighting)
- Tree Removal Permit

The facility would require the following land use permits or approvals from the City of Fairview:

- Conditional Use Permit
- Site Design Review

**IV.E.1.a: City of Troutdale’s Applicable Substantive Criteria**

**City of Troutdale Zoning Requirements**

**Troutdale Development Code Chapter 3: Use Zoning Districts**

*Section 3.172: Permitted Uses (General Industrial)*

The following uses and their accessory uses are permitted in the GI district:

G. Utility facilities, major and minor, except for the following which require conditional use approval: sanitary landfills, recycling centers, and transfer stations, sewage treatment plants and lagoons, and telecommunication towers or poles.

The applicant proposes a facility that would consist of three distinct components: (1) a natural gas-fired power plant and all related structures and equipment; (2) the 230-kV transmission line; and (3) the process water pipeline. The applicant proposes to locate all three of these components within the City of Troutdale’s General Industrial (GI) district. The Troutdale Development Code defines both the natural gas-fired power plant (as an “electric generation facility”) and the 230-kV transmission line (as a “transmission facility”) as major utility facilities. The TDC defines process water pipelines (as an “underground pipe”) as a Minor Utility Facilities. Both Major and Minor Utility Facilities are permitted uses within the GI district and do not require a conditional use permit for approval.

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105 Final ASC, Figure K-1.
106 Troutdale Development Code Section 1.020.113, “Utility Facility, Major.”
107 Troutdale Development Code Section 1.020.114, “Utility Facility, Minor.”
Section 3.174: Dimensional Standards

Section 3.174 of the TDC lists the dimensional standards that apply to all uses located within the GI district.

A. Setbacks.

1. Front: 20 feet.

2. No side or rear yard setbacks unless the property abuts a parcel of land in a more restrictive manufacturing or commercial district, in which case the requirements of the abutting zoning district shall apply.

3. Additional setback requirements: If any use in this district abuts or faces any residential zoning district, a setback of 50 feet from the property line or centerline of an intervening public street, on the side abutting or facing the residential or apartment district shall be required.

4. Setbacks for insufficient right-of-way: Setbacks shall be established when a lot abuts a street having insufficient right-of-way width to serve the area. The necessary right-of-way widths and the setback requirements in such cases shall be based upon the Comprehensive Land Use Plan and applicable ordinances and standards.

The TDC Section 3.174(A)(1) setback requirements apply to all proposed buildings associated with the proposed facility. \(^{108}\) The overview site plan presented in Figure B-6 in the ASC, shows a front setback of approximately 50 feet from NW Swigert Way to the nearest building (fuel oil storage tank). This distance exceeds the 20-foot setback requirement in TDC Section 3.174(A)(1). In order to ensure compliance with the City of Troutdale’s dimensional standards for the General Industrial zone, the Department recommends that the Council adopt the following condition:

**Condition E.1:** In accordance with the setback requirements of Section 3.174(A) of the Troutdale Development Code, in effect as of July 23, 2012, the certificate holder shall construct all facility components a minimum of 20 feet from the front property line of Lot 3.

TDC Section 3.174(A) continues with the following requirements:

2. No side or rear yard setbacks unless the property abuts a parcel of land in a more restrictive manufacturing or commercial district, in which case the requirements of the abutting zoning district shall apply.

\(^{108}\) Final ASC, Section K.5.4.1, p. K-11.
3. Additional setback requirements: If any use in this district abuts or faces any residential zoning district, a setback of 50 feet from the property line or centerline of an intervening public street, on the side abutting or facing the residential or apartment district shall be required.

4. Setbacks for insufficient right-of-way: Setbacks shall be established when a lot abuts a street having insufficient right-of-way width to serve the area. The necessary right-of-way widths and the setback requirements in such cases shall be based upon the Comprehensive Land Use Plan and applicable ordinances and standards.

None of the proposed facility buildings abut any parcels of land in a more restrictive manufacturing, commercial, or residential zone. The applicant proposes to provide access to the site from NW Swigert Way, owned by the Port of Portland. The applicant states that the Port will extend and improve NW Swigert Way to a sufficient width along the entire Lot 3 frontage. Therefore, in accordance with TDC Section 3.174(A)(2) through (4), the Department recommends that the Council find that no side, rear, or additional setbacks are required.

B. Height Limitation. None, unless otherwise limited by the Federal Aviation Administration.

The City of Troutdale does not impose any height limitations on developments in the GI district, and similarly the Federal Aviation Administration (FAA) has not imposed any height limitations on the proposed facility. Accordingly, the Department recommends that the Council find that TDC Sections 3.174(B) would not apply to the proposed facility.

C. Lot Area. Division of lots or parcels are permitted as follows * * *:

The applicant does not propose divisions of lots or parcels, and states that no lot division would be required to develop the facility. Accordingly TDC Sections 3.174(C) would not apply to the proposed facility.

Based on the evidence in the record, and subject to compliance with recommended Condition E.1, the Department recommends that the Council find that the proposed facility would satisfy the requirements of TDC Section 3.174.

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109 Final ASC, Figure K-1.
110 Final ASC, Section K.5.4.1, p. K-11.
111 Final ASC, Attachment E-1.
112 Final ASC, Section K.5.4.1, p. K-12.
Section 3.175: Additional Requirements

The additional requirements contained in TDC Section 3.175 apply to all proposed uses located in the GI district.

A. Design review and landscaping is required for all uses in the GI district.

TDC Section 3.175(A) requires new developments proposed in the GI district to undergo design review, which implements the requirements of TDC Section 8.040, Site and Design Review. In addition, TDC Section 3.175(A) requires new developments to contain landscaping, which implements the requirements of TDC Section 11.010, Minimum Basic Improvements. The Department addresses the proposed facility’s compliance with design review and landscaping standards in the findings for TDC Sections 8.040 and Chapter 11, respectively.

B. All lots shall have frontage or approved access to public streets, public water, and public sewer before development is allowed.

TDC Section 3.175(B) requires all lots in the GI district to have frontage or approved access to public streets, public water, and public sewer before development is allowed. The applicant provides preliminary design information showing proposed access locations and utility connections. In order to ensure compliance with the requirements of TDC Section 3.175(B), the Department recommends that the Council adopt the following condition:

Condition E.2: Prior to commencement of construction, the certificate holder shall provide documentation of approved access to public streets, public water, and public sewer to the City of Troutdale.

C. Off-street parking spaces shall be provided in accordance with the requirements of Chapter 9, Off-Street Parking and Loading, of this code.

TDC Section 3.175(C) requires all new developments proposed in the GI district to provide off-street parking spaces, implementing the requirements of TDC Section 9.040, Industrial Off-Street Parking Space Requirements. The Department addresses the proposal’s compliance with off-street parking standards below in the finding for TDC Chapter 9.

D. Commercial uses within industrial flex-space buildings are subject to the following standards * * *:

The applicant does not propose a commercial use or any use located within an industrial flex-space building. Therefore, TDC Section 3.175(D) would not apply to the proposed facility.

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E. Development is subject to compliance with any applicable overlay zoning district standards.

TDC Section 3.175(E) requires all new developments proposed in the GI district to comply with applicable zoning overlay standards. The proposed facility would cross the following zoning overlays: Airport Landing Field (ALF), Vegetation Corridor and Slope District (VECO), and Flood Management (FLMA), which implement the requirements of TDC Sections 4.100, 4.300, and 4.600, respectively. The Department addresses the proposal’s compliance with zoning overlay standards in the relevant findings for TDC Chapter 4.

Troutdale Development Code Chapter 4: Use Zoning District Overlays

Section 4.100: Airport Landing Field

Section 4.110: Purpose

In order to carry out the provisions of this overlay district, there are hereby created and established certain zones which include all of the land lying beneath the airport imaginary surfaces as they apply to the Portland-Troutdale Airport. Such zones are shown on the current Airport Approach and Clear Zone Map. Further, this overlay district is intended to prevent the establishment of air space obstructions in airport approaches and surrounding areas through height restrictions and other land use controls as deemed essential to protect the health, safety, and welfare of the people of the City of Troutdale and Multnomah County.

TDC Section 4.100 outlines the allowable uses and additional requirements for development located within the City of Troutdale’s Airport Landing Field (ALF) overlay district. The ALF overlay district is intended to prevent the establishment of air space obstructions in airport approaches and surrounding areas through height restrictions and other land use controls. The applicant provides the FAR Part 77 Airspace Plan for Portland-Troutdale Airport, which shows that the proposed facility site is not within any approach or transition surfaces for the Portland-Troutdale Airport. Based on this information, the Department recommends that the Council find that the proposed facility is not within the airport overlay zone and, therefore, TDC Section 4.100 would not apply to the proposed facility.

115 Final ASC, Attachment K-3. DPO comments from City of Troutdale suggest that the proposed facility may be shown on some drawings within the “Horizontal Surface Area elevation 150 feet” for the Portland Troutdale Airport. The City notes that the applicant would need to provide FAA Form 7460-1 determinations to Oregon Department of Aviation and the City of Troutdale, consistent with recommended Condition M.6.
Section 4.300: Vegetation Corridor and Slope District

Section 4.311: Applicability

These standards apply to all development in the vegetation corridor and slope district as defined in section 1.040, Vegetation Corridor and Slope District, and Water Quality and Flood Management Definitions, of this code. The vegetation corridor, inclusive of the wetland areas identified on the U.S. Department of the Interior, Fish and Wildlife Service National Wetland Inventory 1988 (NWI), are generally mapped on the Metro Title 3 map. Metro’s Title 3 map is used as reference only. Not all wetlands recognized by the Oregon Division of State Lands are mapped on either the NWI or Title 3 map.

The VECO overlay district applies to the proposed facility because a portion of the facility would encroach onto the 50-foot VECO buffer around identified wetlands. The applicable provisions of TDC Section 4.300 are outlined below.

Section 4.315: Development Standards

A. New Development.

1. The applicant shall demonstrate that no reasonably practicable alternative design or method of development exists that would have a lesser impact on the vegetation corridor and slope than the one proposed.

The site plan provided by the applicant in Figure B-6 shows that the proposed facility site contains a number of environmental constraints, including onsite extraction wells, the Sandy Drainage Improvement Company levee, and 4.39 acres of existing wetlands. Approximately 3.56 acres of VECO buffer surround existing wetlands on the eastern portion of Lot 3. The proposed facility layout concentrates structures into a permanent footprint of approximately 16.5 acres on the western portion of Lot 3. This footprint would encroach on roughly 0.25 acres (7 percent) of the onsite VECO buffer. Construction and operation of the facility would necessitate the placement of large-scale equipment and construction of several structures, requisite parking and landscaping, and looped fire control access. The Department recommends that the Council find that, given the proposed equipment required

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116 Final ASC, Figure K-9.
117 Final ASC, Attachment J-1, Wetlands and Other Waters Delineation Report for the Troutdale Energy Center, p. 5.
118 Final ASC, Figure K-9.
120 Final ASC, Section K.5.4.1, p. K-14.
for the facility and existing onsite constraints, there are no reasonably practicable alternative
designs or methods of development that would have a lesser impact on the vegetation corridor.

2. If no such reasonably practicable alternative design or method of development
exists, new structures and development shall be limited in scale, as specified in
this section, so that the impacts on the vegetation corridor and slope district are
the least necessary and the plans shall include restoration, replacement, or
rehabilitation of the vegetation corridor and/or slope associated with the site:

a. Notwithstanding the provisions of chapter 6.220, Type II Variance, of this
code, a maximum of 30% of the total area of the vegetation corridor and
slope district on the lot may be used for the development, inclusive of any
walkways, driveways, patios, decks, accessory buildings, and similar
impervious features.

b. Notwithstanding the provisions of chapter 6.220, Type II Variance, of this
code, where necessary to avoid construction within the vegetation corridor
and slope district, the following provisions are available for lots of record
affected by the vegetation corridor and slope district:

i. Setbacks may be reduced up to 50% from the underlying zoning district
setback dimension where necessary to avoid construction on slopes of
25% or greater or within the required vegetation corridor, and otherwise
meet the standards of this chapter.

According to the VECO mitigation plan provided by the applicant, the proposed facility will
disturb 7 percent of the VECO buffer on Lot 3.\textsuperscript{121} The applicant states that a 50% reduction in
the base zone front yard setback, as allowed under TDC Section 4.315(A)(2)(b)(i), would not
result in avoidance of the VECO buffer.\textsuperscript{122} The Department has reviewed the proposed VECO
mitigation plan and has confirmed that a 50% setback reduction would not result in avoidance
of the VECO buffer. Accordingly, the Department recommends that the Council find that the
new structures and development associated with the proposed facility would be limited in scale
as required in TDC Section 4.315(A)(2)(b).

3. The applicant shall provide mitigation to ensure that impacts to the functions
and values of the vegetation corridor and integrity of the slope will be mitigated
or restored to the extent practicable.

a. The existing tree canopy and understory comprised of native plants shall be
retained wherever possible outside of the building envelope. A tree

\textsuperscript{121} Final ASC, Figure K-9.
\textsuperscript{122} Final ASC, Section K.5.4.1, p. K-15.
preservation and maintenance plan is required to be submitted with the land
use application as part of the landscaping plan, or in the case of a single-
family dwelling, with the building permit. Only those trees approved for
removal by the Director, Site and Design Review Committee, or Planning
Commission may be removed.

b. Any disturbed portions of the site shall be restored and enhanced by
removing non-native plants and noxious weeds, and restoring the vegetation
corridor with native plant species listed on the Metro Native Plant List. Only
native grass varieties will be permitted.

The applicant provides a VECO mitigation plan that states that disturbed portions of the VECO
will be mitigated by removal of non-native vegetation and planting of native species and that
no development is proposed within the remaining undisturbed portion of the VECO buffer. 123

c. A mitigation and restoration plan shall be submitted with construction
plans, and shall be implemented prior to issuance of a Certificate of
Occupancy, a Certificate of Completion for a subdivision, or the final building
inspection, as applicable.

i. Required plants and plant densities. An applicant must meet Mitigation
Option 1, 2 or 3.

Option 1. Number and type of trees and shrubs that must be planted
to qualify as mitigation.

Table 3: Tree Replacement Mitigation Option 1:

<table>
<thead>
<tr>
<th>Size of Tree Removed</th>
<th>Number of Trees and Shrubs to Plant</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 to 12” diameter</td>
<td>1 tree and 1 shrub</td>
</tr>
<tr>
<td>13 to 18” diameter</td>
<td>2 tree and 3 shrubs</td>
</tr>
<tr>
<td>19 to 24” diameter</td>
<td>3 tree and 6 shrubs</td>
</tr>
<tr>
<td>25 to 30” diameter</td>
<td>4 tree and 9 shrubs</td>
</tr>
<tr>
<td>Over 30” diameter</td>
<td>5 tree and 15 shrubs</td>
</tr>
</tbody>
</table>

Option 2. The mitigation is calculated based on the size of the area
disturbed within the Vegetation Corridor and Slope District. Native
trees and shrubs are required to be planted at a rate of one tree and

123 Final ASC, Figure K-9.
five shrubs for every 100 square feet of disturbance area. All fractions are rounded to the nearest whole number. Bare ground must be planted or seeded with native grasses or herbs.

Option 3. Discretionary Review. This mitigation plan varies the required number and size of trees and shrubs under Option 1 or Option 2.

[...]

As depicted in Figure P-4, all trees proposed for removal are located outside of the VECO buffer. The applicant does not propose to remove any shrubs within the VECO buffer. Accordingly, the Department recommends that the Council find that the provisions contained in TDC Section 4.315(A)(3)(c) would not apply to the proposed facility.

d. The portion of the vegetation corridor and slope district that is not disturbed with the use shall be conserved and maintained as open space. This may occur through private ownership; private conditions, covenants, and restrictions; conservation easements enforceable by the City, other public or private nonprofit agency, or where approved by the City Council; dedication to the City; or donation to other appropriate public or private nonprofit agency.

The applicant provides a VECO mitigation plan that states that disturbed portions of the VECO will be mitigated by removal of non-native vegetation and planting of native species and that no development is proposed within the remaining undisturbed portion of the VECO buffer. In order to ensure implementation of these mitigation measures, the Department recommends that the Council adopt the following condition:

**Condition E.3:** Prior to the commencement of construction, the certificate holder shall submit a final VECO mitigation plan to the City of Troutdale as part of the building permit application for the energy facility. This plan shall comply with Section 4.3.15 of the Troutdale Development Code in effect as of July 23, 2012. The certificate holder shall implement the plan prior to completion of construction of the energy facility.

As depicted in Figure P-4, all trees proposed for removal are located outside of the VECO buffer. Accordingly, Section 4.315(A)(3)(c) would not apply to the proposed facility.

4. The use satisfies all applicable standards of chapters 4.600, Flood Management Area; 5.600, Erosion Control and Water Quality Standards; and 5.800, Stormwater Management, of this code.

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124 Final ASC, Section K.5.4.2, p. K-16.
125 Final ASC, Figure K-9.
The Department addresses the proposed facility’s compliance with the applicable criteria contained in TDC Chapters 4.600, 5.600, and 5.800 in sections analyzing those respective sections of the TDC.

5. All excavation over three feet in depth shall require submission of an engineering report addressing the hydrology, geology, and soils of the site as specified in this chapter. The siting, engineering, erosion control, water quality, and enhancement or revegetation of the site shall comply with the standards of this chapter. The applicant’s engineering plans shall certify that runoff from the site will not increase above pre-development quantity and rate, and that visible and measurable erosion is prevented.

According to preliminary design information included in the ASC, the facility will require excavations in the VECO overlay district for installation of a secondary access road, security fencing, and a utility corridor.\(^{126}\) In order to ensure compliance with the requirements of TDC Section 4.315(A)(5), the Department recommends that the Council adopt the following condition:

**Condition E.4:** For all excavation activities in the VECO area, the certificate holder shall submit to the City of Troutdale an engineering report addressing the hydrology, geology, and soils of the site prior to the commencement of construction. The siting, engineering, erosion control, water quality, and enhancement or revegetation of the site shall comply with the standards of TDC Section 4.315 in effect as of July 23, 2012. The engineering plans shall certify that runoff from the site will not increase above pre-development quantity and rate, and that visible and measurable erosion is prevented.

Based on the evidence in the record, the Department recommends that the Council find that the proposed facility would comply with the requirements of TDC Section 4.315.

**Section 4.600: Flood Management Area**

**Section 4.612: Applicability**

A. This chapter shall apply to all development of land within the Flood Management Area (FLMA) and wetlands within the planning jurisdiction of the City, which includes land in unincorporated Multnomah County within the City’s Urban Planning Area.

FLMA development standards apply to land within the Flood Management Area (land within the FEMA 100-year floodplain), as well as to wetlands within the City of Troutdale’s planning

\(^{126}\) Final ASC, Section K.5.4.2, p. K-17.
jurisdiction. The applicant explains that due to the adjacent SDIC levee, the proposed facility site would not be located within the 100-year floodplain.\textsuperscript{127} The applicant proposes to avoid any temporary or permanent disturbances to waters of the state.\textsuperscript{128}

Accordingly, the Department recommends that the Council find that the development standards of TDC Section 4.600 would not apply to the proposed facility.

\textit{City of Troutdale Design Review Approval}

\textbf{Troutdale Development Code Chapter 8: Site Orientation and Design Standards}

\textit{Section 8.040: Additional Requirements – Site Design and Review}

\textit{Conditions of approval may be imposed on a development subject to site and design review by advising the applicant of the reasons, in writing, that the conditions are necessary to meet the intent and purpose of the Comprehensive Land Use Plan, this code, and other applicable ordinances. Conditions may include the following:}

\begin{itemize}
  \item A. Include as part of the landscaped area, clearances from specified trees, rocks, water ponds or courses, or other natural features.
\end{itemize}

In comments on the ASC, the City of Troutdale did not identify site-specific resources for which such a clearance is required.\textsuperscript{129} The applicant provides a landscape plan for the proposed facility that includes buffers between proposed structures and existing forested wetlands located on the facility site. The applicant has not identified any large rocks and water ponds on Lot 3, and has committed to avoiding these features should they occur within the site boundary.\textsuperscript{130} Accordingly, the Department does not recommend that the Council adopt any additional requirements described in TDC 8.040(A).

\begin{itemize}
  \item B. Establish the suitability of the landscape plan by having it prepared by a licensed landscape architect.
\end{itemize}

The applicant states that the landscape plan for the facility was prepared by a landscape architect from the design firm Group Mackenzie.\textsuperscript{131} The applicant provides a preliminary landscape plan, but this plan does not bear the stamp of a registered landscape architect.\textsuperscript{132} As described in the findings for TDC Chapter 11 below, the applicant provides and landscaping plan

\begin{footnotes}
\item[127] Final ASC, Section K.5.4.2, p. K-17.
\item[129] McCallum, Elizabeth, "City of Troutdale Comments on the Troutdale Energy Center," May 1, 2013.
\item[130] Final ASC, Section K.5.4.5, p. K-33.
\item[131] Final ASC, Section K.5.4.5, p. K-33.
\item[132] Final ASC, Figure K-3.
\end{footnotes}
establishing the feasibility of the facility complying with the applicable substantive criteria contained in the City of Troutdale’s Landscaping and Screening requirements in TDC Chapter 11. In addition, recommended Condition E.13 would require the applicant to submit to the City of Troutdale a final landscape plan meeting the requirements of TDC Chapter 11. Accordingly, the Department does not recommend that the Council adopt any additional requirements described in TDC 8.040(B).

C. Obtain city engineer’s approval of a grading and drainage plan for the collection and transmission of stormwater or groundwater.

The applicant provides a preliminary grading plan for the proposed facility that shows where and to what extent grading will occur, and current and proposed contour lines on the site. Grading would allow for collection of stormwater in the proposed stormwater management facilities, which are shown on Figure K-3 of the ASC. TDC Section 8.040 requires that, in imposing any of the conditions listed in that section, the decision maker advise the applicant of the reasons that the conditions are necessary to meet the intent and purpose of the Comprehensive Land Use Plan, the Troutdale Development Code, and other applicable ordinances. The applicant notes Goal 7, Policy 1 of the Troutdale Comprehensive Land Use Plan, which provides as follows:

1. Ensure that development in highly hazardous areas be restricted or prohibited. Development may be allowed in areas of potential hazard if appropriate safeguards are taken in the design and construction to protect affected persons and property.

The applicant explains that Lot 3 is not located within a highly hazardous area as designated by the City of Troutdale, and that the Environmental Protection Agency’s 2006 Record of Decision for the former aluminum reduction plant on Lot 3 indicates that the site is suitable for industrial use, but not for residential or commercial use. The applicant describes proposed safeguards during construction and operation, such as installation of lined stormwater swales to prevent backflow of groundwater into the existing TRIP stormwater system. In comments on the application, the City of Troutdale explains that infrastructure associated with the facility would be constructed in areas of contaminated groundwater and soil. The comment states that “additional engineering controls are necessary” to prevent facility infrastructure from becoming a conduit for offsite contamination migration.

In order to ensure that measures to prevent the spread of contamination in an area of potential hazard are developed in coordination with the City of Troutdale, the Department recommends that the Council find that a grading and drainage plan approved by the City of Troutdale’s city engineer is necessary to meet the intent and purpose of the Troutdale Comprehensive Land

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133 Final ASC, Figure K-2.
134 Final ASC, Section K.5.6.5, p. K-77.
135 Comment letter on ASC, Elizabeth McCallum, Senior Planner, City of Troutdale, May 1, 2013.
Use Plan, the Troutdale Development Code, and other applicable ordinances. Therefore, in order to ensure compliance with this requirement, the Department recommends that the Council adopt the following condition:

**Condition E.5:** Prior to commencement of construction, the certificate holder shall obtain approval of a grading and drainage plan for the collection and transmission of stormwater from the City Engineer of the City of Troutdale.

*D. Establish vehicle and pedestrian access facilities with due consideration to size, location, and grade.*

*E. Require dedication of public street right-of-way; a pedestrian way; or an easement for utilities, waterway, slope protection, or open spaces.*

*F. Install sidewalks.*

*G. Support a future street improvement in an agreement that will run with the land.*

TDC Section 8.040(D)-(G) allows for the City of Troutdale to impose conditions on development related to vehicular and pedestrian facilities. The applicant provides an access, circulation, and parking plan for the proposed facility. The Department has reviewed this plan and finds it contains the requisite elements outlined in TDC Chapter 8, Site Orientation and Design Standards and Chapter 9, Parking and Loading. The applicant proposes two access roads; a paved primary access road on the western side of Lot 3, and a graveled secondary emergency fire access road on the eastern portion of Lot 3. The applicant explains that final design of both access roads would comply with dimensional requirements of Gresham Fire and Emergency Services.

The applicant proposes to provide access to the facility via NW Swigert Way south of the Lot 3 property line. The applicant explains that NW Swigert Way is not a platted right-of-way, but instead is located within an easement granted to the City of Troutdale (within Tract E), and owned by the Port of Portland. The applicant states that the Port will extend NW Swigert Way east and south to NW Graham Road, under separate authority as part of the Port’s Phase II development of TRIP. The applicant explains that design of this NW Swigert Way extension will be consistent with the section currently developed south of the Federal Express facility, and

136 Final ASC, Figure K-8.
137 Final ASC, Figure K.5.4.5, p. K-34.
138 Final ASC, Section K.5.4.5, p. K-34.
139 Final ASC, Section K.2.1, p. K-3. Comments from Joe Mollusky, Real Estate Program Manager, Port of Portland, September 19, 2013 also describe the extension of NW Swigert Way to NW Graham Road as a condition of approval for the TRIP Phase II subdivision.
will include a sidewalk and landscape strip on the north side. Some of the site plans submitted by the applicant do not depict improvements to any portion of NW Swigert Way, while others show both the existing cul-de-sac terminus at the western boundary of Lot 3 and the extension of NW Swigert Way beyond the east property line of Lot 3 toward NW Graham Road. Although the applicant’s DPO comments suggest that the NW Swigert Way extension should only be required along the frontage of Lot 3, none of the site plans included in the application depict that scenario.

Although the applicant proposes to rely on the Port of Portland to complete the NW Swigert Way extension improvements, the applicant has relied on these street improvements to provide the vehicle and pedestrian access facilities described in TDC Section 8.040(D) and to comply with the City’s street improvement requirements. To ensure compliance with these requirements, the Department recommends that the Council adopt the following condition:

**Condition E.6:** The certificate holder shall not commence operation of the facility prior to the completion of construction of the NW Swigert Way extension to NW Graham Road, including installation of sidewalk and landscape facilities, consistent with the existing portion of NW Swigert Way and subject to City of Troutdale approval.

DPO comments from Port of Portland, the City of Troutdale, and the applicant all challenge the recommended site certificate condition requiring improvements to NW Swigert Way. Both the City of Troutdale and Port of Portland comments misinterpret recommended Condition E.6 as transferring the obligation for constructing the NW Swigert Way extension from the Port of Portland (the property owner) to the applicant (the developer of an individual lot). The recommended condition does not obligate the applicant or any other specific party to complete the extension. Instead, the condition addresses the timing of the required improvements by ensuring that they are completed prior to the commencement of operation of the proposed facility.

In addition, comments from the City of Troutdale and the applicant contend that because the NW Swigert Way improvements are needed specifically to meet frontage requirements in the Troutdale Development Code, recommended Condition E.6 should only require improvements along the frontage of Lot 3. As described above, site plans and written descriptions in the application are unclear as to the timing and extent of improvements to NW Swigert Way. This lack of clarity leaves considerable doubt as to whether reviewing agencies with a particular

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140 Final ASC, Section K.5.4.5, p. K-34.
141 Final ASC, Figure C-2.
143 Comments from Steve Gashler, Public Works Director, City of Troutdale, September 18, 2013; Joe Mollusky, Real Estate Manager, Port of Portland, September 19, 2013; Elizabeth McCallum, Senior Planner, City of Troutdale, September 23, 2013; and David Filippi, Stoel Rives, attorney for the applicant, September 25, 2013.
144 David Filippi comment, September 25, 2013.
interest in traffic circulation, such as emergency services or transportation planning agencies, considered in preparing their comments that the extension may not be in place during operation of the proposed facility. Accordingly, the Department recommends Condition E.6 to ensure the planned extension of NW Swigert Way to NW Graham Road be completed prior to operation of the facility.

H. Modify elements of the design or proposed materials, color, texture, or shape of a structure, sign, or other feature of the development, providing that a specific design feature is so inappropriate, incongruous with the surrounding area, or in some other way sufficiently detrimental to the aesthetics, property values, general stability, or other public welfare concern for the area or the City as a whole, that correction is necessary. In requiring modification, an alternate means of solution shall be provided, but the applicant is free to propose other alternatives.

In Exhibit R the applicant provides photographs of existing conditions of the proposed facility site as well as photo simulations that provide an approximation of the proposed facility appearance following construction. These photographs indicate that given surrounding industrial uses, the proposed facility will not be inappropriate or incongruous with the surrounding area, or in some other way sufficiently detrimental to the aesthetics, property values, general stability, or other public welfare concern for the area or the City as a whole. Accordingly, the Department does not recommend that the Council adopt any additional requirements described in TDC 8.040(H).

I. Install an onsite fire hydrant with a protective barricade.

The applicant proposes to install fire hydrants as required along the facility’s NW Swigert Way frontage, and represents that it will coordinate with Gresham Fire and Emergency Services (GFES) prior to construction to ensure that adequate provisions are made for fire safety. In order to ensure compliance with this requirement, the Department recommends that the Council adopt the following condition:

Condition E.7: Prior to beginning construction, the certificate holder shall obtain Gresham Fire and Emergency Services approval of final locations and specifications of new fire hydrants.

J. Install lighting for outdoor circulation and parking areas, including approval of the type and placement of the outdoor lighting.

The applicant provides a lighting plan and photometric data, which the Department has determined contains the requisite elements outlined in TDC Section 9.090 and TMC Chapter

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145 Final ASC, Attachment R-2.
146 Final ASC, Section K.5.4.5, p. K-35.
8.26, Outdoor Lighting. Accordingly, the Department does not recommend that the Council adopt any additional requirements described in TDC 8.040(J).

K. In case of commercial or industrial development, provide access by a frontage road having limited and controlled access onto an arterial street by means of traffic signals, traffic control islands, or other means that will preserve the traffic carrying capacity and safety of the arterial street, and that will avoid the cumulative effect of individual access points directly onto the arterial street.

The applicant proposes to provide access to the facility via NW Swigert Way, which the City of Troutdale’s Transportation System Plan designates as a local street. Recommended Condition E.6 would require the completion of construction of this extension prior to operation of the facility. Accordingly, the Department does not recommend that the Council adopt any additional requirements described in TDC 8.040(K). Because the Facility has direct access to a local road and not an arterial, the provisions contained in TDC Section 8.040(K) would not be applicable.

L. In the case of development that is not required to provide a frontage road, provide access to a street that intersects an arterial street instead of directly to the arterial street, preserve the traffic carrying capacity and safety of the arterial street, and avoid the cumulative effect of individual access points.

As described above, the applicant proposes to provide access to the facility via NW Swigert Way, which intersects an arterial via Sundial Road and Marine Drive, both classified as collectors in the City of Troutdale’s Transportation System Plan. The applicant explains that during operations, the proposed facility would operate three daily shifts, which would result in approximately 44 additional daily trips to I-84, I-205, NE Marine Drive, and NW Sundial Road. Based on the 2010 Traffic Volume Tables provided by the applicant, the Department finds that the anticipated addition of approximately 44 daily trips, spread out over three shifts, would result in an increase of approximately 0.1% to 0.3% at interchanges to the east and west of TRIP. Therefore, the Department recommends that the Council find that the proposed facility would not likely result in significant adverse impacts to the carrying capacity of arterial streets used for access to the facility.

Based on the evidence in the record, and subject to compliance with recommended conditions, the Department recommends that the Council find that the proposed facility would comply with the requirements of TDC Section 8.040.

Section 8.052: Pedestrian Walkways

All industrial parks, commercial developments, and community service uses shall meet the following requirements for pedestrian walkways:

A. Number and Placement.

1. At least one pedestrian walkway shall be provided to each street, other than limited access freeways, abutting the property.

2. Pedestrian walkways shall connect building entrances to one another, to public street entrances, and to existing or planned transit stops.

3. Where practicable, on-site walkways shall connect with walkways, sidewalks, bike paths, alleyways, and other bicycle or pedestrian connections on adjacent properties used as, or planned for, industrial parks, commercial, multiple-family, or community service uses.

4. Where practicable, pedestrian walkways and driveways shall provide a direct connection to walkways and driveways on abutting developments.

B. Routing.

1. Pedestrian walkways shall be as direct as possible and avoid unnecessary meandering unless integrated into an overall site design which necessitates meandering.

2. Driveway crossings shall be minimized. Internal parking lot circulation and design shall maintain ease of access for pedestrians from streets and transit stops.

3. The on-site pedestrian circulation system shall connect adjacent streets to the main entrance of the primary structure on the site in the most direct route possible.

5. A required walkway or walkway connection need not be provided where another required sidewalk or walkway route provides a reasonably direct alternate route. An alternate route is reasonably direct if the walking distance increases by less than 50%, but not more than 100 feet, over the other required route.
6. Pedestrian walkways are required between those parts of a site that people on the site normally would walk between. Walkways are not required between buildings or portions of a site which are not intended for, or likely to be used by, pedestrians. Such buildings and features include truck loading docks, warehouses not including office/warehouse combinations, automobile sales lots, temporary uses, outdoor storage areas, etc.

C. Design

1. Pedestrian walkways shall be at least five feet in unobstructed width and shall be constructed to sidewalk standards as found in City of Troutdale Construction Standards for Public Works Facilities, except for portions of walkways in driveways and other vehicle maneuvering areas which shall be paved with a material different in color, texture, or composition than the surrounding driveway, or striped to city specifications.

2. Walkways bordering perpendicular or angular parking spaces shall be at least eight feet wide unless concrete bumpers, bollards, curbing and landscaping, or other similar improvements are provided which prevent parked vehicles from obstructing the walkway.

3. Stairs or ramps shall be provided where necessary to provide a direct route. Walkways without stairs shall have a maximum slope of eight percent and a maximum cross slope of two percent.

TDC Section 8.052 provides requirements for the number and placement, routing, design, and Americans with Disabilities Act compliance of pedestrian walkways in new developments. The applicant provides an access, circulation, and parking plan for the proposed facility. The Department has reviewed this plan and finds it contains the requisite elements outlined in TDC Chapter 8 and establishes the feasibility of the facility meeting the requirements of the applicable substantive criteria contained in that chapter. Although the applicant provides analysis in support of a Council determination of compliance with the specific provisions contained in TDC Section 8.052, the Department finds that specific requirements contained in TDC Section 8.052 relate to specific requirements imposed by the City of Troutdale during review of a building permit application. In order to ensure that the facility complies with these requirements as implemented by the City of Troutdale, the Department recommends the following condition:

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150 Final ASC, Figure K-8.
Condition E.8: Prior to the commencement of construction, the certificate holder shall submit a final access, circulation, and parking plan to the City of Troutdale as part of the building permit application for the energy facility. This plan shall comply with Section 8.052 of the Troutdale Development Code in effect as of July 23, 2012. The certificate holder shall implement the plan prior to completion of construction of the energy facility.

Based on the evidence in the record, and subject to compliance with recommended conditions, the Department recommends that the Council find that the proposed facility would comply with the requirements of TDC Section 8.052.

Section 8.054: Accessways

Any Type II land division where further divisions are possible, Type III land divisions, industrial, commercial, and planned developments along existing and identified future transit routes shall meet the following requirements for accessways:

* * * * *

Section 8.056: Transit Facility Design

Any Type II land division where further divisions are possible, Type III land divisions, industrial, commercial, and planned developments along existing and identified future transit routes shall meet the following requirements for accessways:

* * * * *

TDC Sections 8.054 and 8.056 require compliance with certain accessway and transit design standards for industrial developments proposed along existing and identified future transit routes. The applicant explains that no current transit route currently serves the proposed facility site and that no transit routes are proposed in the Tri-Met Transit Investment Plan (2012) that would directly serve the proposed facility site. Accordingly, the Department finds that TDC Sections 8.054 and 8.056 do not apply to the proposed facility.

Section 8.058: Building Orientation

All commercial and community service uses, and any industrial use with 50 or more employees, located on parcels within 600 feet of existing or planned transit routes shall meet the following requirements * * *:

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151 Final ASC, Section K.5.4.5, p. K-46.
The applicant states that the proposed facility will employ approximately 26 personnel, and that the nearest current transit route to Lot 3 is located approximately 0.5 miles south of the site, across I-84. The applicant states that the Tri-Met Transit Investment Plan, adopted in 2012, does not propose any routes located within 600 feet of the proposed facility.\footnote{Final ASC, Section K.5.4.5, p. K-46.} Accordingly, TDC Section 8.058 would not apply to the proposed facility.

\textit{Section 8.059: Utility Undergrounding}

\textit{Development subject to site and design review shall be required to install underground utilities including, but not limited to, natural gas, electric power, telecommunications facilities to serve the development and to convert existing overhead utilities to underground in accordance with Chapter 12.11 of the Troutdale Municipal Code.}

The applicant provides the text of the original City of Troutdale undergrounding ordinance, which specifically exempts “Electrical power transmission lines (over 50,000) volts.”\footnote{Final ASC, Attachment K-6.} TDC Section 8.059 also applies to several other types of utilities. In order to ensure compliance with the requirements of TDC Section 8.059, the Department recommends that the Council adopt the following condition:

\textbf{Condition E.9:} Excepting any electric power transmission lines over 50,000 volts, the certificate holder shall install underground utilities including, but not limited to, natural gas, electric power, telecommunications facilities to serve the facility in accordance with Chapter 12.11 of the Troutdale Municipal Code, in effect as of July 23, 2012.

Based on the evidence in the record, and subject to compliance with recommended conditions, the Department recommends that the Council find that the proposed facility would comply with the requirements of TDC Section 8.059.

\textit{Section 8.060: Maintenance}

\textit{All approved onsite improvements shall be the ongoing responsibility of the property owner or occupant. The owner, occupant, or agent shall be jointly and severally responsible for the maintenance of all landscaping which shall be maintained in good condition so as to present a healthy, neat, and orderly appearance, and shall be kept free of refuse and debris. All onsite improvements shall be controlled by maintaining, pruning, trimming, or otherwise so that:}

\begin{enumerate}
\item \textit{A. It will not interfere with the maintenance or repair of any public facility;}
\item \textit{B. It will not restrict pedestrian or vehicular access; and}
\end{enumerate}

\textsuperscript{\footnotemark[152]}
C. It will not constitute a traffic hazard because of reduced visibility.

The applicant proposes to assume responsibility to maintain all approved onsite improvements for the duration of ownership in accordance with TDC Section 8.060(A)-(C). In order to ensure compliance with the requirements of TDC Section 8.060, the Department recommends the Council adopt the following condition:

**Condition E.10:** During operation, the certificate holder shall maintain onsite landscaping so that it does not interfere with the maintenance or repair of any public facility, restrict vehicle or pedestrian access, or constitute a traffic hazard due to reduced visibility, in accordance with TDC Section 9.060(E), in effect as of July 23, 2012.

Based on the evidence in the record, and subject to compliance with recommended conditions, the Department recommends that the Council find that the proposed facility would comply with the requirements of TDC Section 8.060.

**Chapter 9: Off-Street Parking and Loading**

All uses proposed in the GI district are required to demonstrate compliance with applicable parking and loading requirements in accordance with TDC Section 3.175(C). TDC Chapter 9 provides off-street parking space requirements, as well as requirements for landscaping and screening, drainage, lighting, driveways, on-site circulation, and design and construction of off-street parking.

The applicant provides information about the proposed development of related and supporting parking areas in a landscape plan; an access, circulation, and parking plan; and a grading plan. The Department has reviewed these plans and finds that they contain the requisite elements outlined in TDC Sections 9.000 through 9.800 and TDC Sections 9.110 through 9.210 and establishes the feasibility of the facility meeting the requirements of the applicable substantive criteria contained in that chapter. Although the applicant provides analysis in support of a Council determination of compliance with the specific provisions contained in TDC Section 9.000 through 9.800 and TDC Sections 9.110 through 9.210, the Department finds that specific requirements contained in these sections relate to specific requirements imposed by the City of Troutdale during review of a building permit application. In order to ensure that the facility complies with these requirements as implemented by the City of Troutdale, the Department recommends the following condition:

**Condition E.11:** Prior to the commencement of construction, the certificate holder shall submit a final access, circulation, and parking plan to the City of Troutdale as part of the building permit application for the energy facility. This plan shall comply with Sections 9.000 through 9.800 and Sections 9.110 through 9.210 of the Troutdale Development Code in
effect as of July 23, 2012. The certificate holder shall implement the plan prior to completion of construction of the energy facility.

Section 9.090: Lighting

Artificial lighting shall be provided in all required off-street parking areas. Lighting shall be deflected so as not to shine directly into adjoining dwellings or other types of living units and so as not to create a hazard to the public use of a street. Lighting shall be provided in a bicycle parking area so that all facilities are thoroughly illuminated and visible from adjacent sidewalks or motor vehicle parking lots during all hours of use. Lighting fixtures shall also comply with the requirements of Troutdale Municipal Code, Chapter 8.26, Outdoor Lighting.

TDC Section 9.090 provides artificial lighting requirements for parking areas and adopts the provisions of TMC Chapter 8.26, Outdoor Lighting, by reference. The applicant provides a lighting plan for the proposed facility. The Department has reviewed this plan and finds it contains the requisite elements outlined in TDC Section 9.090 and TMC Chapter 8.26.

Some of the lighting fixtures proposed by the applicant do not comply with Section 8.26.040(A) of the Troutdale Municipal Code, which limits the height of all outdoor lighting fixtures to 25 feet. The applicant proposes outdoor lighting at heights up to 159 feet. Pursuant to TDC Chapter 6.200, the applicant requests a Type III Variance for all lighting that exceeds the 25 foot standard. 154 In the section below, the Department evaluates the variance request according to the applicable substantive criteria provided in TDC Chapter 6.200.

Chapter 6.200 – Variance

Section 6.205 – General Provisions

A. The variance procedures are intended to allow modifications of specific standards contained within this code where difficulties exist which render compliance with the standards impractical and such compliance would create unnecessary hardship to the owner or user of land or buildings.

B. In approving a variance request, the approving authority may attach reasonable conditions, restrictions, or safeguards to mitigate any adverse impacts which may result by reason of the approved variance.

C. Separate variance provisions apply to uses within the Vegetation Corridor and Slope District and the Flood Management Area.

154 Final ASC, Section K.5.4.6, p. K-50.
Pursuant to OAR 345-022-0030(2)(b), the Council will serve as the approving authority for this variance request, and may consider conditions of approval in accordance with TDC Section 6.205(B). The applicant does not propose to install any lighting fixtures within the VECO buffer or FLMA overlay. Accordingly, the provisions referenced in TDC Section 6.205(C) do not apply to the variance request.

The Planning Commission may grant a variance under the Type III procedure if the request involves the expansion or reduction of a quantifiable provision in this code by more than 30%, or if this request is referred to the Planning Commission in accordance with section 6.235 of this chapter and the criteria in section 6.215 of this chapter are met.

The applicant proposes outdoor lighting at heights up to 159 feet, which exceeds the maximum height allowed by the City of Troutdale by more than 30 percent. The applicant requests a variance for 63 light fixtures ranging in height from 32 feet to 159 feet. Accordingly, the provisions of TDC Section 6.255 apply to the variance request.

A. Special circumstances or conditions including, but not limited to, lot size, lot shape, topography, or size or shape of building, apply to the property, development, or to the intended use and are not typical of the general conditions in the surrounding area;

The applicant explains that engineering requirements for the type of natural gas combustion power plant proposed include several elements, such as combined-cycle exhaust stacks and simple-cycle power plants, which exceed 25 feet in height. These elements in turn require elevated accessways, stairways, and equipment platforms that must be lit at night for worker safety. The applicant also explains that the facility must include lighting above 25 feet in height to meet FAA warning light standards for vertical projections. Accordingly, the Department recommends that the Council find that the variance request meets the criteria in TDC Section 6.255(A).

B. The variance authorized will not be injurious to adjacent properties or the surrounding neighborhood or otherwise detrimental to the public welfare;

The applicant states that the facility would be located within an industrial park, with adjacent properties zoned for industrial use and some containing existing industrial development. The applicant describes existing sources of nighttime light in the vicinity of the proposed facility site. Existing sources include FAA warning lights and strobes on existing 230-kV transmission structures, and outdoor lighting on the Federal Express distribution facility, which exceeds 25

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155 Final ASC, Figure K-5.
157 Final ASC, Section K.5.4.6, p. K-53.
feet in height pursuant to a Type III Variance granted by the City of Troutdale in 2008.\textsuperscript{158} Accordingly, the Department recommends that the Council find that the variance request meets the criteria in TDC Section 6.255(B).

\hspace{1cm}C. The variance authorized will be consistent with the general purpose and intent of the provision from which a variance is sought; and\hspace{1cm}

The applicant quotes TMC Section 8.26.010, which states the purpose of regulations on lighting contained in that chapter.

\hspace{1cm}The purpose of this chapter is to affirm the right of citizens in Troutdale, Oregon to illuminate residential, commercial and public areas with outdoor light fixtures appropriate to the need, and to confine lighting to the property from which it is generated to the greatest extent possible. Furthermore, the purpose of this chapter is to affirm the general need for well-lighted streets and that such illumination by nature cannot be confined to the property from which it is generated.\hspace{1cm}

The applicant explains that no residential or commercial property in the City of Troutdale is adjacent to the proposed facility site, and that lighting fixtures in excess of 25 feet in height are already prevalent within TRIP.\textsuperscript{159} The applicant states that proposed lighting would be installed to light stairways, equipment platforms, and machinery according to a lighting plan designed according to American National Standards Institute guidance for lighting industrial facilities and minimum levels necessary to satisfy the safety needs of the facility.\textsuperscript{160} Accordingly, the Department recommends that the Council find that the variance request meets the criteria in TDC Section 6.255(C).

\hspace{1cm}D. The variance is the minimum necessary to relieve a practical difficulty and the resulting hardship.\hspace{1cm}

The applicant states that proposed lighting would be installed to meet worker safety needs, American National Standards Institute guidance for lighting industrial facilities, and FAA warning light standards for vertical projections.\textsuperscript{161} The applicant also states that the design engineer for the project, Kiewit Power Constructors, has extensive experience in designing and constructing similar natural gas plants, and has determined that the proposed lighting is the minimum necessary to meet the safety needs of the facility.\textsuperscript{162} Accordingly, the Department recommends that the Council find that the variance request meets the criteria in TDC Section 6.255(D).

\textsuperscript{158} Final ASC, Section K.5.4.6, p. K-54.
\textsuperscript{159} Final ASC, Section K.5.4.6, p. K-54.
\textsuperscript{160} Final ASC, Table K-3, p. K-51.
\textsuperscript{161} Final ASC, Table K-3, p. K-51.
\textsuperscript{162} Final ASC, Section K.5.4.6, p. K-54.
Based on the evidence in the record, the Department recommends that the Council find that
the proposed facility would meet the requirements of TDC Section 6.225 with respect to the
applicant’s variance request to the outdoor lighting height limits required by TMC Section
8.26.040, as adopted by reference in TDC Section 9.090. Accordingly, the Department
recommends that the Council approve this variance request under authority of ORS
469.504(1)(b).

Subject to a variance from outdoor lighting height limits discussed above, the Department finds
that the lighting plan provided by the applicant establishes the feasibility of the facility meeting
the requirements of the applicable substantive criteria contained in TMC Section 8.26.040, as
adopted by reference in TDC Section 9.090. Although the applicant provides analysis in support
of a Council determination of compliance with the specific provisions contained in TDC Section
9.090, the Department finds that specific requirements contained in those sections relate to
specific requirements imposed by the City of Troutdale during review of a building permit
application. In order to ensure that the facility complies with these requirements as
implemented by the City of Troutdale, the Department recommends the following condition:

**Condition E.12:** Prior to the commencement of construction, the certificate holder shall
submit a lighting plan to the City of Troutdale as part of the building permit application for
the energy facility. This plan shall, subject to a variance from outdoor lighting height limits,
comply with TMC Section 8.26.040, as adopted by reference in TDC Section 9.090 in effect
as of July 23, 2012. The certificate holder shall implement the plan prior to completion of
construction of the energy facility.

Based on the evidence in the record, and subject to compliance with recommended conditions,
the Department recommends that the Council find that the proposed facility would comply
with the requirements of TDC Chapter 9.

**Chapter 10: Signs**

TDC Chapter 10 regulates the use of signs in the City of Troutdale. The applicant proposes
two-traffic related signs on Lot 3.

**Section 10.025: Sign Permit Exemptions**

A. Public signs constructed or placed in a public right-of-way by, or with the approval of,
a governmental agency having legal control or ownership of the right-of-way; signs
owned or constructed by the City; signs required by law including, but not limited to,
hearing notices; and signs placed in or near a right-of-way by a public utility that are
intended to warn the public of danger.
TDC Section 10.025 allows signs required by law to be exempt from all sign standards included in TDC Chapter 10. Figure K-8.2 shows two proposed signs: a freestanding stop sign (No. R1-1) and ADA-accessible parking signage (No. OR7-8 and R7-8P). The applicant explains that both proposed signs are required by law.\footnote{Final ASC, Section K.5.4.7, p. K-60.} Accordingly, the requirements of TDC Chapter 10 would not apply to the proposed signs.

**Chapter 11: Landscaping and Screening**

All uses proposed in the GI district are required to demonstrate compliance with applicable landscaping requirements in accordance with TDC Section 3.175(A). TDC Chapter 11 provides landscaping requirements for developments in the City of Troutdale, including minimum planting requirements and screening for garbage and recycling container enclosures. The applicant provides a preliminary landscaping plan for the proposed facility.\footnote{Final ASC, Figure K-3.} The Department has reviewed this plan and finds it contains the requisite elements outlined in TDC Chapter 11 and establishes the feasibility of the facility meeting the requirements of the applicable substantive criteria contained in that chapter. Although the applicant provides analysis in support of a Council determination of compliance with the specific provisions contained in TDC Chapter 11, the Department finds that specific requirements contained in TDC Chapter 11 relate to specific requirements imposed by the City of Troutdale during review of a building permit application. In order to ensure that the facility complies with these requirements as implemented by the City of Troutdale, the Department recommends the following condition:

**Condition E.13:** Prior to the commencement of construction, the certificate holder shall submit a final landscape plan to the City of Troutdale as part of the building permit application for the energy facility. This plan shall comply with Chapter 11 of the Troutdale Development Code in effect as of July 23, 2012. The certificate holder shall implement the plan prior to completion of construction of the energy facility.

Based on the evidence in the record, and subject to compliance with recommended conditions, the Department recommends that the Council find that the proposed facility would comply with the requirements of TDC Chapter 11.

**Chapter 13.10: Trees ("City of Troutdale Tree Ordinance“) [Sections 13.10.000 through 13.10.170]**

TDC Sections 13.10.000 through 13.10.170 provide requirements for planting and removal of trees in the City of Troutdale, including required permits, trees in new developments or on new streets, historic and significant trees, pruning and maintenance, and tree removal. The applicant provides a preliminary tree plan\footnote{Final ASC, Figure K-7.} and a preliminary landscaping plan for the

\footnote{163 Final ASC, Section K.5.4.7, p. K-60.  
164 Final ASC, Figure K-3.  
165 Final ASC, Figure K-7.}
The Department has reviewed these plans and finds that they contain the requisite elements outlined in TDC Sections 13.10.000 through 13.10.170 and establish the feasibility of the facility meeting the requirements of the applicable substantive criteria contained in those sections. Although the applicant provides analysis in support of a Council determination of compliance with the specific provisions contained in TDC Sections 13.10.000 through 13.10.170, the Department finds that specific requirements contained in those sections relate to specific requirements imposed by the City of Troutdale during review of a building permit application. In order to ensure that the facility complies with these requirements as implemented by the City of Troutdale, the Department recommends the following condition:

**Condition E.14:** Prior to the commencement of construction, the certificate holder shall submit a final tree plan to the City of Troutdale as part of the building permit application for the energy facility. This plan shall comply with Sections 13.10.000 through 13.10.170 of the Troutdale Development Code in effect as of July 23, 2012. The certificate holder shall implement the plan prior to completion of construction of the energy facility.

Based on the evidence in the record, and subject to compliance with recommended conditions, the Department recommends that the Council find that the proposed facility would comply with the requirements of TDC Sections 13.10.000 through 13.10.170.

**City of Troutdale Tree Removal Permit**

**Section 13.10.270 – Tree Removal**

A. The intent of this section is to regulate the removal of trees, other than street trees, as defined in Section 13.10.005, and other than historic or significant trees, as designated pursuant to Section 13.10.130, on undeveloped and underdeveloped property. Street trees shall be regulated as provided in applicable sections of this chapter.

B. The requirements of this section apply only to trees having a trunk six inches or more in diameter, maximum cross section, measured at a point four and one-half feet above the ground on the upslope side of the tree. If a tree splits into multiple trunks below four and one-half feet, the trunk is measured at its most narrow point beneath the split.

C. No person shall remove a tree from undeveloped or underdeveloped property without first obtaining a tree removal permit from the director pursuant to this section. No tree removal permit is required to remove trees on developed property.

D. An application for a tree removal permit in conjunction with a land use permit shall be considered as part of the land use permit and shall be subject to the application, notice,
hearing and appeal procedures applicable to the proposed development pursuant to the Troutdale Development Code. An application for any land use permit shall show trees regulated by this section on a site plan. A tree removal permit may be granted in the following circumstances:

1. If a tree is diseased, hazardous, in danger of falling, in close proximity to existing structures or proposed construction, or interferes with utility services or pedestrian or vehicular traffic safety;

TMC Section 13.10.270(D) allows for a tree removal permit decision to be made concurrently with a land use decision, and states in subsection (1) that a tree removal permit may be granted if trees are in close proximity to proposed construction. A tree removal permit application consists of a request for removal along with a site plan showing regulated trees that will be removed. The applicant provides a tree removal and mitigation plan for the proposed facility showing trees with a diameter of 6 inches or greater that the applicant plans for removal and retention. According to the tree plan, the construction of the proposed facility would require removal of 43 trees with a diameter of 6 inches or greater and located in close proximity to the proposed power blocks, cooling towers, and perimeter fence. The applicant requests that the Council approve a tree removal permit for these trees. Accordingly, the applicant has satisfied the submission requirements for a tree removal permit under TMC Section 13.10.270(A)-(D). Based on the evidence submitted by the applicant, the Department recommends that the Council find that the requested tree removal permit complies with the standards in TCM 13.10.270(D).

Based on the evidence in the record, the Department recommends that the Council find that the portion of the proposed facility within the City of Troutdale would comply with the applicable substantive criteria submitted by the City of Troutdale. Accordingly, the Department recommends that the Council instruct the City of Troutdale to issue a Site Plan Review permit, Type III Variance for maximum lighting fixture height, and tree removal permit subject to the terms and conditions recommended in this draft proposed order.

IV.E.1.b: City of Fairview’s Applicable Substantive Criteria

The applicant proposes to install a 230-kv overhead transmission line from the facility switchyard on Lot 3 to one of three potential points of interconnection. In Exhibit K, the applicant provides information on each of the three routes under consideration for providing this interconnection as “Route 1” (connecting to the PGE Blue Lake substation), “Route 2” (connecting to the PP&L Troutdale substation), and “Route 3” (connecting to the BPA Troutdale substation). A 0.3 mile segment of Route 1 would enter Fairview before crossing NE Marine

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167 Final ASC, Figure K-7.
169 Final ASC, Section B.3.3, pp. B-15 and B-16.
Drive to interconnect with the existing PGE Blue Lake substation. \footnote{Final ASC, Section K.5.7, pp. K-79 and K-80.} Applicable substantive criteria from the City of Fairview apply to this proposed segment of Route 1. Within this segment, the transmission line would pass through the City of Fairview’s Agricultural Holding (F-2), Residential (R), and General Industrial (GI) zoning districts. \footnote{Final ASC, Section K.5.7.1, p. K-80.}

**City of Fairview Zoning Requirements**

**Fairview Development Code Article II – Land Use Districts**

Unlike a proposed development on a single property, the 0.3 mile segment of the proposed Route 1 within the City of Fairview would cross through multiple base zones and overlay zoning districts. Accordingly, rather than presenting the various combinations of base and overlay zones that apply to the proposed facility, the Department provides separate analysis of the proposed facility’s compliance with the requirements of each zoning district and each overlay district.

**Chapter 19.25: Agricultural Holding Zone (F-2)**

19.25.010 – Purpose

This zone is intended primarily as a holding zone to be used for agricultural purposes until the land is developed for industrial purposes.

19.25.030 – Conditional uses

The following uses and their accessory uses are permitted in an F-2 zone after approval of the planning commission:

- F. Community service/parks.
- G. other community service uses and uses similar in nature to those listed above when approved by the planning commission.

An approximately 760-foot portion of one of the proposed routes for the facility’s 230-kV transmission line crosses the Agricultural Holding Zone (F-2). \footnote{Final ASC, Section K.5.7.1, p. K-80.} The applicant provides a letter from a Senior Planner at City of Fairview which states that public and private utilities are permitted conditionally as “Community Service” uses when approved by the Planning Commission. \footnote{Final ASC, Attachment K-2.}
Section 19.25.040 – Additional requirements

The applicant states that the segment of the facility within the F-2 district also crosses land within the Significant Environmental Concern (SEC) and Community Service/Parks overlay. Based on maps provided by the applicant, only the Significant Environmental Concern overlay appears to coincide with the portion of the site within the F-2 base zone. Accordingly, only the Significant Environmental Concern overlay applies to the proposed facility. The Department evaluates the proposed facility’s compliance with the requirements of the Significant Environmental concern overlay in findings on FDC Chapter 19.100 below.

Chapter 19.30 – Residential (R) District

An approximately 380-foot portion of the facility’s 230-kV transmission line crosses the Residential (R) zoning district within the City of Fairview. This portion of the line would include two transmission line pole structures with a total footprint of approximately 100 square feet. Fairview Development Code Table 19.30.020.A, which lists land uses and building types permitted in the Residential zoning district, shows “Community Services” allowed as a conditional use in the R district. Although correspondence provided by the applicant from the City of Fairview does not specifically discuss “Community Services” definitions in the R zone, defining the transmission line as a Community Service would be consistent with the treatment of the facility in other zoning districts.

Section 19.30.030 – Building setbacks

A. Front Setbacks.

1. Residential Uses (single-family detached and attached, duplex and triplex, manufactured homes on lots, multifamily housing types). Setbacks for manufactured home parks are located in FMC 19.30.130.

2. Residential Commercial Buildings.

   a. A minimum front setback is not required, except as necessary to comply with the vision clearance standards in FMC 19.162.020.

   b. A maximum setback of 10 feet is required. This standard is met when a minimum of 50 percent of the front building elevation is placed 10 feet or closer to the front property line. On parcels with more than one building, this standard applies to the largest building. Exception: The setback may be increased when

174 Final ASC, Figure K-1.4.
175 Final ASC, Section K.5.7.1, p. K-81.
an expanded sidewalk, outdoor seating area, plaza, pocket park, or town square
is provided between the building and front property line.

3. Public and Institutional Buildings. The standards in subsection (A)(2) of this section
(residential commercial buildings) shall also apply to public and institutional
buildings, except that the maximum setback standard in subsection (A)(2)(b) shall
not be required for buildings that do not receive the public (e.g., buildings used solely
for storage or housing mechanical equipment, and similar uses) ***.

The proposed 230-kV line does not meet the definition in Section 19.30.030 for a residential
use, a residential commercial building, or a public and institutional building. As a building that
does not “receive the public” as described under FDC 19.30.030(3), the building setback
requirements for the R zone do not apply to the proposed facility.

Section 19.30.110 – Special standards for certain uses

This section supplements the standards contained FMC 19.30.010 through 19.30.100. It provides
standards for the following land uses in order to control the scale and compatibility of those
uses within the residential district:

F. Community Services/Parks. Public and institutional uses (as listed in Table
19.30.020.A) are allowed in the residential district subject to the following land use
standards, which are intended to control the scale of these developments and their
compatibility with nearby residences:

1. Development Site Area. The maximum development site area shall be eight acres,
except that this standard shall not apply to parks and open space uses. Larger
developments may be approved as a conditional use, in accordance with Chapter
19.440 FMC, Conditional Use Permits, or as part of a master planned development, in
accordance with Chapter 19.450 FMC.

The applicant states that the portion of the right-of-way for the proposed Route 1 of the 230-kV
transmission line would cover approximately 0.9 acres. Based on the evidence provided by
the applicant, the proposed facility would comply with the maximum development site area in
FDC 19.30.110(F)(1).

2. Vehicle Areas and Trash Receptacles. All vehicle areas (i.e., parking, drives,
storage, etc.) and trash receptacles shall be oriented away from adjacent residences
to the greatest extent practicable, and shall be screened with an evergreen hedge or
solid fence or wall of not less than six feet in height.

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176 Final ASC, Section K.5.7.1, p. K-82.
The applicant does not propose any permanent vehicle areas or trash receptacles within the City of Fairview. Based on the evidence provided by the applicant, the proposed facility would comply with the maximum development site area in FDC 19.30.110(F)(1).

**Chapter 19.85 – General Industrial (GI) District**

An approximately 540-foot portion of the proposed Route 1 for the 230-kV transmission line would cross the General Industrial (GI) District within the City of Fairview. This segment of the proposed line would also include two transmission line pole structures with a total footprint of approximately 100 square feet.

**Section 19.85.020: Permitted Land Uses**

**A. Permitted Uses.** The land uses listed in Table 19.85.020.A are permitted in the general industrial district, subject to the provisions of this chapter. Only land uses which are specifically listed below, and land uses which are approved as “similar” to those listed below, may be permitted. The land uses identified with a “CU” in Table 19.85.020.A require conditional use permit approval prior to development or a change in use.

<table>
<thead>
<tr>
<th>Table 4: Table 19.85.020.A (excerpt)</th>
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<tbody>
<tr>
<td><strong>Land Uses Types Permitted in the General Industrial District</strong></td>
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<tr>
<td>4. <strong>Community Services/Parks Uses (CU)</strong>*</td>
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<tr>
<td>b. Private utilities (e.g., natural gas, electricity, telephone, cable, and similar facilities)</td>
</tr>
</tbody>
</table>

Land uses with an asterisk (*) are subject to the standards in FMC 19.85.070, Special standards for certain uses. Conditional Uses (CU) shall require a conditional use permit when they generate significant noise, light/glare, dust and vibration impacts, or traffic; or when they include resource extraction.

FDC Table 19.85.020.A lists “Community Services” as a conditional use subject to the standards contained in FDC 19.85.070. As discussed above, City of Fairview staff has indicated that a 230-kV transmission line falls under the FDC’s definition of “Community Service.” Accordingly, the 230-kV transmission line is an allowed use in the GI district subject to the standards contained in FDC Sections 19.85.070 and 19.440.400.

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177 Final ASC, Section K.5.7.1, p. K-83.
178 Final ASC, Figure K-1.
179 Final ASC, Attachment K-2.
Section 19.85.030: Development Setbacks

Development setbacks provide separation between industrial and nonindustrial uses for fire protection/security, building maintenance, sunlight and air circulation, noise buffering, and visual separation.

A. Front, Side and Rear Setbacks.

1. None, unless the property abuts a parcel of land in a more restrictive manufacturing district (i.e., Li), or a commercial district, in which case the requirements of the abutting property shall apply. If an established building line exists, the setback may be the same as the established building line following approval by the planning commission.

2. If any use in this district abuts or faces any residential zone, a setback of 50 feet on the side abutting or facing the residential district may be required.

3. Setbacks for Insufficient Right-of-Way. Setbacks shall be established when a lot abuts a street having insufficient right-of-way width to serve the area. The necessary right-of-way widths and the setback requirements in such cases shall be based upon the Comprehensive Plan and applicable ordinances and standards.

The applicant provides a map showing that the segment of the 230-kV transmission line in the GI district abuts the right-of-way for NE Marine Drive to the east, a small parcel in the Agricultural Holding (F-2) district to the northwest, and is surrounded by other GI-zoned properties on all other sides.\(^\text{180}\) No residential districts abut the tax lot crossed by the transmission line in the GI district, and the two transmission line poles are not located in the designated right-of-way for NE Marine Drive. Accordingly, the Department recommends that the Council find that the proposed facility would comply with the provisions of FDC Section 19.85.030(A).

Section 19.85.040: Lot Coverage

The maximum allowable lot coverage in the general industrial district is 85 percent. The maximum allowable lot coverage is computed by calculating the total area covered by buildings and impervious (paved) surfaces, including accessory structures. Compliance with other sections of this code may preclude development of the maximum lot coverage for some land uses.

\(^{180}\) Final ASC, Figure K-1.4.
The applicant describes the parcel that would be crossed by the proposed 540-foot-long, 80-foot-wide transmission line right-of-way as approximately 4.7 acres in size. The applicant explains that the transmission line right-of-way would cover approximately 1.0 acre, or roughly 21 percent of the overall lot (transmission line ROW [1.0 acre] ÷ total lot size [4.7 acres]), which is less than the maximum lot coverage requirement. Accordingly, the Department recommends that the Council find that the proposed facility would comply with the provisions of FDC Section 19.85.040.

Section 19.85.050: Development Orientation

Industrial developments shall be oriented on the site to minimize adverse impacts (e.g., noise, glare, smoke, dust, exhaust, vibration, etc.) and protect the privacy of adjacent uses to the extent possible. The following standards shall apply to all development in the general industrial district:

A. Mechanical equipment, lights, emissions, shipping/receiving areas, and other components of an industrial use that are outside enclosed buildings, shall be located away from residential areas, schools, parks and other nonindustrial areas to the maximum extent practicable; and

B. The city may require a landscape buffer, or other visual or sound barrier (fence, wall, landscaping, or combination thereof) to mitigate adverse impacts that cannot be avoided through building orientation standards alone.

As discussed above, the parcel that the proposed right-of-way for the segment of the 230-kV transmission line within the GI district would cross would not abut any residential areas, schools, parks, or other non-industrial areas. Accordingly, the requirements of Section 19.85.050 do not apply to the proposed facility.

Section 19.85.070: Special Standards for Certain Uses

A. Uses With Significant Noise, Light/Glare, Dust, Vibration, or Traffic Impacts. The following uses shall require conditional use permit approval, in addition to development review or site design review: ***

Because the proposed facility is listed as a conditional use in both the R and F-2 districts, the proposed facility is obligated, regardless of the criteria set forth in FDC Section 19.85.070, to comply with the conditional use standards contained in FDC Section 19.440.400. Accordingly, the Department does not provide further analysis of the whether the facility would be

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181 Final ASC, Section K.5.7.2, p. K-84.
obligated to comply with the conditional use standards as a result of the criteria in FDC Section 19.85.070.

**Chapter 19.100: Significant Environmental Concern Overlay**

**Section 19.100.040: Exceptions**

An SEC permit shall not be required for the following:

C. The expansion of capacity or the replacement of existing communication or energy distribution and transmission systems, except substations ***.

Unless an exception applies, all uses within the SEC overlay district require an SEC permit. The applicant explains that the proposed 230-kV transmission line would expand the capacity of the region’s energy distribution and transmission system.\(^{182}\) Based on the evidence provided by the applicant, the Department recommends that the Council find that an exception applies to the SEC permit requirement for the proposed transmission line pursuant to FDC Section 19.100.040(C). Additionally, the Department recommends that the Council find that the proposed facility would comply with the requirements of FDC Chapter 19.25.

**Chapter 19.106 – Wetlands and Riparian Buffer Overlay**

An approximately 260-foot portion of the proposed Facility’s 230-kV transmission line crosses the Wetlands and Riparian Buffer overlay; therefore, the standards contained in FMC Chapter 19.106 are discussed below.

**Section 19.106.010 – Purpose**

A. The city has, during its continuing review, investigation and development of appropriate regulation and guidelines to promote the application and utilization of the city’s Comprehensive Plan, determined that the city’s major water features of the Columbia River and the Fairview Creek Watershed: Fairview Creek, Osburn Creek, No Name Creek, Salmon Creek, Fairview Lake, Columbia Slough, and associated wetlands and riparian areas, as defined herein, are a valuable and irreplaceable natural resource to the community and as such it is the intention of the Fairview city council to protect and regulate them with the following purposes and objectives in mind: ***

The applicant provides a map showing that, although the 230-kV transmission line will span over the top of areas covered by the Wetlands and Riparian Buffer overlay, no transmission line pole structures will be located in this overlay zone.\(^{183}\) In Section IV.S, the Department evaluates

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\(^{182}\) Final ASC, Section K.5.7.1, p. K-86.

\(^{183}\) Final ASC, Figure K-1.4.
the evidence provided by the applicant regarding compliance with the Ground Water Act, and
recommends that the Council find that construction and operation of the proposed facility
would not have a significant impact on waters of the state or of the U.S. Based on the evidence
provided by the applicant, the Department recommends that the Council find that the
proposed facility would not likely result in a significant adverse impact to the major water
features of the Columbia River and Fairview Creek Watershed listed in FDC Section 19.106.010.
Accordingly, the requirements in FDC Section 19.106.010 do not apply to the proposed facility.

Chapter 19.108 – Community Service/Parks Overlay

Zoning maps provided by the applicant shows that the Community Service/Parks overlay district
applies to the segment of the facility within the R district.\(^{184}\) The applicant states that the 230-
kV is a permitted use within the Community Service/Parks overlay district under FDC 19.108.010(F):

Section 19.108.010: Uses

The following community service/parks uses and those of a similar nature may be permitted in any zoning district when approved at a public hearing by the planning commission. The district is to be applied only to public property (lands owned by public agencies) or utilities.

F. Power substation or other public utility building or use.

The applicant explains that the FDC does not define “public utility,” but that FDC 19.13.160 defines “public facilities” as “public and private transportation facilities and utilities.”\(^{185}\) The Department finds that the proposed transmission line is consistent with this description. The FDC does not list any additional standards for permitted uses within the Community Service/Park Overlay district. Based on the evidence in the record, the Department recommends that the Council find that the proposed facility would comply with the requirements of FDC Chapter 19.108.

Based on the evidence in the record, and subject to compliance with recommended site certificate conditions, the Department recommends that the Council find that the proposed facility would comply with the requirements of FDC Article II.

\(^{184}\) Final ASC, Attachment K-1.4.
\(^{185}\) Final ASC, Section K.5.7.1, p. K-87.
City of Fairview Conditional Use Permit

FDC Article III – Design Standards

Chapter 19.162: Design Standards Administration

Section 19.162.020: Vehicular Access and Circulation

A. Intent and Purpose. The intent of this section is to manage vehicle access to development through a connected street system, while preserving the flow of traffic in terms of safety, roadway capacity, and efficiency. Access shall be managed to maintain an adequate “level of service” and to maintain the “functional classification” of roadways as required by the city’s transportation system plan. Major roadways, including highways, arterials, and collectors, serve as the primary system for moving people and goods. “Access management” is a primary concern on these roads. Local streets and alleys provide access to individual properties. If vehicular access and circulation are not properly designed, these roadways will be unable to accommodate the needs of development and serve their transportation function. This section attempts to balance the right of reasonable access to private property with the right of the citizens of the city and the state of Oregon to safe and efficient travel. It also requires all developments to construct planned streets (arterials and collectors) and to extend local streets.

B. Applicability. This section shall apply to all public streets within the city and to all properties that abut these streets

C. Access Permit Required. Access to a public street requires an access permit in accordance with the following procedures:

The applicant does not propose any new street, driveway, or access point to a public street in the City of Fairview. Accordingly, the Department finds that FDC 19.162.020 does not apply to the proposed facility.

Section 19.162.030 Pedestrian Access and Circulation

The standards presented in this code provide standards for safe, connected and user-friendly pedestrian connections and pathways that join neighborhoods and buildings within a development.

A. Pedestrian Access and Circulation. To ensure safe, direct and convenient pedestrian circulation, all developments, except single-family detached housing (i.e., on individual lots), shall provide a continuous pedestrian and/or multi-use pathway system. (Pathways only provide for pedestrian circulation. Multi-use pathways accommodate pedestrians and bicycles.) The system of pathways shall be designed based on the standards in subsections (A)(1) through (A)(3) of this section:

The proposed route for the 230-kV transmission line in Fairview would run on private property, with the exception of the NE Marine Drive crossing. The applicant explains that due to the potential hazard associated with high voltage electricity, pedestrian access within the 80-foot right-of-way for the transmission line would be limited. The Department concurs that pedestrian pathways within the right-of-way would not meet the section’s stated purpose to “ensure safe, direct, and convenient pedestrian circulation.” The Department recommends that the Council find that the provisions of FDC Section 19.162.030(A) do not apply to the proposed facility.

Chapter 19.163: Landscaping, Street Trees, Fences, and Walls

A. Applicability. All development sites containing significant vegetation, as defined below, shall comply with the standards of this section. The purpose of this section is to incorporate significant native vegetation into the landscapes of development and protect vegetation that is subject to requirements of the significant environmental concern and riparian buffer overlay zones, Chapters 19.100 and 19.106 FMC. The use of mature, native vegetation within developments is a preferred alternative to removal of vegetation and re-planting. Mature landscaping provides summer shade and wind breaks, and allows for water conservation due to larger plants having established root systems.

B. Significant Vegetation. “Significant vegetation” means:

1. Significant Trees and Shrubs. Individual trees and shrubs with a trunk diameter of six inches or greater, as measured four feet above the ground (DBH), and all plants within the drip line of such trees and shrubs, shall be protected.

2. Sensitive Lands. Trees and shrubs on sites that have been designated as “sensitive lands,” in accordance with the Chapter 19.100 FMC, Significant Environmental Concern, Chapter 19.106 FMC, Riparian Buffer Overlay Zone, and Chapter 19.105 FMC, Floodplain Overlay (e.g., due to slope, natural resource areas, wildlife habitat, etc.) shall be protected.

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C. Mapping and Protection Required. Significant vegetation shall be mapped as required by this code. Significant trees shall be mapped individually and identified by species and size (diameter at four feet above grade, or “DBH”). A “protection” area shall be defined around the edge of all branches (drip-line) of each tree (drip lines may overlap between trees). The city also may require a inventory, survey, or assessment prepared by a qualified professional when necessary to determine vegetation boundaries, building setbacks, and other protection or mitigation requirements.

The applicant does not provide a significant vegetation inventory for the City of Fairview and specifically requests that this requirement be fulfilled as a condition of approval to the site certificate.\textsuperscript{188} Accordingly, in order to ensure compliance with this requirement the Department recommends that the Council adopt the following condition:

**Condition E.15:** Prior to construction, if the certificate holder selects transmission line Route 1, the certificate holder shall provide the City of Fairview with a significant vegetation inventory and a site plan showing significant vegetation proposed for removal for the portion of the facility within the City of Fairview.

Based on the evidence in the record, and subject to compliance with recommended conditions, the Department recommends that the Council find that the proposed facility would comply with the requirements of FDC Chapter 19.163.

D. Protection Standards. All of the following protection standards shall apply to significant vegetation areas:

1. Protection of Significant Trees. Significant trees identified as meeting the criteria in subsection (B)(1) of this section shall be retained whenever practicable. Preservation may become impracticable when it would prevent reasonable development of public streets, utilities, or land uses permitted by the applicable land use district.

The applicant explains that the 230-kV transmission line right-of-way will require maintenance in accordance with National Electrical Safety Code (NESC) standards. This may require removal or pruning of existing trees when avoidance is not practicable, as allowed under FDC Section 19.163.020(D)(1). Recommended Condition E.15 would require the certificate holder to provide the City of Fairview with a site plan showing significant vegetation proposed for removal within the City of Fairview prior to construction of Route 1. Accordingly, the Department recommends that the Council find that the proposed facility would satisfy the provisions of FDC Section 19.163.020(D)(1), subject to recommended Condition E.15.

\textsuperscript{188} Final ASC, Section K.5.7.2, p. K-90.
2. Sensitive Lands. Sensitive lands shall be protected in conformance with the provisions of Chapters 19.100, 19.105 and 19.106 FMC.

FDC Chapter 19.105 regulates development in a floodplain and is not applicable because the applicant does not propose to locate the facility within a floodplain.\textsuperscript{189} The Department discusses the proposed facility’s conformance with FDC Chapters 19.100 and 19.106 above in the respective sections on the Riparian Buffer overlay zone and the Significant Environmental Concern overlay zone. Accordingly, the Department recommends that the Council find that the proposed facility would comply with the provisions of FDC Section 19.163.020(D)(2).

Section 19.163.025: Existing Landscaping

A. Applicability. This section shall apply to all developments.

B. Construction. All areas of significant vegetation shall be protected prior to, during, and after construction. Grading and operation of vehicles and heavy equipment is prohibited within significant vegetation areas, except as approved by the city for installation of utilities or streets. Such approval shall only be granted after finding that there is no other reasonable alternative to avoid the protected area, and any required mitigation is provided in conformance with Chapter 19.100 FMC, Sensitive Lands, Chapter 19.105 FMC, Floodplains and Chapter 19.106 FMC, Riparian Buffer Overlay Zones.

Recommended Condition E.15 requires the certificate holder to provide the City of Fairview with a site plan showing significant vegetation proposed for removal within the City of Fairview prior to construction of transmission line Route 1. Accordingly, the Department recommends that the Council find that the proposed facility would comply with the provisions of FDC Section 19.163.025, subject to recommended Condition E.15.

Section 19.163.030: New Landscaping

A. Applicability. This section shall apply to all developments requiring site design review, and other developments with required landscaping.

The applicant explains that the 230-kV transmission line right-of-way must be maintained in accordance with National Electrical Safety Code (NESC) standards, which require trimming and removal of vegetation within the entire 80-foot right-of-way to provide adequate maintenance access and to avoid potentially hazardous interference from falling trees or other encroaching vegetation. In order to maintain safe operation of the 230-kV transmission line, the applicant does not propose new landscaping.\textsuperscript{190} Accordingly, the Department recommends that the

\textsuperscript{189} Final ASC, Section K.5.7.2, p. K-90.
\textsuperscript{190} Final ASC, Section K.5.7.2, p. K-91.
Council find that the provisions contained in FDC Section 19.163.030 do not apply to the proposed facility.

Section 19.163.040: Street Trees

The guidelines provided in this section promote healthy street trees and adequate canopy cover to provide shade, reduce stormwater runoff, and improve the appearance of a development. Street trees shall be planted for all developments that are subject to land division or site design review. Requirements for street tree planting strips are provided in Chapter 19.165 FMC, Public Facility Standards. Planting of unimproved streets shall be deferred until the construction of curbs and sidewalks. Street trees shall conform to the following standards and guidelines: ***

The applicant provides a map of the portion of transmission line Route 1 proposed within the City of Fairview. This map shows that the applicant does not propose to locate the 230-kV transmission line alongside a street where street tree plantings could occur. Accordingly, the provisions in FDC Section 19.163.040 do not apply to the proposed facility.

Section 19.163.050: Fences and Walls

The fences and walls section provides height limits for construction of new walls. The guidelines prevent walls that reduce pedestrian connectivity and sight clearance. The standards also provide guidelines relating to maintenance.

The applicant does not propose to construct a new fence or wall within the City of Fairview. Accordingly the provisions in FDC Section 19.163.050 do not apply to the proposed facility.

Chapter 19.164: Vehicle and Bicycle Parking

The purpose of this chapter is to provide basic and flexible standards for development of vehicle and bicycle parking. The design of parking areas is critically important to the viability of some commercial areas, pedestrian and driver safety, the efficient and safe operation of adjoining streets, and community image and livability. Historically, some communities have required more parking than is necessary for some land uses, paving extensive areas of land that could be put to better use. Because vehicle parking facilities can occupy large amounts of land, they must be planned and designed carefully to use the land efficiently while maintaining the visual character of the community. This chapter recognizes that each development has unique parking needs by providing a flexible approach for determining parking space requirements (i.e., “minimum” and “performance-based” standards). This chapter also provides standards for bicycle parking because many people use bicycles for recreation, commuting, and general transportation.

191 Final ASC, Figure K-1.4.
Children as well as adults need safe and adequate spaces to park their bicycles throughout the community.

The applicant does not propose vehicle or bicycle parking for the proposed facility within the City of Fairview. The applicant explains that required access to the 230-kV transmission line would be made exclusively via the proposed 80-foot right-of-way. Accordingly, the provisions in FDC Chapter 19.164 do not apply to the proposed facility.

Chapter 19.165: Public Facilities Standards

Section 19.165.010: Purpose and Applicability

A. Purpose. The purpose of this chapter is to provide planning and design standards for public and private transportation facilities and utilities. Streets are the most common public spaces, touching virtually every parcel of land. Therefore, one of the primary purposes of this chapter is to provide standards for attractive and safe streets that can accommodate vehicle traffic from planned growth, and provide a range of transportation options, including options for driving, walking, bus transit and bicycling. This chapter is also intended to implement the city’s transportation system plan.

Section 19.165.060: Utilities

A. Underground Utilities. All utility lines including, but not limited to, those required for electric, communication, lighting and cable television services and related facilities shall be placed underground, except for surface-mounted transformers, surface-mounted connection boxes and meter cabinets which may be placed above ground, temporary utility service facilities during construction, and high capacity electric lines operating at 50,000 volts or above. The following additional standards apply to all new subdivisions, in order to facilitate underground placement of utilities:

B. Easements. Easements shall be provided for all underground utility facilities.

C. Exception to Undergrounding Requirement. The standard applies only to proposed subdivisions. An exception to the undergrounding requirement may be granted due to physical constraints, such as steep topography, sensitive lands, Chapters 19.100 and 19.106 FMC, or existing development conditions.

FDC Section 19.165.060(A) requires all electric lines that operate at a capacity below 50-kV to be installed underground. The proposed 230-kV transmission line will operate at a capacity in

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excess of 50-kV and is therefore exempt from the undergrounding requirement. Accordingly, the provisions in FDC Section 19.165.060 do not apply to the proposed Facility.

Section 19.165.080: Construction Plan Approval and Assurances

The construction plan approval portion ensures the completion of a development by a builder. No public improvements, including sanitary sewers, storm sewers, streets, sidewalks, curbs, lighting, parks, or other requirements, shall be undertaken except after the plans have been approved by the city, permit fee paid, and permit issued. The permit fee is required to defray the cost and expenses incurred by the city for construction and other services in connection with the improvement. The permit fee shall be set by the city council. The city may require the developer or subdivider to provide bonding or other performance guarantees to ensure completion of required public improvements. (Ord. 6-2001 § 1)

Although the applicant provides analysis in support of a Council determination of compliance with the specific provisions contained in FDC Section 19.165.080, specific requirements in that section apply to design, building code compliance, or other operational issues that do not relate to siting the facility. Pursuant to ORS 469.401(4), these matters would not be included in and governed by the site certificate.

Section 19.165.090: Installation

A. Conformance Required. Improvements installed by the developer either as a requirement of these regulations or at his/her own option, shall conform to the requirements of this chapter, approved construction plans, and to improvement standards and specifications adopted by the city.

B. Adopted Installation Standards. The Standard Specifications for Public Works Construction, Oregon Chapter APWA shall be a part of the city’s adopted installation standard(s); other standards may also be required upon recommendation of the city engineer.

C. Commencement. Work shall not begin until the city has been notified in advance.

D. Resumption. If work is discontinued for more than one month, it shall not be resumed until the city is notified.

E. City Inspection. Improvements shall be constructed under the inspection and to the satisfaction of the city. The city may require minor changes in typical sections and details if unusual conditions arising during construction warrant such changes in the public interest. Modifications requested by the developer shall be subject to land use review under Chapter 19.415 FMC, Modifications to Approved Plans and Conditions of Approval.
Any monuments that are disturbed before all improvements are completed by the subdivider shall be replaced prior to final acceptance of the improvements.

F. Engineer’s Certification and As-Built Plans. A registered civil engineer shall provide written certification in a form required by the city that all improvements, workmanship and materials are in accord with current and standard engineering and construction practices, conform to approved plans and conditions of approval, and are of high grade, prior to city acceptance of the public improvements, or any portion thereof, for operation and maintenance. The developer’s engineer shall also provide three sets (one mylar, one electronic, one paper copy) of “as-built” plans, in conformance with the city engineer’s specifications, for permanent filing with the city. (Ord. 6-2009 § 4; Ord. 6-2001 § 1)

Although the applicant provides analysis in support of a Council determination of compliance with the specific provisions contained in FDC Section 19.165.090, specific requirements in that section apply to design, building code compliance, or other operational issues that do not relate to siting the facility. Pursuant to ORS 469.401(4), these matters would not be included in and governed by the site certificate.

Based on the evidence in the record, and subject to compliance with recommended site certificate conditions, the Department recommends that the Council find that the proposed facility would comply with the requirements of FDC Article III.

**FDC Article IV: Applications and Review Procedures**

Article IV of the FDC specifies application requirements for site design review and conditional use permit review. The proposed 230-kV transmission line is a conditional use in at least one zoning district crossed in the City of Fairview, which requires conformance to the conditional use standards contained in this Article.

**Chapter 19.422: Applicability (Development Review and Site Design Review)**

**Section 19.422.001: Applicability**

Development review or site design review shall be required for all new developments and modifications of existing developments, except that regular maintenance, repair and replacement of materials (e.g., roof, siding, awnings, etc.), parking resurfacing, and similar maintenance and repair shall be exempt. The criteria for each type of review are as follows in this chapter.
Section 19.422.010: Site Design Review

Site design review is a discretionary review conducted by the planning commission with a public hearing. It applies to all developments in the city, except those specifically listed under FMC 19.422.020, Development review. Site design review ensures compliance with the basic development standards of the land use district (e.g., building setbacks, lot coverage, maximum building height), as well as other more detailed design standards and public improvement requirements in Articles II and III of this title.

Section 19.422.020: Development Review

Development review is a nondiscretionary or “ministerial” review conducted by the city administrator’s designee without a public hearing. It is for less complex developments and land uses that do not require site design review approval. Development review is based on clear and objective standards and ensures compliance with the basic development standards of the land use district, such as building setbacks, lot coverage, maximum building height, and similar provisions. Development review is required for all of the types of development listed below, except that all developments in sensitive land areas and historic districts shall also use the development review procedures for those districts:

A. Single-family detached dwelling (including manufactured homes), when required by a condition of land division approval;

B. A single duplex, up to two single-family attached (townhome) units, or a single triplex which is not being reviewed as part of any other development, and accessory parking on the same lot;

C. Building additions of not more than 500 square feet, and minor modifications to development approvals;

D. Any proposed development which has a valid conditional use permit. Major modifications to a development with a conditional use permit shall require review and approval in accordance with Chapter 19.440 FMC, Conditional Use Permits;

E. Home occupation, subject to review under Chapter 19.490 FMC;

F. Temporary use, except that temporary uses shall comply with the procedures and standards for temporary uses as contained in Chapter 19.490 FMC;

G. Accessory structures with less than 600 square feet of floor area, including accessory dwellings;
H. Other developments, when required by a condition of approval.

FDC Section 19.422.001 states that all development in the City of Fairview is subject to either development review or site design review. FDC Section 19.422.010 clarifies that all development that is not specifically listed under FDC 19.422.020 is subject to design review. A 230-kV transmission line or similar use is not specifically listed under FDC 19.422.020(A)-(H). Accordingly, the Department finds that the proposed facility must meet site design review requirements.

Chapter 19.440: Procedures (Conditional Use Permits)

Section 19.440.400: Criteria, Standards, and Conditions of Approval

The city shall approve, approve with conditions, or deny an application for a conditional use or to enlarge or alter a conditional use based on findings of fact with respect to each of the following standards and criteria.

A. Use Criteria.

1. The site size, dimensions, location, topography and access are adequate for the needs of the proposed use, considering the proposed building mass, parking, traffic, noise, vibration, exhaust/emissions, light, glare, erosion, odor, dust, visibility, safety, and aesthetic considerations;

The applicant provides a map showing the location and dimensions of the right-of-way for transmission line for the portion of transmission line Route 1 proposed within the City of Fairview.194

The applicant does not propose parking or new roadways as part of the 230-kV transmission line. The applicant provides corona audible noise modeling results showing that the sound level at the edge of the transmission corridor right-of-way would not exceed 26 dBA,195 below the 65 dBA 24-hour average established as a threshold for “significance” at FDC Section 19.440.400. The applicant states that the 230-kV transmission line would not be a source of significant noise, light/glare, dust, vibration, or traffic impacts.196

Recommended Condition D.2 would require the applicant to implement erosion and sediment control measures during construction, in accordance with an NPDES 1200-C Construction Stormwater Permit. Recommended Condition D.2 would require the applicant to implement best management practices from an Erosion and Sediment Control Plan for the segment of

194 Final ASC, Figure K-11.
195 Final ASC, Section X.2.2.2, p. X-7 and Final ASC, Figure X-3.
196 Final ASC, Section K.5.7.2, p. K-104.
transmission line Route 1 proposed in the City of Fairview, as provided in Figures K-4.4 and K-4.5 in the application. Recommended Condition H.1 would require the applicant to meet Aviation Protection Guidelines adopted by the Edison Electric Institute and USFWS. The applicant proposes to design the transmission line and supporting structures to meet NESC 230-kV line safety standards and FAA marking and lighting requirements.\(^{197}\)

The applicant provides information on aesthetic considerations in the general vicinity of proposed transmission line Route 1. The applicant explains that, given the 45 mile per hour speed limit on adjacent roads and multiple existing transmission lines connecting to the PGE Blue Lake Substation, the proposed transmission line would not result in significant adverse visual impacts.\(^{198}\) The Department concurs with the applicant’s analysis of aesthetic considerations of the proposed transmission line within the City of Fairview.

Based on the evidence provided by the applicant, the Department recommends that the Council find that, subject to compliance with recommend conditions of approval, the proposed site size, dimensions, location, topography, and access proposed are adequate for the needs of the portion of transmission line Route 1 within the City of Fairview, given the considerations listed in FMC 19.440.400(A)(1).

2. The negative impacts of the proposed use on adjacent properties and on the public can be mitigated through application of other code standards, or other reasonable conditions of approval; and

As discussed above, the Department recommends that the Council find that, subject to compliance with recommended conditions of approval, the site is adequate for the needs of the proposed segment of the transmission line, considering a list of factors that could otherwise result in negative impacts on adjacent properties and the public. Accordingly, the Department recommends that the Council find that, subject to compliance with recommended conditions of approval, that the proposed facility would comply with the requirements of FMC 19.440.400(A)(2).

3. All required public facilities have adequate capacity to serve the proposal.

The applicant explains that the proposed 230-kV transmission line would not require the extension of existing public facilities, such as water or sewer connections.\(^{199}\) Accordingly, criterion (A)(3) does not apply to the proposed facility.

B. Site Design Standards. The criteria for site design review approval (Chapter 19.420 FMC) shall be met.

\(^{197}\) Final ASC, Section K.5.7.2, p. K-104.
\(^{198}\) Final ASC, Section K.5.7.2, p. K-104.
\(^{199}\) Final ASC, Section K.5.7.2, p. K-105.
FMC Chapter 19.420 provides criteria for site design approval in the City of Fairview, including review procedures (FMC Chapter 19.424), submittal requirements (FMC Chapter 19.425), and approval criteria (FMC Chapter 19.426) for site design review applications. The applicant provides a site analysis map for the proposed facility. The Department has reviewed this map and finds it contains the requisite elements outlined in FMC Chapter 19.425 and establishes the feasibility of the facility meeting the requirements of the applicable substantive criteria contained in FMC Chapter 19.426. Although the applicant provides analysis in support of a Council determination of compliance with the specific provisions contained in FMC Chapters 19.425 and 19.426, the Department finds that specific requirements contained in those chapters relate to specific requirements imposed by the City of Fairview during review of a building permit application. In order to ensure that the facility complies with these requirements as implemented by the City of Fairview, the Department recommends the following condition:

**Condition E.16:** Prior to the commencement of construction of transmission line Route 1, the certificate holder shall submit a final site analysis map to the City of Fairview as part of the building permit application for the energy facility. This plan shall comply with Chapters 19.425 and 19.426 of the Fairview Development Code in effect as of July 23, 2012. The certificate holder shall implement the plan prior to completion of construction of the energy facility.

C. Conditions of Approval. The city may impose conditions that are found necessary to ensure that the use is compatible with other uses in the vicinity, and that the negative impact of the proposed use on the surrounding uses and public facilities is minimized. These conditions include, but are not limited to, the following ***:

1. Limiting the hours, days, place and/or manner of operation;

2. Requiring site or architectural design features which minimize environmental impacts such as noise, vibration, exhaust/emissions, light, glare, erosion, odor and/or dust;

3. Requiring larger setback areas, lot area, and/or lot depth or width;

4. Limiting the building height, size or lot coverage, and/or location on the site;

5. Designating the size, number, location and/or design of vehicle access points or parking areas;

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200 Final ASC, Figure K-11.
6. Requiring street right-of-way to be dedicated and street(s), sidewalks, curbs, planting strips, pathways, or trails to be improved;

7. Requiring landscaping, screening, drainage, water quality facilities, and/or improvement of parking and loading areas;

8. Limiting the number, size, location, height and/or lighting of signs;

9. Limiting or setting standards for the location, design, and/or intensity of outdoor lighting;

10. Requiring berms, screening or landscaping and the establishment of standards for their installation and maintenance;

11. Requiring and designating the size, height, location and/or materials for fences;

12. Requiring the protection and preservation of existing trees, soils, vegetation, watercourses, habitat areas, drainage areas, historic resources, cultural resources, and/or sensitive lands;

13. Requiring the dedication of sufficient land to the public, and/or construction of pedestrian/bicycle pathways in accordance with the adopted plans. Dedication of land and construction shall conform to the provisions of Chapter 19.160 FMC. (Ord. 6-2001 § 1)

As discussed above, the Department recommends that the Council find that, with the adoption of Conditions D.2 and H.1, the proposed site for the applicable segment of transmission line Route 1 would be adequate for the impacts that would likely result from the facility. Subject to compliance with these conditions as they relate to the portion of the facility proposed in the City of Fairview, the Department recommends that the Council find that the proposed facility complies with the requirements of FDC Section 19.440.400(C).

Section 19.440.500: Additional Development Standards for Conditional Use Types

A. Concurrent Variance Application(s). A conditional use permit shall not grant variances to regulations otherwise prescribed by the development code. Variance application(s) may be filed in conjunction with the conditional use application and both applications may be reviewed at the same hearing.

The applicant does not request a variance for the portion of the facility proposed in the City of Fairview for any applicable substantive criteria. Accordingly, the requirements in FMC Section 19.440.500(A) do not apply to the proposed facility.
B. Additional Development Standards. Development standards for specific uses are contained in Article II of this title, Land Use Districts.

The Department discusses the compliance of the proposed facility with standards for specific uses in Article II of the Fairview Municipal Code in the above findings on FMC Chapters 19.25 through 19.108.

Based on the evidence in the record, and subject to compliance with recommended site certificate conditions, the Department recommends that the Council find that the proposed facility would comply with the requirements of FDC Article IV.

Based on the evidence in the record, the Department recommends that the Council find that the portion of the proposed facility within the City of Fairview would comply with the applicable substantive criteria from the City of Fairview development code. Accordingly, the Department recommends that the Council instruct the City of Fairview to issue a Conditional Use Permit for the segment of the “Route 1” 230-kV transmission line proposed within the City of Fairview, subject to the terms and conditions recommended in this draft proposed order.

IV.E.2 Land Use: Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the proposed facility complies with the Council’s Siting Standards for Land Use.

IV.F. Protected Areas [OAR 345-022-0040]

(1) Except as provided in sections (2) and (3), the Council shall not issue a site certificate for a proposed facility located in the areas listed below. To issue a site certificate for a proposed facility located outside the areas listed below, the Council must find that, taking into account mitigation, the design, construction and operation of the facility are not likely to result in significant adverse impact to the areas listed below. References in this rule to protected areas designated under federal or state statutes or regulations are to the designations in effect as of May 11, 2007:

(a) National parks, including but not limited to Crater Lake National Park and Fort Clatsop National Memorial;

(b) National monuments, including but not limited to John Day Fossil Bed National Monument, Newberry National Volcanic Monument and Oregon Caves National Monument;
(c) Wilderness areas established pursuant to The Wilderness Act, 16 U.S.C. 1131 et seq. and areas recommended for designation as wilderness areas pursuant to 43 U.S.C. 1782;

(d) National and state wildlife refuges, including but not limited to Ankeny, Bandon Marsh, Baskett Slough, Bear Valley, Cape Meares, Cold Springs, Deer Flat, Hart Mountain, Julia Butler Hansen, Klamath Forest, Lewis and Clark, Lower Klamath, Malheur, McKay Creek, Oregon Islands, Sheldon, Three Arch Rocks, Umatilla, Upper Klamath, and William L. Finley;

(e) National cooperation areas, including but not limited to Government Island, Ochoco and Summer Lake;

(f) National and state fish hatcheries, including but not limited to Eagle Creek and Warm Springs;

(g) National recreation and scenic areas, including but not limited to Oregon Dunes National Recreation Area, Hell’s Canyon National Recreation Area, and the Oregon Cascades Recreation Area, and Columbia River Gorge National Scenic Area;

(h) State parks and waysides as listed by the Oregon Department of Parks and Recreation and the Willamette River Greenway;

(i) State natural heritage areas listed in the Oregon Register of Natural Heritage Areas pursuant to ORS 273.581;

(j) State estuarine sanctuaries, including but not limited to South Slough Estuarine Sanctuary, OAR Chapter 142;

(k) Scenic waterways designated pursuant to ORS 390.826, wild or scenic rivers designated pursuant to 16 U.S.C. 1271 et seq., and those waterways and rivers listed as potentials for designation;

(l) Experimental areas established by the Rangeland Resources Program, College of Agriculture, Oregon State University: the Prineville site, the Burns (Squaw Butte) site, the Starkey site and the Union site;

(m) Agricultural experimental stations established by the College of Agriculture, Oregon State University, including but not limited to:

Coastal Oregon Marine Experiment Station, Astoria
Mid-Columbia Agriculture Research and Extension Center, Hood River
Agriculture Research and Extension Center, Hermiston
Troutdale Energy Center
Proposed Order

Columbia Basin Agriculture Research Center, Pendleton
Columbia Basin Agriculture Research Center, Moro
North Willamette Research and Extension Center, Aurora
East Oregon Agriculture Research Center, Union
Malheur Experiment Station, Ontario
Eastern Oregon Agriculture Research Center, Burns
Eastern Oregon Agriculture Research Center, Squaw Butte
Central Oregon Experiment Station, Madras
Central Oregon Experiment Station, Powell Butte
Central Oregon Experiment Station, Redmond
Central Station, Corvallis
Coastal Oregon Marine Experiment Station, Newport
Southern Oregon Experiment Station, Medford
Klamath Experiment Station, Klamath Falls;

(n) Research forests established by the College of Forestry, Oregon State University, including but not limited to McDonald Forest, Paul M. Dunn Forest, the Blodgett Tract in Columbia County, the Spaulding Tract in the Mary’s Peak area and the Marchel Tract;

(o) Bureau of Land Management areas of critical environmental concern, outstanding natural areas and research natural areas;

(p) State wildlife areas and management areas identified in OAR chapter 635, Division 8.

(2) Notwithstanding section (1), the Council may issue a site certificate for a transmission line or a natural gas pipeline or for a facility located outside a protected area that includes a transmission line or natural gas or water pipeline as a related or supporting facility located in a protected area identified in section (1), if other alternative routes or sites have been studied and determined by the Council to have greater impacts.

Notwithstanding section (1), the Council may issue a site certificate for surface facilities related to an underground gas storage reservoir that have pipelines and injection, withdrawal or monitoring wells and individual wellhead equipment and pumps located in a protected area, if other alternative routes or sites have been studied and determined by the Council to be unsuitable.

(3) The provisions of section (1) do not apply to transmission lines or natural gas pipelines routed within 500 feet of an existing utility right-of-way containing at least one transmission line with a voltage rating of 115 kilovolts or higher or containing at least one natural gas pipeline of 8 inches or greater diameter that is operated at a pressure of 125 psig.

Troutdale Energy Center
Proposed Order
December 16, 2013
IV.F.1. Protected Areas: Findings of Fact

OAR 345-022-0040(2) applies only to facilities located within the protected areas listed in OAR 345-022-0040(1). OAR 345-022-0040(3) applies only to certain high voltage transmission lines or natural gas pipelines located within 500 feet of an existing utility right of way. Because the applicant does not propose to locate any portion of the facility within a protected area, or locate a transmission line or natural gas pipeline within 500 feet of an existing utility right of way, OAR 345-022-0040(2) and (3) do not apply to the proposed facility.

The applicant provides evidence about potential impacts to protected areas in Exhibit L of the ASC, and more specifically visual impacts to certain protected areas in Exhibit R. In addition, the applicant has submitted additional analysis that the Department identified as needed pursuant to OAR 345-015-0190(9). The Project Order identifies the analysis area for the Protected Areas standard as the area within the site boundary and within 20 miles of the site boundary.

IV.F.1.a: Protected Areas within the Analysis Area

In Exhibit L, the applicant provides a list of the 35 protected areas, as defined in OAR 345-022-0040(1) that lie within 20 miles of the site boundary. The applicant also provides a map showing the location of the proposed facility in relation to the protected areas located within the analysis area. This map, included in the application as Figure L-1, shows that the facility site proposed by the applicant does not include or overlap with any protected area listed under OAR 345-022-0040(1). The applicant identifies the following Protected Areas within the analysis area:

Table 5: Protected Areas Within the 20-Mile Analysis Area

<table>
<thead>
<tr>
<th>Protected Area</th>
<th>Rule Reference</th>
<th>Distance from Facility to Closest Point (miles)</th>
<th>Direction from the Site Boundary</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbia River Gorge National Scenic Area (NSA)</td>
<td>(g)</td>
<td>0.2</td>
<td>NE</td>
<td>OR/WA</td>
</tr>
<tr>
<td>Lewis and Clark State Recreation Area (SRA)</td>
<td>(h)</td>
<td>0.6</td>
<td>SE</td>
<td>OR</td>
</tr>
<tr>
<td>Government Island SRA</td>
<td>(h)</td>
<td>1.1</td>
<td>W</td>
<td>OR</td>
</tr>
<tr>
<td>Sandy River, Wild and Scenic River</td>
<td>(k)</td>
<td>2.7</td>
<td>SE</td>
<td>OR</td>
</tr>
<tr>
<td>Dabney SRA</td>
<td>(h)</td>
<td>2.8</td>
<td>SE</td>
<td>OR</td>
</tr>
<tr>
<td>Steigerwald Lake National Wildlife Refuge (NWR)</td>
<td>(d)</td>
<td>3.0</td>
<td>E</td>
<td>WA</td>
</tr>
<tr>
<td>Portland Women’s Forum State Scenic Viewpoint</td>
<td>(h)</td>
<td>6.5</td>
<td>E</td>
<td>OR</td>
</tr>
<tr>
<td>Rocky Butte State Scenic Corridor</td>
<td>(h)</td>
<td>6.5</td>
<td>W</td>
<td>OR</td>
</tr>
</tbody>
</table>

202 Final ASC, Section L.3, Table L-1, pp. L-2 and L-3.
Protected Areas within the 20-Mile Analysis Area

<table>
<thead>
<tr>
<th>Protected Area</th>
<th>Rule Reference</th>
<th>Distance from Facility to Closest Point (miles)</th>
<th>Direction from the Site Boundary</th>
<th>State</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandy River, Wild and Scenic River, Segment 1</td>
<td>(k)</td>
<td>6.8</td>
<td>SE</td>
<td>OR</td>
</tr>
<tr>
<td>Rooster Rock State Park</td>
<td>(h)</td>
<td>7.1</td>
<td>E</td>
<td>OR</td>
</tr>
<tr>
<td>Crown Point</td>
<td>(h)</td>
<td>7.2</td>
<td>E</td>
<td>OR</td>
</tr>
<tr>
<td>Bureau of Land Management (BLM) Area of Critical Environmental Concern (ACEC)</td>
<td>(o)</td>
<td>7.2</td>
<td>SE</td>
<td>OR</td>
</tr>
<tr>
<td>Sandy River Scenic Waterway</td>
<td>(k)</td>
<td>9.1</td>
<td>SE</td>
<td>OR</td>
</tr>
<tr>
<td>Bridal Veil Falls State Park</td>
<td>(h)</td>
<td>9.9</td>
<td>E</td>
<td>OR</td>
</tr>
<tr>
<td>Shepperd’s Dell SNA</td>
<td>(h)</td>
<td>10.1</td>
<td>E</td>
<td>OR</td>
</tr>
<tr>
<td>Dalton Point Recreation Site</td>
<td>(h)</td>
<td>10.5</td>
<td>E</td>
<td>OR</td>
</tr>
<tr>
<td>Clackamas, Brodie State Scenic Waterway</td>
<td>(h)</td>
<td>11.8</td>
<td>SW</td>
<td>OR</td>
</tr>
<tr>
<td>Sandy Fish Hatchery</td>
<td>(f)</td>
<td>12.0</td>
<td>SE</td>
<td>OR</td>
</tr>
<tr>
<td>Benson SRA</td>
<td>(h)</td>
<td>12.3</td>
<td>E</td>
<td>OR</td>
</tr>
<tr>
<td>Bonnie Lure SRA</td>
<td>(h)</td>
<td>13.7</td>
<td>S</td>
<td>OR</td>
</tr>
<tr>
<td>Franz Lake NWR</td>
<td>(d)</td>
<td>13.9</td>
<td>E</td>
<td>WA</td>
</tr>
<tr>
<td>Tryon Creek SNA</td>
<td>(h)</td>
<td>14.0</td>
<td>SW</td>
<td>OR</td>
</tr>
<tr>
<td>Oswego Creek Outlet Access, Willamette River Greenway</td>
<td>(h)</td>
<td>15.0</td>
<td>SW</td>
<td>OR</td>
</tr>
<tr>
<td>Mary S. Young SRA</td>
<td>(h)</td>
<td>15.1</td>
<td>SW</td>
<td>OR</td>
</tr>
<tr>
<td>Oregon Parks and Recreation Department (OPRD)-W07, Willamette River Greenway</td>
<td>(h)</td>
<td>15.1</td>
<td>SW</td>
<td>OR</td>
</tr>
<tr>
<td>Willamette Stone State Heritage Site</td>
<td>(h)</td>
<td>15.4</td>
<td>E</td>
<td>OR</td>
</tr>
<tr>
<td>Ainsworth State Park</td>
<td>(h)(i)</td>
<td>16.2</td>
<td>E</td>
<td>OR</td>
</tr>
<tr>
<td>Milo McIver State Park</td>
<td>(h)</td>
<td>16.3</td>
<td>S</td>
<td>OR</td>
</tr>
<tr>
<td>McLoughlin SNA</td>
<td>(h)</td>
<td>17.5</td>
<td>E</td>
<td>OR</td>
</tr>
<tr>
<td>Clackamas Fish Hatchery</td>
<td>(f)</td>
<td>17.8</td>
<td>S</td>
<td>OR</td>
</tr>
<tr>
<td>Pierce NWR</td>
<td>(d)</td>
<td>18.6</td>
<td>E</td>
<td>WA</td>
</tr>
<tr>
<td>John B. Yeon State Scenic Corridor</td>
<td>(h)</td>
<td>18.8</td>
<td>E</td>
<td>OR</td>
</tr>
<tr>
<td>Rock Island Landing, Willamette River Greenway</td>
<td>(h)</td>
<td>19.5</td>
<td>SW</td>
<td>OR</td>
</tr>
</tbody>
</table>

1 A comment on the application from the Columbia River Gorge Commission notes that Exhibit L does not address wilderness areas designated as part of the Mark O. Hatfield Wilderness Area.
in 2009.\textsuperscript{203} However, OAR 345-022-0040(1) states that “References in this rule to protected areas designated under federal or state statutes or regulations are to the designations in effect as of May 11, 2007.” Because the Mark O. Hatfield Wilderness Area was not designated until 2009, it does not meet the definition of a Protected Area under OAR 345-022-0040(1).

\textit{IV.F.1.b: Types of Impacts to Protected Areas}

In accordance with OAR 345-021-0010(L)(C), the applicant provided descriptions of the potential impacts of the proposed facility from noise, increased traffic, water use, wastewater disposal, visual impacts of facility structures or plumes, and visual impacts from air emissions. In this section, the Department evaluates the likelihood of the design, construction, and operation of the facility to result in the types of impacts listed in OAR 345-021-0010(L)(C).

\textit{Noise resulting from facility construction or operation}

In Exhibit X, the applicant provides information about predicted noise levels resulting from construction and operation of the facility. Because the protected areas closest to the proposed facility site are not designated “quiet areas” or other identified noise-sensitive receptors, there are no applicable noise requirements contained in DEQ noise regulations at OAR Chapter 340, Division 35. However, although the noise regulations are not directly applicable to the CRGNSA, the applicant’s evidence regarding compliance with these regulations, which protect humans from impacts of excessive noise emissions,\textsuperscript{204} is relevant in considering the potential impacts of the facility on protected areas. The Department evaluates the potential impacts of noise on wildlife species in Section IV.H of this draft proposed order.

Table X-5 shows composite construction site noise levels ranging from 58 dBA to 64 dBA at the 1,040 foot distance to the nearest protected area. During operation, the applicant estimates noise generated by the facility at more than 55 dBA at the edge of the Columbia River Gorge National Scenic Area (CRGNSA), the nearest protected area to the site boundary. The applicant states that this noise level would attenuate with distance to reach approximately 45 dBA within 3,500 feet of the edge of the CRGNSA. Noise modeling provided by the applicant indicates that noise from the facility at the Lewis and Clark State Recreation Area, a protected area located approximately 0.6 miles southeast of the facility, would be less than 45 dBA. Similarly, the remaining identified protected areas are located farther from the facility (1.1 mile or more) and modeled noise levels from facility operations are below 45 dBA at all other identified protected areas.\textsuperscript{205}

\textsuperscript{203} Comment on the Application for Site Certificate, from Darren Nichols, Columbia River Gorge Commission, May 1, 2013.
\textsuperscript{204} OAR 340-035-0005(1) provides that it is a public policy of the State of Oregon “To provide a coordinated state-wide program of noise control to protect the health, safety, and welfare of Oregon citizens from the hazards and deterioration of quality of life imposed by excessive noise emissions.”
\textsuperscript{205} Final ASC, Section X.2, pp. X-6 and X-7.
The Department recommends that the Council find that the predicted noise resulting from construction and operation of the facility would not result in a significant adverse impact to protected areas.

**Increased traffic resulting from facility construction or operation**

The applicant anticipates that the majority of facility-related traffic during construction and operation will approach the facility site from I-84, which passes through the Columbia River Gorge National Scenic Area, a protected area. The major collectors that connect the facility site to I-84, NW Sundial Road and NE Marine Drive, do not pass through or near any protected area. In Exhibit U, the applicant provides 2010 traffic counts provided by the Oregon Department of Transportation, which show 29,600 average daily trips on I-84 at milepost 17.71.

The applicant states that during construction, facility related traffic will consist of deliveries of construction materials and commuting trips by construction workers. The applicant estimates that construction of the facility will add a maximum of 1,025 daily trips, consisting of 500 daily workers traveling to and from work and an additional 25 trips for mobilization and demobilization of materials during peak construction. The applicant estimates that, over the projected 24-month construction period, the workforce will average 350 people, adding approximately 725 daily trips to and from the facility. The applicant estimates that during operation, commuting trips by staff and occasional maintenance and delivery trips will add approximately 44 daily commuting trips.

The Department recommends that the Council find that the expected increase in daily traffic resulting from construction and operation of the facility is unlikely to result in a significant adverse impact to protected areas.

**Water use during facility construction or operation**

The applicant describes the facility’s proposed water use in Exhibit O of the ASC. The applicant proposes to purchase approximately 15.2 million gallons of water from the City of Troutdale over the projected 24-month construction period. During operation, the applicant proposes to obtain process water from the Troutdale Water Pollution Control Facility and the Port of Portland and potable water from the City of Troutdale. The applicant provides statements from

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206 Final ASC, Section L.4, p. L-4.
207 Final ASC, Section U.4.7.3, Table U-3, p. U-11.
208 Final ASC, Section L.4, p. L-4.
209 Final ASC, Section L.4, p. L-4
each proposed water source affirming that adequate supply is available to meet the water
needs of the proposed facility without compromising the needs of existing users.\textsuperscript{210}

The Department recommends that the Council find that because the facility would use existing
sources of water, water use during construction and operation of the facility would not likely
result in a significant adverse impact to protected areas.

\textit{Wastewater disposal resulting from facility construction or operation}

During construction, the applicant proposes to treat wastewater from tire and vehicle washing,
flushing and testing activities, and pressure testing onsite for reuse, or offsite at the City of
Troutdale Water Pollution Control Facility.\textsuperscript{211} Recommended Condition D.2 would require the
applicant to control stormwater runoff during construction according to best management
practices adopted in the Erosion and Sediment Control Plan for the proposed facility. The
Department has reviewed the BMPs contained in the ESCP and finds that their implementation
during construction and operation of the facility would minimize possible impacts to protected
areas from stormwater runoff.

During operation, the applicant proposes to treat and cool process wastewater prior to
discharge to the Troutdale Water Pollution Control Facility’s existing outfall on the Sandy
River.\textsuperscript{212} This outfall is near the confluence of the Sandy and Columbia rivers and downstream
from the portion of the Sandy River that is designated as a Wild and Scenic River. The Columbia
River Gorge NSA, which abuts the Sandy River, and Government Island SRA are the only
protected areas downstream of the outfall.\textsuperscript{213} The applicant explains that to the extent that the
proposed facility would divert treated wastewater from the City of Troutdale’s discharge into
the Sandy River for use as process water, all of the intake water substances obtained from the
City would still be discharged to the river under current conditions. The applicant states that
the facility’s treatment of the water and subsequent use of it for steam generation and cooling
would not add any additional substance load to the river.\textsuperscript{214} The facility would also use
groundwater from the Port of Portland for its intake water, and would add heat to the water.
Subject to an individual NPDES permit issued for the facility, the combined discharges from the
facility and the Troutdale Water Pollution Control Facility would meet water quality standards
for the Sandy River, which were established to protect the designated uses of the river,
including fish and aquatic life, recreation, and drinking water. During operation, the applicant
proposes to discharge approximately 750 gallons per day of sanitary wastewater generated
from the O & M building and control rooms to the City of Troutdale sanitary sewer system, with

\textsuperscript{210} Final ASC, Attachments O-2 and O-3.
\textsuperscript{211} Final ASC, Section V.2.1.2, p. V-2.
\textsuperscript{212} Final ASC, Section V.2.2.2, p. V-3.
\textsuperscript{213} Final ASC, Section L.4, p. L-5.
no anticipated impacts to protected areas. The applicant proposes to discharge stormwater runoff to the Troutdale Reynolds Industrial Park (TRIP) stormwater system pursuant to a NPDES 1200-Z general industrial stormwater permit issued by the Oregon Department of Environmental Quality. The Department has reviewed the BMPs contained in the SWPCP and finds that their implementation during construction and operation of the facility would minimize possible impacts to protected areas from stormwater runoff. Based on the evidence in the record, the Department recommends that the Council find that wastewater disposal resulting from construction and operation of the facility is unlikely to result in a significant adverse impact to protected areas.

*Visual impacts of facility structures or plumes*

In Exhibit R, the applicant states that the proposed facility would add "industrial elements" to the landscape, including the combustion turbine generator buildings, steam turbine generator buildings, outdoor heat recovery steam generators (HRSGs), HRSG exhaust stacks, mechanical draft cooling towers, a water treatment building and water tanks, a control and administration building, and generators and auxiliary transformers. The tallest component of the proposed facility is the exhaust stack for the combined-cycle power block, which would stand 159 feet tall. Other relatively tall elements of the proposed facility include the heat recovery steam generator (110 feet tall) and the exhaust stack related to the simple-cycle power block (90 feet tall). Steel monopole structures making up the transmission line are expected to be approximately 85 feet tall. The applicant provides modeling data that shows that the height of plumes, when visible, will typically be less than 75 meters (m) (246 feet). For all seasons, the heights of visible plumes that could form will most frequently be between 0 and 25 m (0 and 82 feet) above the cooling tower. For most of the year (spring, summer, and fall), the lengths of the visible plumes that could form will most frequently be between 0 and 50 m (0 and 164 feet). During winter, the lengths of the visible plumes that could form are predicted to range between 100 and 200 m (328 and 656 feet). These facility structures and plumes may be visible from protected areas within the analysis area. The Department evaluates potential visual impacts from facility structures and plumes to specific protected areas in further detail in Section IV.F.1.c below.

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215 Final ASC, Section V.2.2.2, p. V-4.
216 Final ASC, Section L.4, p. L-5.
218 Final ASC, Section B.4, Table B-1, p. B-19.
219 Final ASC, Figure Z-1.
Visual impacts from air emissions resulting from facility construction or operation

Emission of visibility-impairing pollutants may impact protected areas more generally by contributing to haze in the vicinity of the facility, thus diminishing views from or within protected areas within the analysis area. The applicant provides an analysis of the potential impacts to protected areas as a result of certain pollutants that the facility could emit at a significant rate. The analysis presents the results of the applicant’s air dispersion modeling of the impacts from the facility’s emissions of these potentially visibility-impairing pollutants; particulate matter less than 10 micrometers in aerodynamic diameter (PM$_{10}$), particulate matter less than 2.5 micrometers in aerodynamic diameter (PM$_{2.5}$), and oxides of nitrogen (NOx). The applicant’s analysis considers whether these emissions would likely result in impairments to visibility that could in turn adversely impact specific protected areas within the analysis area.\(^{221}\)

The applicant proposes the secondary National Ambient Air Quality Standards (NAAQS) as an appropriate benchmark to use in evaluating whether emission of visibility-impairing pollutants would result in significant adverse impacts to protected areas within the analysis area. The applicant describes the purpose of the secondary National Ambient Air Quality Standards (NAAQS) established by the U.S. Environmental Protection Agency for certain “criteria” pollutants which include those pollutants that are identified as having reasonable potential to endanger the public welfare, including PM$_{10}$, PM$_{2.5}$, and NOx. The applicant explains that the federal Clean Air Act requires NAAQS to be set at levels that are requisite to “protect the public welfare from any known or anticipated adverse effects associated with the presence of the [criteria] pollutant in the ambient air.”\(^{222}\) The applicant notes that the Clean Air Act specifically identifies visibility impairment as an adverse effect to the public welfare to be prevented by the secondary NAAQS. Additionally, the Oregon Environmental Quality Commission adopted the secondary NAAQS for statewide applicability in Chapter 340, Division 202 of the Oregon Administrative Rules and Oregon’s Clean Air Act State Implementation Plan.\(^{223}\)

While the fact that an applicant has obtained a permit under the Clean Air Act does not necessarily ensure compliance with the Council’s siting standards, the Council may rely on information from permit applications and studies from the air quality permitting process to support findings regarding compliance with relevant Council standards.\(^{224}\) The Department concurs with the applicant’s assessment that the secondary NAAQS adopted by the U.S.

\(^{224}\) This position is generally supported by comments from Richard Till, Friends of the Columbia Gorge, September 24, 2013. Mr. Till and Friends of the Columbia Gorge also correctly assert that “EFSC has a mandate to go beyond tan [sic] the DEQ’s standards if it is necessary to prevent significant adverse impacts.” However, these comments primarily raise issues related to existing cumulative impacts in the Gorge, rather than whether the proposed facility itself is likely to result in a significant adverse impact to the CRGNSA as a Protected Area.
Environmental Protection Agency and into the rules administered by Oregon DEQ represent appropriate points of reference for determining the likelihood of visibility impairment from facility air emissions to cause significant adverse impacts to protected areas.

The applicant provides a table showing secondary NAAQS for particulate matter less than 10 micrometers in aerodynamic diameter (PM$_{10}$), particulate matter less than 2.5 micrometers in aerodynamic diameter (PM$_{2.5}$), and oxides of nitrogen (NOx), stated in terms of micrograms per cubic meter. The applicant analyzes the facility’s potential emissions of these pollutants according to the modeling protocol approved by DEQ for that purpose. The applicant presents results of a comparison between modeled emissions of those pollutants to “significant air quality impact levels” (SIL), which are regulatory screening levels applied by Oregon DEQ to identify emissions from a proposed new source that would not cause or contribute to a violation of the secondary NAAQS. For those protected areas within the analysis area with a modeled impact greater than the SIL, the applicant conducted a competing source analysis, which added modeled concentrations of pollutants from the facility to concentrations modeled from other, preexisting emissions sources and to representative background concentrations in that area in order to provide a “total concentration” of pollutants in relation to the NAAQS. The applicant provides results of this “enhanced analysis,” showing that the facility’s emissions, when added to pollutant concentrations resulting from existing sources and background, will not cause or contribute to a secondary NAAQS exceedance in any of the protected areas for which the applicant conducted the enhanced analysis.

In order to ensure that air emissions from the facility do not impair visibility associated with protected areas in the analysis area, the Department recommends that the Council adopt the following condition:

**Condition F.1:** Prior to commencing operation of the facility, the applicant shall submit to the Department an Air Contaminant Discharge Permit issued by Oregon Department of Environmental Quality covering the facility, and demonstrating that the facility’s construction and operation will not cause air emissions that cause or contribute to a violation of the following secondary NAAQS at any protected areas within the analysis area:

a). For particulate matter less than 10 micrometers in aerodynamic diameter (PM$_{10}$), no more than 150 micrograms per cubic meter, averaged over a 24-hour period, and;

b) For particulate matter less than 2.5 micrometers in aerodynamic diameter (PM$_{2.5}$), no more than 35 micrograms per cubic meter, averaged over a 24-hour period, and;


228 CH2M HILL, “Troutdale Energy Center: Protected Areas Visibility Analysis,” June 26, 2013, Table 4.
c) For particulate matter less than 2.5 micrometers in aerodynamic diameter (PM$_{2.5}$), no more than 15 micrograms per cubic meter, averaged over a one year period, and;

d) For oxides of nitrogen (NOx), no more than 100 micrograms per cubic meter, averaged over a one year period.

DPO comments from the applicant request a revision to Condition F.1 to indicate that DEQ’s issuance of an Air Contaminant Discharge Permit would demonstrate the facility’s compliance with Council standards “in and of itself.” As discussed above, the Council may adopt a condition applying certain thresholds used in the DEQ permitting process as consistent with a siting standard, but the fact of a federal air quality permit does not “in and of itself” ensure compliance with the Council’s Protected Areas standard. Accordingly, the Department does not recommend that the Council adopt the revised Condition F.1 as proposed by the applicant.

The Department recommends that the Council find that the construction and operation of the proposed facility is not likely to result in significant adverse impacts from air emissions to protected areas within the analysis area.

IV.F.1.c: Potential Impacts to Protected Areas and Proposed Mitigation

OAR 345-022-0040 requires that the Council determine that the design, construction, and operation of the proposed facility will not have a significant adverse impact to any protected areas in the analysis area. OAR 345-001-0010(53) defines “significant” as follows:

(53) “Significant” means having an important consequence, either alone or in combination with other factors, based upon the magnitude and likelihood of the impact on the affected human population or natural resources, or on the importance of the natural resources affected, considering the context of the action or impact, its intensity, and the degree to which possible impacts are caused by the proposed action. Nothing in this definition is intended to require a statistical analysis of the magnitude or likelihood of a particular impact.

Several comments stated that Exhibit L did not discuss a statutory or regulatory definition of “significant adverse impact,” and requested that the Council apply the definition of “adversely impact” applicable to the National Scenic Area (16 U.S.C. § 544(a)). The Department recommends that the Council apply its own definition for significant at OAR 345-001-0010(53), and analyzes potential significant adverse impacts resulting from the facility consistent with that definition.

In order to apply this standard to specific protected areas, the Department first evaluates the possibility of an adverse impact from design, construction, or operation of the facility affecting the protected area. If a reasonable possibility exists that the facility may result in a significant adverse impact on a protected area, the Department then considers the significance of the possible impact using the criteria in OAR 345-001-0010(53). Based on the findings in Section IV.F.b above, the Department’s evaluation of impacts to specific protected areas focuses on potential visual impacts from facility structures or plumes.

The applicant describes conducting a viewshed analysis to determine visibility of the facility’s exhaust stack from protected areas. The applicant states that this viewshed analysis would exclude 25 of 35 protected areas within the analysis area. Because the applicant does not provide results of the viewshed analysis in the application, the Department relies on other evidence provided by the applicant, including photos, distances, and descriptions of intervening topography or urban and industrial development to evaluate the visibility of the proposed facility from the protected areas discussed below.

1) Columbia River Gorge National Scenic Area

The Columbia River Gorge National Scenic Area is specifically named as a protected area at OAR 345-022-0040(1)(g). In 1986, the U.S. Congress passed the National Scenic Areas Act, which designated approximately 292,000 acres of southern Washington and northern Oregon as the Columbia River Gorge National Scenic Area (“CRGNSA” or “Scenic Area”). The proposed facility site is located just outside of the CRGNSA, about 1,000 feet west of the Scenic Area’s boundary at the Sandy River. In addition, fourteen protected areas in the analysis are located within the CRGNSA.

To represent potential impacts to the portion of the CRGNSA closest to the proposed facility site, the applicant provides analysis of the Sandy River Delta Recreation Area, located at the confluence of the Sandy and Columbia Rivers. The Sandy River Delta Recreation Area is within the CRGNSA and sits approximately 0.5 miles east of the proposed facility site at its closest point, and includes a variety of trails and shore access to the Columbia and Sandy Rivers.

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230 Final ASC, Section L.4.1, p. L-7.
231 DPO comments from Friends of the Columbia River Gorge similarly note the absence of a “seen areas map” showing all locations from which the cooling tower and plume would be visible. (See comment from Richard Till, Friends of the Columbia River Gorge, September 24, 2013, pg. 15). However, the Council can still use other types of evidence provided by the applicant, such as photographs, to evaluate the likelihood and significance of potential visual impacts.
232 Final ASC, Section L.3, Table L-1, pp. L-2 and L-3.
233 Final ASC, Figure L-1.
234 Final ASC, Section L.4.2, p. L-9. DPO comments also raised concerns about potential adverse impacts from deposition of nitrogen in Protected Areas, particularly the Sandy River Delta within the CRGNSA. (See DPO comments from Richard Till, Friends of the Columbia River Gorge, September 24, 2013; DPO comments...
The applicant provides a visual simulation showing existing views and views depicting both typical and representative worst case plume from the proposed facility, as viewed from the Sandy River Delta Recreational Area along the east bank of the Sandy River, looking west toward the facility. Figures 4a-4c in Attachment R-2 show the existing conditions of the area as well as the results of the photo simulations showing what the view may look like with the facility in place. Both simulations show existing dense evergreen and deciduous vegetation screening potential views of the facility.  

The applicant explains that even in the absence of vegetative screening, the viewed landscape from the Recreation Area would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line. The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from the Recreation Area.

The Department recommends that the Council find that impacts from proposed facility structures or plumes to the Sandy River Delta Recreation Area are not likely to occur due to the presence of screening vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would preclude impacts from proposed facility structures or plumes to the Sandy River Delta Recreation Area from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, are not likely to result in significant adverse impact to the Sandy River Delta Recreation Area, the closest portion of the CRGNSA to the proposed facility site. In addition, in the discussion below, the Department further recommends that the Council find that the design, construction and operation of the facility, are not likely to result in significant adverse impact to 16 protected areas located partially or entirely within the CRGNSA. Accordingly, the Department recommends that the Council find

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235 Final ASC, Attachment R-2, Figures 4a, 4b, and 4c.


237 The Department evaluated the potential for significant adverse impacts on the following protected areas within the Columbia River Gorge National Scenic Area: Lewis and Clark SRA, Steigerwald Lake NWR,
that the design, construction, and operation of the facility are not likely to result in a significant adverse impact to the CRGNSA.

2) Lewis and Clark State Recreation Area

The Lewis and Clark State Recreation Area is defined as a protected area pursuant to OAR 345-022-0040(1)(h), which includes state parks and waysides listed by the Oregon Department of Parks and Recreation. The State Recreation Area (SRA) encompasses 57 acres, and is located approximately 0.6 miles east of proposed facility site at its closest point. The SRA includes a popular swimming area on the Sandy River, as well as public boat launch and trail to Broughton Bluff. The specific goals of the SRA do not identify important visual or scenic resources that could be impacted by facility structures or plumes, but OPRD goals for all parks and recreation areas include protection of these resources. The applicant provides photos taken from within commonly used areas in the SRA showing dense deciduous and evergreen vegetation screening potential views of the facility. The applicant explains that even in the absence of vegetative screening, the viewed landscape from within the SRA would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line. The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the main use areas of the SRA. The Department recommends that the Council find that visual impacts from facility structures or plumes to the Lewis and Clark State Recreation Area due to the presence of screening vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would preclude visual impacts from facility structures or plumes to the Lewis and Clark State Recreation Area from meeting the definition of “significant” at OAR 345-001-0010(53).

The applicant provides a photo taken from the summit of Broughton Bluff, a geologic feature and hiking opportunity located within the SRA, which shows a clear, unobstructed line of sight toward the facility site. The applicant explains that the viewed landscape from this location

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238 Final ASC, Section L.4.3.1, p. L-10.
includes many other examples of large scale urban and industrial development, including the City of Camas, Washington, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.\textsuperscript{242} The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape as viewed toward the direction of the facility site from the top of Broughton Bluff. The Department recommends that the Council find that, due to the existing industrial features within the viewed landscape, visual impacts from facility structures or plumes to Broughton Bluff would not meet the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in a significant adverse impact to the Lewis and Clark State Recreation Area.

3) Government Island State Recreation Area

Government Island State Recreation Area, located approximately 1.1 miles west of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(h), which includes state parks and waysides listed by the Oregon Department of Parks and Recreation.\textsuperscript{243} The Port of Portland owns the island, and leases an area used by boaters and campers to OPRD. The Management Plan does not directly mention scenic resources, other than a description of Multnomah County’s Parks and Open Space and Commercial Forest Use zoning of the island, the purpose of which is to “conserve and protect wildlife habitat and scenic value.”\textsuperscript{244} The applicant describes the SRA itself as a series of islands in the Columbia River accessible only by boat, with two docks and a floating tie-up on the north end of the island. Fishing, hiking, and camping are permitted on the perimeter of the area, but the interior of the island is reserved for cattle ranching and off-limits to recreational users.\textsuperscript{245}

The applicant provides a photo taken from the northbound span of the I-205 Glenn L. Jackson Memorial Bridge, facing east toward the facility site. The photo shows dense stands of deciduous vegetation screening views toward the facility. The applicant anticipates that the density of vegetation, particularly along the eastern shore of Government Island, is such that tree trunks and branches will provide screening during winter months.\textsuperscript{246} The Department cannot verify this assertion based on the evidence in the record. The applicant acknowledges that facility structures and the cooling tower plume may be more visible from the southern and western portions of the island.

\textsuperscript{242} Final ASC, Section 6.4.2, p. R-26.
\textsuperscript{243} Final ASC, Section L.3, Table L-1, pp. L-2 and L-3.
\textsuperscript{244} Final ASC, Section R.5.2.5, p. R-10.
\textsuperscript{245} Final ASC, Section L.4.4.1, p. L-13.
The applicant explains that the viewed landscape from within the SRA would include many other examples of large scale urban and industrial development, including developed areas of the City of Camas, Washington, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line. The Department has reviewed aerial photos of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that could be viewed in the absence of vegetation toward the direction of the facility site from within the main use areas of the SRA. The Department recommends that the Council find that, although visual impacts from facility structures or plumes to Government Island State Recreation Area may occur, existing industrial features within the viewed landscape preclude impacts from proposed facility structures or plumes to Government Island State Recreation Area from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in a significant adverse impact to the Government Island State Recreation Site.

4) Sandy River, Wild and Scenic River

The nearest portion of the Sandy River, Wild and Scenic River, located approximately 2.7 miles southeast of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(k), which includes wild or scenic rivers designated pursuant to 16 U.S.C. 1271 et seq. The applicant provides a photo taken from the Sandy River, Wild and Scenic River, showing topographic barriers and dense deciduous and evergreen vegetation screening potential views of the facility. In addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from that segment of the river. The Department recommends that the Council find that visual impacts from proposed facility structures or plumes to the nearest portion of Sandy River, Wild and Scenic River are not likely to occur due to the presence of screening topography and vegetation.

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248 Final ASC, Section L.3, Table L-1, pp. L-2 and L-3.
Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude visual impacts from proposed facility structures and plumes to the nearest segment of Sandy River, Wild and Scenic River from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in a significant adverse impact to Sandy River, Wild and Scenic River.

5) Dabney State Recreation Area

Dabney State Recreation Area, located approximately 2.8 miles southeast of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(h), which state parks and waysides listed by the Oregon Department of Parks and Recreation.251 The applicant provides a photo taken from Dabney SRA, showing topographic barriers and dense deciduous and evergreen vegetation screening potential views of the facility.252 In addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.253

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the Dabney SRA. The Department recommends that the Council find that visual impacts from proposed facility structures or plumes to the Dabney SRA are not likely to occur due to the presence of screening topography and vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude visual impacts from proposed facility structures and plumes to the Dabney SRA from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in a significant adverse impact to Dabney State Recreation Area.

251 Final ASC, Section L.3, Table L-1, pp. L-2 and L-3.
6) Steigerwald Lake National Wildlife Refuge

The Steigerwald Lake National Wildlife Refuge, located approximately 3 miles east of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(d), which includes national and state wildlife refuges.\(^{254}\) In 2004, the U.S. Fish and Wildlife Service adopted the *Steigerwald Lake, Franz Lake, and Pierce National Wildlife Refuges Comprehensive Conservation Plan* to govern the National Wild Refuge (NWR). The plan describes the main purpose of the NWR system is to provide wildlife habitat and provide visitors the opportunity to “hunt, fish, observe and photograph wildlife [and] participate in environmental education and interpretive activities.”\(^{255}\)

The applicant provides a photo taken from the main hiking trail at Steigerwald Lake NWR, facing west/southwest toward the proposed facility site. The photo shows an earthen berm and intervening vegetation screening potential views of the facility.\(^{256}\) In addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.\(^{257}\)

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the Steigerwald Lake NWR. The Department recommends that the Council find that visual impacts from proposed facility structures or plumes to the Steigerwald Lake NWR are not likely to occur due to the presence of screening topography and vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude visual impacts from proposed facility structures and plumes to the Steigerwald Lake NWR from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in a significant adverse impact to Steigerwald Lake National Wildlife Refuge.

7) Portland Women’s Forum State Scenic Viewpoint

\(^{254}\) Final ASC, Section L.3, Table L-1, pp. L-2 and L-3.

\(^{255}\) Final ASC, Section L.4.3.2, pp. L-10 and L-11.


Portland Women’s Forum State Scenic Viewpoint, located approximately 6.5 miles east of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(h), which includes state parks and waysides listed by the Oregon Department of Parks and Recreation.\(^{258}\) The applicant provides a photo taken from within Portland Women’s Forum State Park, showing dense deciduous and evergreen vegetation screening potential views of the facility.\(^{259}\) The applicant explains that even in the absence of vegetative screening, the visibility of facility components would be limited by distance effects from viewing the facility from 6.5 miles away. Because the view from the park to the facility is within the same line of sight as views from Crown Point to the facility, but 0.7 miles closer, the applicant refers to the visual simulation provided in Figure 1c of Attachment R-2 of a Representative Worst Case plume as viewed from Crown Point for the purpose of comparison.\(^{260}\) In addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.\(^{261}\)

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the park. The Department recommends that the Council find that visual impacts from proposed facility structures or plumes to Portland Women’s Forum State Park are not likely to occur due to the presence of screening vegetation and limited visibility of the facility site from a distance of 6.5 miles. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude visual impacts from proposed facility structures and plumes to Portland Women’s Forum State Park from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in a significant adverse impact to Portland Women’s Forum State Park.

8) Rocky Butte State Scenic Corridor

\(^{258}\) Final ASC, Section L.3, Table L-1, pp. L-2 and L-3.
Rocky Butte State Scenic Corridor, located approximately 6.5 miles west of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(h), which includes state parks and waysides listed by the Oregon Department of Parks and Recreation. The applicant provides a photo taken from the viewpoint at Joseph Wood Hill Park at the summit of Rocky Butte, within the State Scenic Corridor. The photo shows a clear, unobstructed line of sight towards the facility site. The photo also shows mitigating effects of distance from viewing the proposed facility site from 6.5 miles away, as well as existing discordant visual elements including I-84 and the plume produced by the Georgia-Pacific paper mill in Camas.

The Department recommends that the Council find that impacts from the proposed facility to the Rocky Butte State Scenic Corridor are not likely to occur due to the limited visibility of the facility site from a distance of 6.5 miles. Additionally, the Department recommends that the Council find that the existing industrial features within the viewed landscape preclude impacts from the proposed facility to the Rocky Butte State Scenic Corridor from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in a significant adverse impact to the Rocky Butte State Scenic Corridor.

9) Sandy River, Wild and Scenic River, Segment 1

Sandy River, Wild and Scenic River, Segment 1, located approximately 6.8 miles southeast of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(k), which includes wild or scenic rivers designated pursuant to 16 U.S.C. 1271 et seq. The applicant provides a photo taken from Segment 1, facing northwest toward the facility site. The applicant provides a photo taken from the Sandy River, Wild and Scenic River, showing topographic barriers and dense deciduous and evergreen vegetation screening potential views of the facility. In addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.

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262 Final ASC, Section L.3, Table L-1, pp. L-2 and L-3.
The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from that segment of the river. The Department recommends that the Council find that visual impacts from proposed facility structures or plumes to the nearest portion of Sandy River, Wild and Scenic River, Segment 1 are not likely to occur due to the presence of screening topography and vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude visual impacts from proposed facility structures and plumes to the nearest segment of Sandy River, Wild and Scenic River, Segment 1 from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in a significant adverse impact to Sandy River, Wild and Scenic River, Segment 1.

10) Rooster Rock State Park

Rooster Rock State Park, located approximately 7.1 miles east of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(h), which includes state parks and waysides listed by the Oregon Department of Parks and Recreation. The applicant provides a photo taken from within the park, showing dense deciduous and evergreen vegetation on Reed Island in the Columbia River screening potential views of the facility. The applicant explains that even in the absence of vegetative screening, the visibility of facility components would be limited by distance effects from viewing the facility from 7.1 miles away. Because the view from the park to the facility is within the same general line of sight as views from Crown Point to the facility, but 0.4 miles closer, the applicant refers to the visual simulation provided in Figure 1c of Attachment R-2 of a Representative Worst Case plume as viewed from Crown Point for the purpose of comparison. In addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from that segment of the river. The Department recommends that the Council find that visual impacts from proposed facility structures or plumes to the nearest portion of Sandy River, Wild and Scenic River, Segment 1 are not likely to occur due to the presence of screening topography and vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude visual impacts from proposed facility structures and plumes to the nearest segment of Sandy River, Wild and Scenic River, Segment 1 from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in a significant adverse impact to Sandy River, Wild and Scenic River, Segment 1.

10) Rooster Rock State Park

Rooster Rock State Park, located approximately 7.1 miles east of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(h), which includes state parks and waysides listed by the Oregon Department of Parks and Recreation. The applicant provides a photo taken from within the park, showing dense deciduous and evergreen vegetation on Reed Island in the Columbia River screening potential views of the facility. The applicant explains that even in the absence of vegetative screening, the visibility of facility components would be limited by distance effects from viewing the facility from 7.1 miles away. Because the view from the park to the facility is within the same general line of sight as views from Crown Point to the facility, but 0.4 miles closer, the applicant refers to the visual simulation provided in Figure 1c of Attachment R-2 of a Representative Worst Case plume as viewed from Crown Point for the purpose of comparison. In addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from that segment of the river. The Department recommends that the Council find that visual impacts from proposed facility structures or plumes to the nearest portion of Sandy River, Wild and Scenic River, Segment 1 are not likely to occur due to the presence of screening topography and vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude visual impacts from proposed facility structures and plumes to the nearest segment of Sandy River, Wild and Scenic River, Segment 1 from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in a significant adverse impact to Sandy River, Wild and Scenic River, Segment 1.

10) Rooster Rock State Park

Rooster Rock State Park, located approximately 7.1 miles east of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(h), which includes state parks and waysides listed by the Oregon Department of Parks and Recreation. The applicant provides a photo taken from within the park, showing dense deciduous and evergreen vegetation on Reed Island in the Columbia River screening potential views of the facility. The applicant explains that even in the absence of vegetative screening, the visibility of facility components would be limited by distance effects from viewing the facility from 7.1 miles away. Because the view from the park to the facility is within the same general line of sight as views from Crown Point to the facility, but 0.4 miles closer, the applicant refers to the visual simulation provided in Figure 1c of Attachment R-2 of a Representative Worst Case plume as viewed from Crown Point for the purpose of comparison. In addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from that segment of the river. The Department recommends that the Council find that visual impacts from proposed facility structures or plumes to the nearest portion of Sandy River, Wild and Scenic River, Segment 1 are not likely to occur due to the presence of screening topography and vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude visual impacts from proposed facility structures and plumes to the nearest segment of Sandy River, Wild and Scenic River, Segment 1 from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in a significant adverse impact to Sandy River, Wild and Scenic River, Segment 1.
viewed in the absence of vegetation toward the direction of the facility site from within the park. The Department recommends that the Council find that visual impacts from proposed facility structures or plumes to Rooster Rock State Park are not likely to occur due to the presence of screening vegetation and limited visibility of the facility site from a distance of 7.1 miles. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude visual impacts from proposed facility structures or plumes to Rooster Rock State Park from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, are not likely to result in a significant adverse impact to Rooster Rock State Park.

11) Crown Point

The Vista House at Crown Point, located approximately 7.2 miles southeast of the proposed facility site at its closest point, is defined as a protected areas pursuant to OAR 345-022-0040(1)(h), which includes state parks and waysides listed by the Oregon Department of Parks and Recreation. The Vista House is built on a promontory sitting 733 feet above the Columbia River. Vista House serves over million visitors annually, and is known for its views of the Columbia River Gorge. The applicant describes the view to the west from Vista House towards the proposed facility site as a “secondary” view, based on the arrangement of a series of telescopes available to visitors, which only allow views to the east. Although views to the west may be less popular with visitors, the evidence on the record does not support the applicant’s qualification of the view to the west as a “secondary” view with “moderate viewer concern.”

The applicant provides visual simulations showing existing views and views depicting both typical and representative worst case plume from the proposed facility, as viewed from the western side of the Vista House parking lot at Crown Point. The visual simulations show a clear, unobstructed line of sight towards the facility site. The visual simulations depicting typical and representative worst case plumes also show the mitigating effects of distance from viewing the proposed facility site from 7.2 miles away, as well as existing discordant visual elements including I-84, the Port of Camas-Washougal Industrial Park, and the plume produced by the Georgia-Pacific paper mill in Camas. The visual simulation also shows that the potentially visible portion of the plume represents a very small object within the viewed landscape from 7.2 miles, and does not noticeably contrast with similar visible features of existing development in the general vicinity, including the visible plume from the Georgia-Pacific mill.

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270 Final ASC, Section L.3, Table L-1, pp. L-2 and L-3.
The Department recommends that the Council find that impacts from the proposed facility structures or plumes to Crown Point are not likely to occur due to the limited visibility of the facility site from a distance of 7.2 miles. Additionally, the Department recommends that the Council find that the existing industrial features within the viewed landscape preclude impacts from proposed facility structures or plumes to Crown Point from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in significant adverse impact to Crown Point.

12) Bureau of Land Management Area of Critical Environmental Concern/Sandy River Gorge

The Bureau of Land Management (BLM) Area of Critical Environmental Concern (ACEC)/Sandy River Gorge, located approximately 7.2 miles southeast of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(o), which includes BLM areas of critical environmental concern. The applicant provides a photo taken facing northwest toward the proposed facility site from within the ACEC. The photo shows dense deciduous and evergreen vegetation screening potential views of the facility. In addition, the applicant states that the viewed landscape looking from the ACEC to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the ACEC. The Department recommends that the Council find that visual impacts from proposed facility structures and plumes to Bureau of Land Management Area of Critical Environmental Concern/Sandy River Gorge are not likely to occur due to the presence of screening vegetation and limited visibility of the facility site from a distance of 7.2 miles. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude impacts from proposed facility structures and plumes to Bureau of Land Management Area of

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274 Final ASC, Section L.3, Table L-1, pp. L-2 and L-3.
Critical Environmental Concern/Sandy River Gorge from meeting the definition of “significant” at OAR 345-001-0010(S3).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in significant adverse impact to Bureau of Land Management Area of Critical Environmental Concern/Sandy River Gorge.

13) Guy W. Talbot State Park

Guy W. Talbot State Park, located approximately 7.4 miles east of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(h), which includes state parks and waysides listed by the Oregon Department of Parks and Recreation.277 The applicant provides photos taken facing west toward the proposed facility site from the main parking area within the park, the parking area at Latourell Falls, and Latourell Falls Trail. These photos show dense deciduous and evergreen vegetation screening potential views of the facility.278 The applicant explains that even in the absence of vegetative screening, the visibility of facility components would be limited by distance effects from viewing the facility from 7.4 miles away. Because the view from the park to the facility is within the same general line of sight as views from Crown Point to the facility, but 0.2 miles further, the applicant refers to the visual simulation provided in Figure 1c of Attachment R-2 of a Representative Worst Case plume as viewed from Crown Point for the purpose of comparison.279 In addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.280

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the park. The Department recommends that the Council find that visual impacts from proposed facility structures and plumes to Guy W. Talbot State Park are not likely to occur due to the presence of screening vegetation and limited visibility of the facility site from a distance of 7.4 miles. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape

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277 Final ASC, Section L.3, Table L-1, pp. L-2 and L-3.
would likely preclude impacts from proposed facility structures and plumes to Guy W. Talbot State Park from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in significant adverse impact to Guy W. Talbot State Park.

14) George W. Joseph State Natural Area

George W. Joseph State Natural Area, located approximately 7.9 miles east of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(h), which includes state parks and waysides listed by the Oregon Department of Parks and Recreation.\(^{281}\) The applicant provides a photo taken facing west toward the proposed facility site from within the George W. Joseph SNA. The photos shows dense deciduous and evergreen vegetation screening potential views of the facility.\(^{282}\) The applicant explains that even in the absence of vegetative screening, the visibility of facility components would be limited by distance effects from viewing the facility from 7.9 miles away. Because the view from the George W. Joseph SNA to the facility is within the same general line of sight as views from Crown Point to the facility, but 0.5 miles further, the applicant refers to the visual simulation provided in Figure 1c of Attachment R-2 of a Representative Worst Case plume as viewed from Crown Point for the purpose of comparison.\(^{283}\) In addition, the applicant states that the viewed landscape looking from the George W. Joseph SNA to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.\(^{284}\)

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the George W. Joseph SNA. The Department recommends that the Council find that visual impacts from proposed facility structures and plumes to George W. Joseph State Natural Area are not likely to occur due to the presence of screening vegetation and limited visibility of the facility site from a distance of 7.9 miles. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude impacts from proposed facility structures and

\(^{281}\) Final ASC, Section L.3, Table L-1, pp. L-2 and L-3.
plumes to George W. Joseph State Natural Area from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in significant adverse impact to George W. Joseph State Natural Area.

15) Sandy River Scenic Waterway

Sandy River Scenic Waterway, located approximately 9.1 miles southeast of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(k), which includes scenic waterways designated pursuant to ORS 273.581. The applicant provides a photo taken facing north/northwest toward the proposed facility site from the Sandy River Scenic Waterway. The photo shows topographic barriers and dense deciduous and evergreen vegetation screening potential views of the facility. The Department finds that even in the absence of vegetative screening, the visibility of facility components would be limited by distance effects from viewing the facility from 9.1 miles away. In addition, the applicant states that the viewed landscape looking from the Sandy River Scenic Waterway to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from the Sandy River Scenic Waterway. The Department recommends that the Council find that visual impacts from proposed facility structures and plumes to Sandy River Scenic Waterway are not likely to occur due to the presence of screening vegetation and limited visibility of the facility site from a distance of 9.1 miles. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude impacts from proposed facility structures and plumes to Sandy River Scenic Waterway from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in significant adverse impact to Sandy River Scenic Waterway.

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285 Final ASC, Section L.3, Table L-1, pp. L-2 and L-3.
Bridal Veil Falls State Park, located approximately 9.9 miles east of the proposed facility site at its closest point, is defined as a protected area pursuant to OAR 345-022-0040(1)(h), which includes state parks and waysides listed by the Oregon Department of Parks and Recreation.\(^{288}\)

The applicant provides photos taken from within the park, showing dense deciduous and evergreen vegetation screening potential views of the facility.\(^{289}\) The applicant also provides a photo showing a clear, unobstructed line of sight towards the facility site from the Overlook Trail viewpoint in the park. This photo also shows mitigating effects of distance from viewing the proposed facility site from 9.9 miles away, as existing large industrial features near the facility, such as the plume produced by the Georgia-Pacific paper mill and transmission line structures are not discernible.\(^{290}\)

In addition, the applicant states that even in the absence of vegetative screening, the viewed landscape looking from the park to the proposed facility site would include I-84, a large-scale developed element which runs adjacent to the park and would likely occupy the foreground of views toward the proposed facility site.\(^{291}\) The Department has reviewed aerial photos of the vicinity to verify the applicant’s assertion that the existing interstate freeway would encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the park. The Department recommends that the Council find that impacts from proposed facility structures or plumes to Bridal Veil Falls State Park are not likely to occur due to the presence of screening vegetation and limited visibility of the facility site from a distance of 9.9 miles. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing I-84 freeway within the viewed landscape would preclude impacts from proposed facility structures and plumes to Bridal Veil Falls State Park from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in significant adverse impact to Bridal Veil Falls State Park.

1) Shepperd’s Dell State Natural Area, 10.1 miles

2) Dalton Point Recreation Site, 10.5 miles

3) Clackamas, Brodie State Scenic Waterway, 11.8 miles

\(^{288}\) Final ASC, Section L.3, Table L-1, pp. L-2 and L-3.


4) Sandy Fish Hatchery, 12.0 miles
5) Benson State Recreation Area, 12.3 miles
6) Bonnie Lure State Recreation Area, 13.7 miles
7) Franz Lake National Wildlife Refuge, 13.9 miles
8) Tryon Creek State Natural Area, 14.0 miles
9) Oswego Creek Outlet Access, Willamette River Greenway, 15.0 miles
10) Mary S. Young State Recreation Area, 15.1 miles
11) Oregon Parks and Recreation Department (OPRD)-W07, Willamette River Greenway, 15.1 miles
12) Willamette Stone State Heritage Site, 15.4 miles
13) Ainsworth State Park, 16.2 miles
14) Milo McIver State Park, 16.3 miles
15) McLoughlin State Natural Area, 17.5 miles
16) Clackamas Fish Hatchery, 17.8 miles
17) Pierce National Wildlife Refuge, 18.6 miles
18) John B. Yeon State Scenic Corridor, 18.8 miles
19) Rock Island Landing, Willamette River Greenway, 19.5 miles

The list above includes the approximate distance from the proposed facility site to each Protected Area at its closest point, as provided by the applicant in Table L-1 of the application. The Department finds that, based on distance alone, the proposed facility would not likely be visible from these 19 Protected Areas. In addition, the applicant provides photos of each Protected Area showing topographic barriers and dense deciduous and evergreen vegetation screening potential views of the facility.\(^\text{292}\) As the applicant also explains, the viewed landscape looking from each of the 19 Protected Areas to the proposed facility site would include many

other examples of large scale urban and industrial development, including the Troutdale-
Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the
Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission
line.293

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the
applicant’s assertion that existing industrial uses encroach on the landscape that would be
viewed in the absence of vegetation toward the direction of the facility site from each of the 19
Protected Areas. The Department recommends that the Council find that visual impacts from
proposed facility structures and plumes to each of the 19 Protected Areas listed above are not
likely to occur due to the presence of screening vegetation and limited visibility of the facility
site from various distances ranging from 10.1 miles to 19.5 miles. Additionally, the Department
recommends that the Council find that, even in the absence of screening vegetation, the
existing industrial features within the viewed landscape would likely preclude impacts from
proposed facility structures and plumes to the 19 Protected Areas listed above from meeting
the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that
the design, construction and operation of the facility are not likely to result in significant
adverse impacts to the 19 Protected Areas listed below. Based on the evidence in the record,
the Department recommends that the Council find that visual impacts of facility structures or
plumes resulting from construction and operation of the facility are unlikely to result in a
significant adverse impact to protected areas.

IV.F.2. Protected Areas: Conclusions of Law

Based on these proposed findings and conclusions, the Department recommends that the
Council conclude that, taking into account mitigation, the design, construction and operation of
the facility are not likely to result in significant adverse impact to any designated protected
area, in compliance with the Protected Areas Standard.

IV.G. Retirement and Financial Assurance [OAR 345-022-0050]

To issue a site certificate, the Council must find that:

(1) The site, taking into account mitigation, can be restored adequately to a useful, non-
hazardous condition following permanent cessation of construction or operation of the
facility.

(2) The applicant has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.


The applicant provides information regarding the Council’s Retirement and Financial Assurance standard in Exhibits M and W of the ASC.

IV.G.1.a: Restoration of the Site Following Cessation of Construction or Operations

To issue a site certificate, the Council must find that the facility site can be restored to a useful, non-hazardous condition following permanent cessation of construction or operations. The applicant estimates that the proposed facility will have a useful life of approximately 30 years.294

With the exception of an approximately 1,680 foot portion of one of the proposed transmission line routes, the proposed facility is located on land within the city limits of the City of Troutdale and designated as Industrial in the Troutdale Comprehensive Land Use Plan. The Comprehensive Plan states that the Industrial designation “provides for industrial parks, light industrial, and general industrial activities.”295 A 1,680 foot portion of one transmission line route is located within the City of Fairview and crosses through land designated as Industrial in the City of Fairview Final Comprehensive Plan.296 In 2007, the Port of Portland purchased the site for development as an industrial park.297

In accordance with the site’s industrial designation, Exhibit W explains that restoring the site to a useful, non-hazardous condition upon retirement would involve equipment removal, demolition and removal of Facility buildings and structures, removal of onsite underground piping and wiring, removal of the 230-kV transmission line, removal, or abandonment in place of underground utility lines, and re-grading the surface soil.298 Demolition waste material would be transported for disposal at authorized sites. Related or supporting pipelines for gas, water, and wastewater could be left in place to serve future industrial uses, consistent with the site’s industrial designation. Alternatively, the Council may adopt a retirement plan that calls for these facilities to be removed along with other structures and equipment on the site.

To estimate the applicable site restoration cost, the applicant used the Oregon Department of Energy Site Restoration Cost Estimating Guide, January 2011 version. The applicant estimated

294 Final ASC, Section W.2, p. W-1.
295 City of Troutdale, Troutdale Comprehensive Land Use Plan, as Amended through July 2011, p. 13.
296 City of Fairview, City of Fairview Final Comprehensive Plan, June 2004, Figure 3-A.
that site restoration would cost approximately $6.88 million in 1st Quarter 2012 dollars. Exhibit W explains that the applicant based this estimate on the dismantling and removal of most equipment and structures of the proposed facility. The following table summarizes the applicant’s estimate of the retirement cost for the proposed facility.

Table 6: Applicant’s Site Restoration Cost Estimate

<table>
<thead>
<tr>
<th>Cost Estimate Component</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Concrete Wrecking</strong></td>
<td></td>
</tr>
<tr>
<td>Remove reinforced and non-reinforced concrete</td>
<td>$31,057</td>
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<tr>
<td><strong>Building Wrecking</strong></td>
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<tr>
<td>Dismantle administration, water treatment, turbine, and boiler feed buildings</td>
<td>$278,688</td>
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<tr>
<td><strong>Steel Wrecking</strong></td>
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<tr>
<td>Dismantle superstructure, miscellaneous metals, soft interior, and sort/clean</td>
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<tr>
<td><strong>Thermal Protection/Liner Wrecking</strong></td>
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</tr>
<tr>
<td>Remove pond liners and insulation</td>
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<tr>
<td><strong>Equipment Wrecking</strong></td>
<td></td>
</tr>
<tr>
<td>Dismantle combustion turbines, coolers, heaters, HRSG, stacks, steam turbine, pumps, compressors, tanks, and catalyst</td>
<td>$230,527</td>
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<tr>
<td><strong>Mechanical Wrecking</strong></td>
<td></td>
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<tr>
<td>Dismantle cooling water, gas, steam, raw water, and fresh water piping</td>
<td>$147,360</td>
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<tr>
<td><strong>Electrical Wrecking</strong></td>
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<tr>
<td>Dismantle transformers, Motor Control Center (MCC), wiring, switch yard, towers, and transmission line wiring</td>
<td>$134,330</td>
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<tr>
<td><strong>Load and Haul</strong></td>
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<tr>
<td>Load, haul, and disposal of debris and scrap steel</td>
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<tr>
<td><strong>Site Construction</strong></td>
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<tr>
<td>Utility disconnects, preliminary work, and site grading</td>
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<tr>
<td><strong>General Costs</strong></td>
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<td>Permits, mobilization, engineering, overhead, hazardous material inspections, and site protection</td>
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<tr>
<td>Overhead</td>
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<td><strong>Subtotal</strong></td>
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<td>Subcontract Work</td>
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299 Final ASC, Section W.4, p. W-2.
300 Final ASC, Attachment W-1.
Applicant’s Site Restoration Cost Estimate

<table>
<thead>
<tr>
<th>Cost Estimate Component</th>
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<tr>
<td>Gross Cost (Adjusted)</td>
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<tr>
<td>Administration and Project Management</td>
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<td>$490,580</td>
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<tr>
<td>Future Developments Contingency</td>
<td>20%</td>
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<td>$981,159</td>
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<tr>
<td>Hazardous Materials Management Contingency</td>
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<tr>
<td>$500,000</td>
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<tr>
<td>Total Site Restoration Cost (current dollars)</td>
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</tr>
<tr>
<td>$6,877,536</td>
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</tr>
<tr>
<td>Total Site Restoration Cost (rounded to nearest $1,000)</td>
<td>$6,878,000</td>
</tr>
</tbody>
</table>

Exhibit W states that the applicant used the procedures in the ODOE Site Restoration Cost Estimating Guide and accepted 2012 unit rates to establish the estimated total site restoration cost. Because the applicant estimates a thirty-year life of the facility, estimated costs include a contingency amount of 20 percent to account for uncertainty that could affect the decommissioning cost estimate during its operational life (Future Developments Contingency). Exhibit G further explains that the estimate also includes a 10 percent contingency for administrative and management expenses (Contract Administration Contingency), which represents the anticipated direct costs borne by the State in the course of managing site restoration. The applicant states this would include the preparation and approval of a final retirement plan, obtaining legal permission to proceed with the demolition of the facility, legal expenses for protecting the State’s interests before the bankruptcy court, preparing specifications, bid documents and contracts for demolition work, managing the bidding process, the negotiation of contracts, and other tasks.

The Department has reviewed the estimate and confirmed the rates and procedures assume a conservative site restoration cost estimate based on the range of design choices available for the facility as proposed in the Application for Site Certificate. The description of various features of the facility in Exhibit B indicates that several preliminary design decisions have yet to be finalized, including geotechnical design and selection of a route for the 230-kV transmission line that would connect the facility to an existing substation. The Department recognizes that the applicant may need to make minor adjustments to design prior to construction of the facility, and that these changes may result in changes to the estimated cost of restoring the facility site. As a result, the Department recommends that the mandatory condition requiring the applicant to provide a bond or letter of credit for restoration of the facility site also include a provision allowing the certificate holder to adjust the amount of the bond or letter of credit, subject to approval by the Department, prior to beginning construction of the facility.

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301 Final ASC, Section W.4, p. W-2.
302 Final ASC, Section W.4, p. W-3.
303 Final ASC, Section B.2.3.2, p. B-7.
For the reasons discussed above, the Department recommends that the Council find that the applicant’s cost estimate of $6,878,000 demonstrates a reasonable estimate of an amount satisfactory to restore the site to a useful, non-hazardous condition.

Under OAR 345-027-0020, the Council must adopt certain conditions in every site certificate. Five of these mandatory conditions implement the requirements in the Retirement and Financial Assurance standard that relate to the decommissioning of the facility and restoration of the facility site. The following mandatory conditions are required pursuant to OAR 345-027-0020:

**Condition G.1:** The certificate holder shall prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder.

**Condition G.2:** The certificate holder shall retire the facility if the certificate holder permanently ceases construction or operation of the facility. The certificate holder shall retire the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110. The certificate holder shall pay the actual cost to restore the site to a useful, non-hazardous condition at the time of retirement, notwithstanding the Council’s approval in the site certificate of an estimated amount required to restore the site.

**Condition G.3:** The certificate holder is obligated to retire the facility upon permanent cessation of construction or operation. If the Council finds that the certificate holder has permanently ceased construction or operation of the Facility without retiring the Facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council shall notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to ODOE within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct ODOE to prepare a proposed final retirement plan for the Council’s approval.

**Condition G.4:** Before beginning construction of the facility, the certificate holder shall submit to the State of Oregon through the Council a bond or letter of credit naming the State, acting by and through the Council, as beneficiary or payee. The initial bond or letter of credit amount for the facility is $6,878,000, to be adjusted to the date of issuance, and adjusted on an annual basis thereafter, as described in sub-paragraph (a) of this condition.

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305 Mandatory site certificate condition at OAR 345-027-0020(7).
306 Mandatory site certificate condition at OAR 345-027-0020(9).
307 Mandatory site certificate condition at OAR 345-027-0020(16).
(a) The certificate holder may adjust the amount of the bond or letter of credit based on the final design configuration of the facility. Any revision to the restoration costs should be adjusted to the date of issuance as described in (b), and is subject to review and approval by the Department.

(b) The certificate holder shall adjust the amount of the bond or letter of credit, using the following calculation and subject to approval by the Department:

   (i) Adjust the amount of the bond or letter of credit amount (expressed in first Quarter 2012 dollars) to present value, using the U.S. Gross Domestic Product Implicit Price Deflator, Chain-Weight, as published in the Oregon Department of Administrative Services’ “Oregon Economic and Revenue Forecast” or by any successor agency (the “Index”) and using the first Quarter 2012 index value and the quarterly index value for the date of issuance of the new bond or letter of credit. If at any time the Index is no longer published, the Council shall select a comparable calculation to adjust first Quarter 2012 dollars to present value.

   (ii) Round the resulting total to the nearest $1,000 to determine the financial assurance amount.

(c) The certificate holder shall use a form of bond or letter of credit approved by the Council.

(d) The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.

(e) The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council under OAR 345-026-0080. The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.

**Condition G.5:** Upon the Council’s approval of the final retirement plan described in Condition G.3, the Council may draw on the bond or letter of credit submitted per the requirements of Condition G.4 to restore the site to a useful, non-hazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder shall pay any additional cost necessary to restore the site to a useful, non-hazardous condition. After completion of site restoration, the Council shall issue an order to terminate the site.

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308 Mandatory site certificate condition at OAR 345-027-0020(8).
Troutdale Energy Center
Proposed Order

For the reasons discussed above, and subject to compliance with the recommended and mandatory conditions of approval, the Department recommends that the Council find restoration of the site to a useful, non-hazardous condition could be achieved.

IV.G.1.b: Applicant’s Likelihood of Obtaining a Bond or Letter of Credit

To issue a site certificate, the Council must find that the applicant has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition. The applicant provides information about its financial capability in Exhibit M. The applicant proposes to provide a financial assurance bond or letter of credit in a form approved by the Council before beginning construction of the facility. The applicant provides a letter from Citibank, N.A. in Exhibit M of the ASC, stating that United States Power Fund III, L.P., which owns the applicant through its ownership of Development Partners Funding I, LLC, has sufficient capacity to obtain a letter of credit for $7 million. The letter describes a “reasonable likelihood” that Citibank would provide a letter of credit for the proposed facility.\(^{310}\)

Although the letter from Citibank specifically addresses the applicant’s likelihood of obtaining a letter of credit, the applicant may ultimately elect to provide a performance bond to meet financial assurance requirements. A performance bond may contain provisions allowing the surety to complete construction of a project in order to reduce the surety’s potential liability. In order to ensure that any surety providing financial assurance for retirement and restoration of the site has agreed to comply with all applicable statutes, Council rules, and site certificate condition, the Department recommends that the Council adopt the following condition:

**Condition G.6:** If the certificate holder elects to use a bond to meet the requirements of Condition G.4, the certificate holder must ensure that the surety is obligated to comply with the requirements of applicable statutes, Council rules and this site certificate when the surety exercises any legal or contractual right it may have to assume construction, operation or retirement of the energy Facility. The certificate holder shall also ensure that the surety is obligated to notify the Council that it is exercising such rights and to obtain any Council approvals required by applicable statutes, Council rules, and this site certificate before the surety commences any activity to complete construction, operate, or retire the energy facility.

For the reasons discussed above, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the applicant has

\(^{309}\) Mandatory site certificate condition at OAR 345-027-0020(16).

\(^{310}\) Final ASC, Attachment M-2.
demonstrated a reasonable likelihood of obtaining a bond or letter of credit in a form and amount that is satisfactory to Council.

IV.G.2. Retirement and Financial Assurance: Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the proposed facility complies with the Council’s Siting Standards for Retirement and Financial Assurance.

IV.H. Fish and Wildlife Habitat [OAR 345-022-0060]

To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025 in effect as of September 1, 2000.

IV.H.1. Fish and Wildlife Habitat: Findings of Fact

In OAR 635-415-0025, ODFW defines six categories of habitat in order of value to wildlife. The rule establishes mitigation goals and corresponding implementation standards for each habitat category. The applicant addresses the Council’s Fish and Wildlife Habitat standard in Exhibit P of the ASC, which includes the Troutdale Energy Center Wildlife and Habitat Monitoring and Mitigation Plan (WHMMP) as Attachment P-3. The applicant also relies on ASC Exhibit D to provide additional evidence of the applicant’s ability to meet mitigation compliance requirements. In addition, the applicant submitted additional analysis that the Department identified as needed pursuant to OAR 345-015-0190(9).

The Project Order for Troutdale Energy Center identifies the analysis area for fish and wildlife habitat disturbance as the area within the site boundary and the area within 0.5 mile of urban areas (generally to the west and south of the site boundary) and within 1 mile of non-urban areas (generally to the north and east of the site boundary). The following sections describe the habitat categories that occur within the analysis area for the proposed Facility (IV.H.1.a); the potential types of impacts to fish and wildlife habitat from design, construction, and operation of the Facility (IV.H.1.b); and the application of these potential impacts to specific

311 ODFW rules define habitat under two broad classifications: “essential” and “important.” OAR 635-415-0005 defines “essential habitat” as “any habitat condition or set of habitat conditions which, if diminished in quality or quantity, would result in depletion of a fish or wildlife species.” The rule defines “important habitat” as “any habitat recognized as a contributor to sustaining fish and wildlife populations on a physiographic province basis over time.”

312 The Applicant also included the Spring 2012 Wildlife Surveys Technical Memorandum as Attachment P-2 to Exhibit P.


habitat within the analysis area, monitoring and mitigation plans proposed by the applicant, and consistency with ODFW goals and standards (IV.H.1.c).

**IV.H.1.a: Habitat Categories within the Analysis Area**

Exhibit H of the Application for Site Certificate explains that to identify the habitat characteristics of the proposed Facility site, the applicant used aerial photos and conducted habitat surveys on January 5 and 6, 2012, to classify the type and quality of habitat. The applicant adapted habitat types from descriptions provided in *Wildlife-Habitat Relationships in Oregon and Washington* (Johnson and O'Neil, 2001; the Northwest Habitat Institute, 2011) and in comments from ODFW.\(^{315}\)

Exhibit P explains that a majority of the land within the site boundary (57.9 acres) consists of Category 3 and 4 Grassland habitat. Other predominant habitat types within the site boundary include Category 2 Westside Riparian (11.6 acres), Category 2 Forested Wetland (4.6 acres), and Category 6 Urban and Mixed Environments (4.0 acres), among others.\(^{316}\) The applicant notes that Grassland habitat includes a wide range of areas found onsite, including areas dominated by non-native species.\(^{317}\) Within the analysis area, over 1,000 acres to the north and east of the facility site are classified as Category 2 Open Water, including portions of the Columbia and Sandy rivers. Large areas of Category 2 Westside Riparian habitat (849.2 acres total within the analysis area) occur along the margins of the Columbia and Sandy rivers within a matrix of forest or regenerating forest. Approximately 558.7 acres within the analysis area is designated as Category 6 Urban and Mixed Environments, which includes developed areas such as residential and industrial land uses and roadways. Isolated areas of Herbaceous and Forested Wetlands occur within the analysis area both inside and outside of the site boundary.\(^{318}\) The applicant states that no Category 1 habitat exists within the site boundary.\(^{319}\) Staff from Oregon Department of Fish and Wildlife reviewed the application for site certificate and found that Exhibit P correctly characterized habitat acreages and categories in the analysis area, subject to the submittal of corrected habitat maps in Figures P-2 and P-3.\(^{320}\) The applicant provided the corrected maps as requested on May 8, 2013.\(^{321}\)

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\(^{315}\) Final ASC, Section P.3.1.1, p. P-10.

\(^{316}\) Final ASC, Table P-3, pp. P-14 and P-15.

\(^{317}\) Final ASC, Section P.3.1.1, p. P-10. The ASC states that 85% of plants observed in a field survey of the soil-capped area of Lot 3 consist of non-native species.

\(^{318}\) Final ASC, Section P.3.1.7, p. P-13.

\(^{319}\) Final ASC, Section P.10, p. P-48.

\(^{320}\) Ruther, Elizabeth, ODFW, comment letter to Chris Green, ODOE, May 3, 2013.

\(^{321}\) Letter to from Paul Seilo, CH2M HILL, May 8, 2013 re: "Troutdale Energy Center – Updated ASC Habitat Classification Figures."
IV.H.1.b: Potential Types of Impacts and Proposed Avoidance or Minimization

The following section summarizes types of impacts that may result generally from the design, construction, and operation of the facility. Based on analysis of measures proposed in the Application for Site Certificate and comments from reviewing agencies, the Department recommends specific conditions of approval to avoid, minimize, or mitigate these potential impacts.

Impacts from Design of the Facility

In Exhibit C, the applicant states that the permanent footprint of the facility will occupy 16.5 acres of the 38.4 acres within Lot 3. The applicant uses dimensional requirements from the City of Troutdale Construction Standards for Public Works Facilities to estimate a total of 0.9 acres of permanent impacts resulting from construction of a 48-foot wide extension of NW Swigert Way. The applicant estimates that the proposed transmission line will permanently impact approximately 1,400 square feet, or less than 0.1 acres. The applicant’s proposed mitigation for land consumed by various structural footprints is discussed in section IV.H.1.c below.

The applicant states that construction of a transmission line in proposed Route 1 would result in a perpendicular crossing of Salmon Creek at approximately 85 to 95 feet. The applicant would not place monopoles in Salmon Creek, but notes that the crossing elevates the potential for collision and electrocution of resident and migratory birds, especially due to frequently foggy conditions in the vicinity of the site. The applicant proposes to minimize this risk by installing perch and nest deterrents and designing the transmission line to meet National Electrical Safety Code (NESC) 230-kV line design standards and Aviation Protection Guidelines. In order to ensure implementation of these measures, the Department recommends that the Council adopt the following conditions:

Condition H.1: The certificate holder shall construct transmission structures and space conductors to meet the Avian Protection Guidelines jointly adopted by the Aviation Power Line Interaction Committee of the Edison Electric Institute and the U.S. Fish and Wildlife Service.

322 Final ASC, Section C.3.2, pp. C-2 and C-3. The applicant’s 16.5-acre estimate of the facility footprint includes the two power blocks, gas metering station, electrical switchyard, aboveground fuel tank, warehouse/storage building, equipment building, facility controls building, and facility roads, parking areas, and other paved surfaces.
323 Final ASC, Section C.3.2, p. C-3. The 48-foot width would include two travel lanes, two curbs with gutters, one landscaping strip, and one sidewalk.
324 Final ASC, Section C.3.2, pp. C-2 and C-3. The applicant’s 1,400 square foot estimate assumes that the transmission line will consist of 29 steel monopoles with an 8-foot diameter.
Condition H.2: The certificate holder shall install perch and nest deterrents, as approved by the Oregon Department of Fish and Wildlife, on all transmission line monopoles located within one hundred feet of Salmon Creek.

Based on the evidence in the record, the Department recommends that the Council find that the design of the facility, taking into account mitigation, is consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025.

Impacts from Construction of the Facility

Construction of the proposed facility would result in temporary loss of wildlife habitat for impacted areas. The temporary use of staging areas during construction and other ground-disturbing construction activities would result in temporary disturbance, which the applicant proposes to restore to their previous condition following construction. Based on the applicant’s analysis, this temporary disturbance would affect approximately 0.6 acre of Category 2 habitat and 18.4 acres of Category 3 habitat. Temporary disturbance would also affect approximately 9.4 acres of Category 4 habitat and 1.6 acres of Category 6 habitat. Altogether, temporary construction disturbance would total 30.0 acres, which is approximately 37 percent of the overall 80.7-acre Facility site boundary.\(^{325}\)

In addition to direct habitat disturbance, construction noise levels may temporarily disrupt normal feeding, sheltering, and breeding activities for birds and other wildlife in the immediate vicinity of facility construction. The applicant explains that human presence and increased noise levels during construction of the facility may temporarily diminish the suitability of onsite habitat for foraging, nesting, feeding, sheltering, and breeding activities for birds and other wildlife. The applicant states that standard composite noise levels, from a 50 foot distance, will reach 84 to 90 dBA during construction, attenuating with greater distance. The applicant also asserts that impact of these disturbances are moderated by “a significant level of industrial noise” already occurring at the site, and a sound barrier effect from the SDIC earthen levee at the north end of the site, the Department cannot verify these statements without evidence of existing baseline conditions.\(^{326}\) The portion of the site where residual effects of construction noise could indirectly impact wildlife generally coincides with areas already identified by the applicant to be directly impacted by construction of the proposed facility, and are already considered in calculations of mitigation ratios for temporary impacts.\(^{327}\) As a result, staff recommends that the Council find that, taking into account mitigation, construction noise generated by the proposed facility and related components would not have an additional significant adverse impact on fish and wildlife habitat.

\(^{325}\) Final ASC, Tables P-3 and P-5.
\(^{326}\) Final ASC, Section P.7.2, p. P-42.
\(^{327}\) Final ASC, Figure P-5.
In Exhibit P, the applicant commits to conduct pre-construction surveys and to coordinate with ODFW regarding results of pre-construction surveys to determine adequate construction buffers, and other potential mitigation as necessary to protect identified species in the vicinity of the facility site and existing nests for special status birds.\textsuperscript{328} In order to ensure implementation of these proposed mitigation and monitoring measures, the Department recommends that the Council adopt the following condition:

**Condition H.3:** The certificate holder shall conduct pre-construction nesting surveys if construction activity occurs during the nesting season. If there is any lapse greater than one week between vegetation clearing and commencement of construction activities, the certificate holder shall repeat nest surveys. Should a listed or candidate species be identified during pre-construction surveys, the certificate holder shall notify the Department, the Oregon Department of Fish and Wildlife, and the U.S. Fish and Wildlife Service to identify appropriate avoidance or mitigation measures prior to beginning construction.

The Department recommends that the Council adopt the following conditions to implement monitoring measures proposed by Oregon Department of Fish and Wildlife:\textsuperscript{329}

**Condition H.4:** The certificate holder shall provide the Department and the Oregon Department of Fish and Wildlife with a written summary of all results of biological pre-construction surveys, including nest surveys, streaked horned lark surveys, yellow breasted chat surveys, and little willow flycatcher surveys within 10 days of survey completion.

**Condition H.5:** The certificate holder shall obtain approval from Oregon Department of Fish and Wildlife (ODFW) for salvage of herpetofauna and provide ODFW with a summary report for Wildlife Salvage Authorization within 30 days of facility operation.

The applicant proposes to remove approximately 43 black cottonwood trees during construction on Lot 3. The applicant commits to preserve over 470 existing trees on Lot 3 with diameters at breast height greater than six inches, including all oak trees. The applicant does not propose to remove any trees on Lot 6. In Exhibit P, the applicant proposes to plant 43 native trees on Lot 3 to affect a result of no net loss of trees on that portion of the site.\textsuperscript{330} However, the applicant later provided the Department with a copy of the *Troutdale Reynolds Industrial Park Development Standards*, which includes a list of trees adopted by the Port of Portland for use in the Troutdale Reynolds Industrial Park. The Port developed this list in part to allow for planting of trees that did not attract birds and other wildlife into areas with a high risk of collision with planes using the nearby Troutdale Airport. The applicant clarified that it would

\textsuperscript{328} Final ASC, Section P.7.2, p. P-42.
\textsuperscript{329} Agency comment letter from Elizabeth Ruther, ODFW, May 3, 2013.
\textsuperscript{330} Final ASC, Section P.7.1.4, p. P-39.
plant 43 trees onsite, but primarily non-native species as authorized by the Port’s tree list.\textsuperscript{331} The Department finds that the substitution of native species with Port-approved tree species does not affect the applicant’s ability to comply with the Fish and Wildlife Habitat standard, and recommends that the Council adopt the following condition:

**Condition H.6:** Prior to beginning operation of the facility, the certificate holder shall plant at least 43 trees on Lot 3 in accordance with the Port of Portland approved plant list and the Troutdale Development Code.

Additionally, in order to avoid temporary loss of habitat quality for special status birds during construction activity, the Department recommends that the Council adopt the following condition:

**Condition H.7:** The certificate holder shall only remove shrubs and trees outside of nesting season. If nesting season cannot be avoided, in addition to the pre-construction nesting surveys, in advance of nesting season, the certificate holder shall place reflective flagging and other deterrents in those trees and shrubs that will be removed.

The applicant states that the vast majority of construction work on the Facility would take place during daylight hours, and some night construction (typically during the 3:00 pm to 11:00 pm “second shift” timeframe) would occur on a limited basis, within the 6 to 12 month period of peak construction, with a smaller workforce than daytime construction. The applicant explains that certain construction tasks, such as delivery of oversized equipment loads or continuous concrete pours may necessitate night work, or work on a 24-hour basis over a limited period of time. The applicant states that in these situations, some night lighting must be provided in order to provide safe working conditions, and this lighting could affect nocturnal wildlife by increasing light levels in adjacent habitat.\textsuperscript{332} In Exhibit P, the applicant commits to shield construction lighting, and to limit the amount of light directed off of Lot 3 by directing lighting to stairways, equipment platforms, and machinery in accordance with the maximum light level standard contained in Troutdale Development Code Section 9.090.\textsuperscript{333} In response to the DPO, comments from City of Troutdale state that TDC Section 9.090 does not specify a maximum lighting level, but does require shielding of outdoor permanent lighting fixtures. The City of Troutdale proposes a revised Condition H.8, which deletes reference to a specific maximum lighting level to accurately reflect the requirements of TDC Section 9.090.\textsuperscript{334} In order to ensure that lighting during construction does not have a significant indirect impact on habitat in the analysis area, the Department recommends that the Council adopt the following condition, based on proposed revisions by the City of Troutdale:

\textsuperscript{331} Email from Jeremy Sande, CH2M HILL, June 20, 2013.
\textsuperscript{332} Final ASC, Section P.7.2, pp. P-43 and P-44.
\textsuperscript{333} Final ASC, Section P.8.1.4, p. P-46.
\textsuperscript{334} DPO comment from Elizabeth McCallum, Senior Planner, City of Troutdale, September 23, 2013.
**Condition H.8:** Nighttime lighting used during construction shall be shielded and directed to stairways, equipment platforms, and machinery in order to limit the amount of light directed off of Lot 3. Permanent outdoor lighting fixtures shall be shielded by design or external application so that light is directed downward and limits direct line-of-sight of the fixture’s lamp to the property upon which the fixture is located.

The facility site is the location of a former aluminum reduction plant owned and operated by Reynolds Metals Company and then Alcoa Inc. In 1994, the site was listed by the U.S. Environmental Protection Agency (EPA) as a Superfund site. The EPA issued its Record of Decision in September 2006 indicating that the level of clean-up within the facility site rendered the site suitable for industrial use, but not for residential or commercial use. The applicant explains that because the site is a remediated brownfield, there is the potential for wildlife exposure to contaminants, including the fluoride-contaminated groundwater plume during ground-disturbing activities. Recommended Conditions D.1 through D.4, discussed under Soil Protection in section IV.D of this report, would require the applicant to adopt best management practices and other preventative measures to limit fugitive dust and other sources of erosion. The Department recommends that the Council find that Conditions D.1 through D.4 are sufficient to prevent wildlife exposure to contaminants during ground-disturbing activities.

The applicant has designated Lot 6, a portion of TRIP immediately south of Lot 3, for temporary construction laydown, stockpiling, and staging for construction of the facility. The applicant estimates that these activities will temporarily disturb approximately 17.9 acres of the 20.3-acre Lot 6 during construction of the facility. The applicant prepared this estimate based on the assumption that “all portions of Lot 6 will be disturbed with the exception of areas designated as Upland Deciduous Woodland (UDW 4).” The applicant estimates that construction of the facility will result in an additional 5.6 acres of temporary disturbance on Lot 3. The applicant estimates that construction of the transmission line will result in temporary disturbances to between 2.7 and 5.3 acres, depending on the route selected.

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336 Final ASC, Section P.72, p. P-42 and Final ASC, Attachment I-2, Figures 4-7.
337 Final ASC, Section P.7.2.4, p. P-44.
338 Final ASC, Section C.3.2, p. C-3. See Table C-1, note ‘f.’ On May 8, 2013, the applicant submitted corrections to habitat categories on several maps in Exhibit P where categorization updates had not been reflected in the ASC. The description of Upland Deciduous Woodland (UDW 4) habitat on Lot 6 in Table C-1 appears to reflect earlier categorizations as well. Exhibit C should instead show UDW 4 habitat on Lot 6 as Westside Riparian Habitat, consistent with the May 8, 2013 corrections to Exhibit P.
339 CH2M HILL, “Troutdale Energy Center: Supplemental Transmission Line Analysis,” June 26, 2013, Table C-1. The applicant’s consultant explains that temporary disturbance estimates for transmission lines assume a “20-foot construction access way along the centerline of the transmission line easement, a 25-foot-by-25-foot laydown/staging area at each pole location, and an approximately 80-foot-by-80-foot pulling at tensioning area at each point of intersection (that is, the angle point.)”
The applicant describes two proposed underground process water lines running within a 20-foot-wide easement between the main Facility on Lot 3 and the City of Troutdale Water Pollution Control Facility, located approximately 0.3 miles to the southeast. The applicant states that the easement would encompass 0.8 acres. The applicant states that construction of the water lines would result in temporary impacts from noise, dust, visible human activity, and soil disturbance within the easement. The applicant indicates that construction of the process water lines will result in “minor temporary disturbances” from activity below the bed of Ditch 2. Although Ditch 2 is classified as Category 4 Open Water, the applicant states that the construction will not affect waters of the state or U.S.

The applicant states that construction of improvements to NW Swigert Way to allow access to Lot 3 would result in temporary disturbances to Category 3 and Category 4 Grassland habitat from “noise, visible human activity, dust, and soil disturbance.” Exhibit C of the ASC estimates that NW Swigert Way improvements would result in a total of 0.4 acres of temporary disturbance, between the edges of the proposed roadway and the boundaries of Lots 3 and 6. In order to ensure that the applicant restores temporarily disturbed areas at the completion of construction, the Department recommends that the Council adopt the following condition:

**Condition H.9:** Prior to beginning construction, the certificate holder shall submit to the Department a Revegetation Plan to offset temporary construction-related impacts within the facility site boundary. The plan shall be subject to approval of the Department, based on recommendations from the Oregon Department of Fish and Wildlife. The plan shall include the minimization measures described in Section 2.1 of the *Wildlife and Habitat Monitoring and Mitigation Plan for the Troutdale Energy Center*. The certificate holder shall restore all temporarily disturbed Category 3 and Category 4 Grassland habitat on site according to the Revegetation Plan.

**Impacts from Operation of the Facility**

The applicant explains that operation of the natural gas generating facility will add to existing noise levels in the vicinity of Lot 3. Increased levels of noise can potentially discourage wildlife from using the land immediately surrounding the facility and may prevent use of an area that is otherwise appropriate for foraging or nesting. The facility’s gas compressors and cooling towers are anticipated to be among the most substantial noise generating equipment, and anticipated project steady-state sound levels are approximately 65 dBA at 400 feet from major
Lot 3, where the applicant proposes to locate the majority of noise generating equipment, is located within a partially-developed industrial park, and current sources of industrial noise exist in the vicinity of the site. Given this information, Oregon Department of Fish and Wildlife has not been able to determine with certainty if residual displacement effects would likely occur. The applicant has acknowledged that the development of the facility will likely result in year-round loss of some uses of the habitat within a portion of the project boundary, and has committed to providing mitigation for permanent disturbances consistent with ODFW habitat mitigation goals. The portion of the site where residual effects of operational noise could indirectly impact wildlife generally coincides with areas already determined to be directly impacted by the proposed facility. As a result, staff recommends that the Council find that, taking into account mitigation, operational noise generated by the proposed facility and related components would not have an additional significant adverse impact on fish and wildlife habitat that would not already be addressed with mitigation.

The applicant explains that, separate from noise, night lighting can potentially disturb wildlife (for example, nesting birds, foraging mammals, bats, and flying insects). The applicant summarizes documentation that night lighting attracts migratory birds in some instances, and collisions may occur if the lights are on tall buildings or stacks. Although the adjacent Federal Express distribution facility and nearby water treatment facility maintain night lighting, the proposed facility footprint on Lot 3 is currently dark at night. In Figures K-5 and K-6 of the Application for Site Certificate, the applicant proposes a lighting plan “designed to include the minimum amount of lighting necessary to satisfy essential safety and security needs of the Facility.” In Exhibit P, the applicant commits to shield lighting, and to limit the amount of light directed off of Lot 3 by directing lighting to stairways, equipment platforms, and machinery in accordance with the maximum light level standard contained in Troutdale Development Code Section 9.090. In order to ensure that lighting during operation of the facility does not have a significant indirect impact on habitat in the analysis area, the Department recommends that the Council adopt the following condition:

**Condition H.10:** The certificate holder shall install facility lighting consistent with a lighting plan approved by the City of Troutdale and the Department. Operational lighting shall comply with the maximum light level standard contained in Troutdale Development Code Section 9.090. Nighttime lighting shall be shielded and directed to stairways, equipment platforms, and machinery in order to limit the amount of light directed off of Lot 3.

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345 Final ASC, Section P.7.1.4, p. P-39.
348 Final ASC, Section P.7.1.4, p. P-41.
349 Final ASC, Section P.8.1.4, p. P-46.
350 Final ASC, Section P.8.1.4, p. P-46.
The applicant proposes to dispose of the facility’s process water through evaporation or by treating, cooling, and sending it offsite through a new wastewater pipe for release into the Sandy River via the City of Troutdale’s existing outfall associated with its Water Pollution Control Facility. The applicant does not propose to construct any new outfall or other facilities in the river, or to undertake any activities in, on, or adjacent to the river. The applicant explains that the facility would draw intake water from an uncontaminated deep aquifer and from secondarily-treated wastewater, and that the facility’s process use would not add any significant substance to that water prior to discharge other than heat.

The applicant describes numeric and “narrative” water quality standards established by the Oregon Environmental Quality Commission (EQC) for the protection of fish and wildlife in the Sandy River at OAR Chapter 340, Division 41. These water quality standards must protect “designated uses” for the lower portion of the Sandy River, including year-round “Salmon & Trout Rearing & Migration” and “Salmon and Steelhead Spawning Use” from October 15 through June 15.

The applicant summarizes modeling results submitted in Section 5 of the Technical Evaluation Report contained in the National Pollutant Discharge Elimination System (NPDES) permit application included as Attachment V-1 to the Application for Site Certificate. The applicant proposes to limit discharge temperatures to meet Total Maximum Daily Load requirements of 20.0°C during the summer and to limit discharge temperatures to 22.5°C during the remainder of the year, expressed as 7-day moving averages of daily maximum temperatures. The applicant’s summary of temperature modeling indicates that the combined discharges of the facility and the City of Troutdale’s wastewater treatment plant will not cause the river temperature to exceed the applicable temperature criterion outside the City of Troutdale’s existing mixing zone in the river. The applicant’s proposed 20.0°C and 22.5°C discharge temperatures would also meet “thermal plume” standards at OAR 340-041-0053(2)(d) that the EQC adopted to prevent adverse effects on fish in the mixing zone.

IV.H.1.c: Impacts to Specific Habitat and Proposed Mitigation

The following sections discuss anticipated impacts to specific categories of fish and wildlife habitat from the design, construction, and operation of the facility. The applicant included a Wildlife Habitat Monitoring and Mitigation Plan (WHMMP) as attachment P-3 to the Application for Site Certificate. The WHMMP describes proposed restoration and enhancement of an off-site conservation area on a parcel in the Sandy River Delta. Oregon Department of Fish and Wildlife staff reviewed the WHMMP as part of the Application for Site Certificate and

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351 Final ASC, Section P.3.2, p. P-17.
commented that the “proposed mitigation appears to meet or exceed recommended habitat impacts per ODFW's Fish and Wildlife Habitat Mitigation Policy (OAR 635-415-0000 through 0025).”\(^{356}\)

**Category 1 habitat**

Habitat Category 1 is “irreplaceable, essential habitat for a fish or wildlife species, population, or a unique assemblage of species and is limited on either a physiographic province or site-specific basis, depending on the individual species, population or unique assemblage.” The mitigation goal for Category 1 habitat is no loss of either habitat quantity or quality.\(^{357}\) This goal requires avoiding disturbance.

As described in section IV.H.1.a, neither the applicant’s and reviewing agencies’ surveys have indicated the presence of any Category 1 habitat within the analysis area. Therefore, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are consistent with the fish and wildlife habitat mitigation goals and standards for Category 1 habitat in effect as of September 1, 2000.\(^{358}\)

**Category 2 habitat**

Habitat Category 2 is “essential habitat for a fish or wildlife species, population, or unique assemblage of species and is limited either on a physiographic province or site-specific basis depending on the individual species, population or unique assemblage.” If disturbance is unavoidable, the mitigation goal for Category 2 habitat is no net loss of either habitat quantity or quality and provision of a net benefit of habitat quantity or quality. To achieve this goal, disturbance must be avoided or unavoidable disturbance must be mitigated through “reliable in-kind, in-proximity” habitat mitigation to achieve no net loss of either pre-development habitat quantity or quality.\(^{359}\) In addition, a net benefit of habitat quantity or quality must be provided.

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\(^{356}\) Ruther, Elizabeth, ODFW, letter to Chris Green, May 3, 2013.

\(^{357}\) OAR 635-415-0005 defines “in-kind habitat mitigation” as habitat mitigation measures that “recreate similar habitat structure and function to that existing prior to the development action.”

\(^{358}\) OAR 635-415-0025(1).

\(^{359}\) OAR 635-415-0005 defines “in-kind habitat mitigation” as habitat mitigation measures that “recreate similar habitat structure and function to that existing prior to the development action.” OAR 635-415-0005 defines “in-proximity habitat mitigation” as follows: “habitat mitigation measures undertaken within or in proximity to areas affected by a development action. For the purposes of this policy, ‘in proximity to’ means within the same home range, or watershed (depending on the species or population being considered) whichever will have the highest likelihood of benefiting fish and wildlife populations directly affected by the development.” OAR 635-415-0005 defines “reliable method” as “a mitigation method that has been tested in areas with site factors similar to those affected by a development action and the area in which the mitigation action is being proposed and that has been found (e.g., through field trials, demonstration projects or scientific studies) to produce the habitat effects required to meet the mitigation goal for that action.”
The applicant anticipates 0.1 acres of permanent, unavoidable disturbance to Category 2 Westside Riparian habitat, near the east end of Lot 3, where the small portion of the easternmost combined cycle cooling tower encroaches on the Westside Riparian habitat associated with the adjacent wetland.\textsuperscript{360} The applicant also estimates 0.6 acres of temporary impact to Category 2 Westside Riparian habitat from noise, dust, visible human activity, and soil disturbance.\textsuperscript{361}

The applicant proposes to discharge process water from the facility into the Sandy River via an existing outfall at the Water Pollution Control Facility. As discussed above, the applicant would avoid potential disturbances to Category 2 Riverine and Category 2 Open Water habitat by discharging water in accordance with water quality standards contained in its NPDES permit. The applicant proposes to mitigate permanent impacts to Category 2 habitat offsite at a 2:1 ratio and to mitigate temporary impacts to Category 2 habitat offsite at a 0.5:1 ratio, as described in the \textit{Wildlife and Habitat Monitoring and Mitigation Plan for the Troutdale Energy Center}.\textsuperscript{362} In order to implement the applicant’s proposed mitigation and ensure compliance with fish and wildlife habitat goals for impacts to Category 2 habitat, the Department recommends that the Council adopt the following conditions:

\textbf{Condition H.11:} The certificate holder shall mitigate all permanent impacts to Category 2 fish and wildlife habitat at a 2:1 mitigation ratio at the designated offsite habitat mitigation area, in accordance with the \textit{Wildlife and Habitat Monitoring and Mitigation Plan for the Troutdale Energy Center}.

\textbf{Condition H.12:} The certificate holder shall mitigate all temporary impacts to Category 2 fish and wildlife habitat at a 0.5:1 mitigation ratio at the designated offsite habitat mitigation area, in accordance with the \textit{Wildlife and Habitat Monitoring and Mitigation Plan for the Troutdale Energy Center}.

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are consistent with the fish and wildlife habitat mitigation goals and standards for Category 2 habitat in effect as of September 1, 2000.

\textit{Category 3 Habitat}

Habitat Category 3 is “essential habitat for fish and wildlife, or important habitat for fish and wildlife that is limited either on a physiographic province or site-specific basis, depending on

\textsuperscript{360} Final ASC, Revised Figure P-2 submitted by applicant, May 8, 2013. The facility’s encroachment into the VECO zone designated by the City of Troutdale is discussed in further detail in the context of the facility’s compliance the Council’s Land Use standard in Section IV.K of this report.

\textsuperscript{361} Final ASC, Section P.7.2.5, p. P-44.

\textsuperscript{362} Final ASC, Attachment P-3, p. 4.
the individual species or population.” The mitigation goal for Category 3 habitat is no net loss of either habitat quantity or quality. The goal is achieved by avoiding disturbance or by mitigation of unavoidable disturbance through “reliable in-kind, in-proximity” habitat mitigation to achieve no net loss in either pre-development habitat quantity or quality. The applicant identifies approximately 0.6 acres of temporary impact to Category 3 Riverine habitat for temporary laydown areas near the channel associated with Salmon Creek. The applicant proposes to mitigate temporary impacts to Category 3 Riverine habitat at a 0.5:1 mitigation ratio at the designated offsite habitat mitigation area, in accordance with the WHMMP.

The applicant estimates 17.8 acres of temporary disturbance to Category 3 Grassland habitat, primarily on proposed construction staging areas on Lot 6. The applicant proposes to mitigate temporary impacts to Category 3 Grassland habitat onsite at a 1:1 mitigation ratio by regrading and reseeding impacted areas using a native seed mix. The Department recommends that the Council implement this proposed mitigation by adopting Condition H.9 as proposed in this report.

The applicant identifies approximately 5.4 acres of permanent, unavoidable impacts to Category 3 Grassland habitat, primarily on the north end of Lot 3, beneath the footprint of the generating turbines and related structures. The applicant proposes to mitigate permanent impacts to Category 3 Grassland habitat at a 1:1 mitigation ratio at the designated offsite habitat mitigation area, in accordance with the WHMMP.

In order to ensure compliance with fish and wildlife habitat goals for impacts to Category 3 habitat, the Department recommends that the Council adopt the following conditions:

**Condition H.13:** The certificate holder shall mitigate all permanent impacts to Category 3 fish and wildlife habitat at a 1:1 mitigation ratio at the designated offsite habitat mitigation area, in accordance with the *Wildlife and Habitat Monitoring and Mitigation Plan for the Troutdale Energy Center*.

**Condition H.14:** The certificate holder shall mitigate all temporary impacts to Category 3 Riverine habitat at a 0.5:1 mitigation ratio at the designated offsite habitat mitigation area, in accordance with the *Wildlife and Habitat Monitoring and Mitigation Plan for the Troutdale Energy Center*.

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363 Final ASC, Revised Figure P-2 submitted by applicant, May 8, 2013.
364 Final ASC, Attachment P-3, p. 5.
365 Final ASC, Section P.7.2.4, p. P-44.
366 Final ASC, Revised Figure P-2 submitted by applicant, May 8, 2013.
367 Final ASC, Attachment P-3, p. 5.
Based on the evidence in the record, the Department recommends that the Council find that
the design, construction and operation of the facility, taking into account mitigation, are
consistent with the fish and wildlife habitat mitigation goals and standards for Category 3
habitat in effect as of September 1, 2000.

Category 4 Habitat

Habitat Category 4 is “important habitat for fish and wildlife species.” The mitigation goal for
Category 4 habitat is no net loss in either existing habitat quantity or quality. The goal is
achieved by avoiding disturbance or by mitigation of unavoidable disturbance. In contrast to
Category 3, mitigation options for Category 4 habitat are less constrained and may involve
“reliable in-kind or out-of-kind, in-proximity or off-proximity” habitat mitigation to achieve no
net loss in either pre-development habitat quantity or quality.

The applicant identifies approximately 11.7 acres of permanent, unavoidable impacts to
Category 4 Grassland habitat, primarily on the west end of Lot 3, beneath the footprint of the
generating turbines and related structures.\footnote{Final ASC, Revised Figure P-2 submitted by applicant, May 8, 2013.} The applicant proposes to mitigate permanent
impacts to Category 4 Grassland habitat at a 1:1 mitigation ratio at the designated offsite
habitat mitigation area, in accordance with the WHMMP.\footnote{Final ASC, Attachment P-3, p. 5.}

The applicant also identifies approximately 9.2 acres of temporary disturbance to Category 4
Grassland habitat, primarily on proposed construction staging areas on Lot 6.\footnote{Final ASC, Revised Figure P-2 submitted by applicant, May 8, 2013.} The applicant proposes to mitigate temporary impacts to Category 4 Grassland habitat onsite at a 0.5:1
mitigation ratio by regrading and reseeding impacted areas using a native seed mix. The
Department recommends that the Council implement this proposed mitigation by adopting
Condition H.9 as proposed in this report.

The applicant states that construction of buried process water and wastewater lines below the
bed of an area known as Ditch 2 would cause minor temporary disturbances to approximately
0.2 acres of Category 4 Open Water. The applicant does not propose mitigation for this
disturbance, which would not impact any waters of the state or waters of the United States.\footnote{Final ASC, Section P.3.2.4, p. P-21.}

In order to ensure compliance with fish and wildlife habitat goals for impacts to Category 4
habitat, the Department recommends that the Council adopt the following conditions:

Condition H.15: The certificate holder shall mitigate all permanent impacts to Category 4
fish and wildlife habitat at a 1:1 mitigation ratio at the designated offsite habitat mitigation
area, in accordance with the *Wildlife and Habitat Monitoring and Mitigation Plan for the Troutdale Energy Center.*

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are consistent with the fish and wildlife habitat mitigation goals and standards for Category 4 habitat in effect as of September 1, 2000.

**Category 5 Habitat**

Habitat Category 5 is “habitat for fish and wildlife having high potential to become either essential or important habitat.” The mitigation goal for Category 5 habitat is to provide a “net benefit in habitat quantity or quality.” ODFW interprets the “net benefit” goal in the context of Category 5 as requiring “some improvement in habitat quantity or quality.” Under OAR 635-415-0025(5)(b), the goal is achieved by avoiding disturbance or by mitigation of unavoidable disturbance through “actions that contribute to essential or important habitat.”

As described in section IV.H.1.a, neither the applicant’s nor reviewing agencies’ surveys have indicated the presence of any Category 5 habitat within the analysis area. Therefore, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are consistent with the fish and wildlife habitat mitigation goals and standards for Category 5 habitat in effect as of September 1, 2000.\(^{372}\)

**Category 6 habitat**

Habitat Category 6 is “habitat that has low potential to become essential or important habitat for fish and wildlife.” The mitigation goal for Category 6 habitat is to minimize disturbance. The goal is achieved by actions that minimize direct habitat loss and avoid disturbance to off-site habitat.

The applicant identifies approximately 0.2 acres of permanent disturbance and 1.6 acres of temporary disturbance to Category 6 Urban and Mixed Environments habitat, primarily within the construction access corridor for the proposed transmission line.\(^{373}\) The applicant states that it has minimized direct loss of Category 6 habitat as required by the fish and wildlife habitat mitigation goal for Category 6; no mitigation is required for disturbances to Category 6 habitat.\(^{374}\)

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are consistent with the fish and wildlife habitat mitigation goals and standards for Category 6 habitat.

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\(^{372}\) OAR 635-415-0025(5).

\(^{373}\) Final ASC, Revised Figure P-2 submitted by applicant, May 8, 2013.

\(^{374}\) Final ASC, Section P.8.1, p. P-45.
consistent with the fish and wildlife habitat mitigation goals and standards for Category 6 habitat in effect as of September 1, 2000.

IV.H.2. Fish and Wildlife Habitat: Conclusions of Law

Based on the foregoing findings of facts and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the proposed facility complies with the Council’s Siting Standards for Fish and Wildlife Habitat.

IV.I. Threatened and Endangered Species [OAR 345-022-0070]

To issue a site certificate, the Council, after consultation with appropriate state agencies, must find that:

1. For plant species that the Oregon Department of Agriculture has listed as threatened or endangered under ORS 564.105(2), the design, construction and operation of the proposed facility, taking into account mitigation:
   a. Are consistent with the protection and conservation program, if any, that the Oregon Department of Agriculture has adopted under ORS 564.105(3); or
   b. If the Oregon Department of Agriculture has not adopted a protection and conservation program, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species; and

2. For wildlife species that the Oregon Fish and Wildlife Commission has listed as threatened or endangered under ORS 496.172(2), the design, construction and operation of the proposed facility, taking into account mitigation, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species.

IV.I.1. Threatened and Endangered Species: Findings of Fact

The Threatened and Endangered Species Standard requires the Council, in consultation with appropriate state agencies, to find that the construction and operation of a facility is consistent with applicable protection plans for threatened or endangered plant and animal species. The Council must also determine that the facility’s construction and operation are not likely to cause a significant reduction in a species’ survival or recovery. For the purposes of this standard, threatened and endangered species are those identified as such by either the Oregon Department of Agriculture or the Oregon Fish and Wildlife Commission. The applicant has provided information about compliance with the Council’s Threatened and Endangered Species Standard in Exhibit Q of the application.
The Project Order identifies the analysis area for threatened or endangered plant\textsuperscript{375} and wildlife\textsuperscript{376} species as the area within the site boundary and five miles from the site boundary.\textsuperscript{377} Although the analysis area includes part of the State of Washington, the Council’s standard addresses only those species listed as threatened or endangered by the responsible agencies in Oregon.\textsuperscript{378} The Council’s standard does not directly address federally-listed threatened or endangered species; however, certificate holders must comply with all applicable federal laws, including laws protecting those species.

The site boundary encompasses a total of approximately 80.7 acres located in the cities of Troutdale and Fairview, Oregon. The site is currently unused and vacant.\textsuperscript{379} The applicant’s literature reviews initially identified a total of 27 threatened, endangered, proposed, or candidate species that occur or potentially occur within the analysis area.\textsuperscript{380} Based on the presence of potentially suitable habitat, the following nine federal or Oregon State-listed, proposed, or candidate species have potential to occur in the site boundary: white rock larkspur, Willamette daisy, water howellia, Kincaid’s lupine, Columbia cress, whitetop aster, Nelson’s checker-mallow, bald eagle, and the streaked horned lark.\textsuperscript{381}

\begin{itemize}
\item ORS 564.100 defines “endangered” and “threatened” plant species as follows:
\begin{itemize}
\item “Endangered species” means:
\begin{itemize}
\item (a) Any native plant species determined by the department to be in danger of extinction throughout any significant portion of its range.
\item (b) Any native plant species listed as an endangered species pursuant to the federal Endangered Species Act of 1973 (P.L. 93-205, 16 U.S.C. 1531 et seq.), as amended.
\end{itemize}
\item “Threatened species” means:
\begin{itemize}
\item (a) Any native plant species the director determines by a finding of fact is likely to become an endangered species within the foreseeable future throughout any significant portion of its range.
\item (b) Any native plant species listed as a threatened species pursuant to the federal Endangered Species Act of 1973 (P.L. 93-205, 16 U.S.C. 1531 et seq.), as amended.
\end{itemize}
\end{itemize}
\end{itemize}

\begin{itemize}
\item ORS 496.004 defines “endangered” and “threatened” wildlife species as follows:
\begin{itemize}
\item “Endangered species” means:
\begin{itemize}
\item (a) Any native wildlife species determined by the commission to be in danger of extinction throughout any significant portion of its range within this state.
\item (b) Any native wildlife species listed as an endangered species pursuant to the federal Endangered Species Act of 1973 (P.L. 93-205, 16 U.S.C. 1531), as amended.
\end{itemize}
\item “Threatened species” means:
\begin{itemize}
\item (a) Any native wildlife species the commission determines is likely to become an endangered species within the foreseeable future throughout any significant portion of its range within this state.
\item (b) Any native wildlife species listed as a threatened species pursuant to the federal Endangered Species Act of 1973 (P.L. 93-205, 16 U.S.C. 1531), as amended.
\end{itemize}
\end{itemize}
\end{itemize}

\textsuperscript{375} Oregon Department of Energy, Project Order for the Troutdale Energy Center, April 20, 2012.
\textsuperscript{376} These species are referred to as “State-listed” species.
\textsuperscript{377} Final ASC, Exhibit B, p. B-1.
\textsuperscript{378} Final ASC, Exhibit Q, p. Q-2, Table Q-1.
\textsuperscript{379} Final ASC, Exhibit Q, p. Q-2, Q-7.
The Council’s standard addresses plant species that the Oregon Department of Agriculture (ODA) has listed as threatened or endangered. To identify State-listed or candidate plant species that could occur within the analysis area, the applicant conducted a literature review, followed by field surveys, to identify special status plant species that could occur within the analysis area.\textsuperscript{382} The applicant collected species data from the Oregon Biodiversity Research Center (ORBIC) and consulted with the U.S. Fish and Wildlife Service and ODFW.\textsuperscript{383} The applicant conducted pedestrian field surveys for special status plants within the site boundary on June 4 and 5, 2012 (to coincide with optimum bloom periods), and August 9, 2012 (during the optimum bloom period for whitetop aster).\textsuperscript{384}

Based on known occurrence or the presence of potentially suitable habitat, the applicant identifies seven federal or Oregon state-listed, proposed, or candidate species that have potential to occur in the site boundary, as summarized in Table 7 below.\textsuperscript{385}

<table>
<thead>
<tr>
<th>Species</th>
<th>State Status</th>
<th>Federal Status</th>
<th>Habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td>White rock larkspur (Delphinium leucophaeum)</td>
<td>Endangered</td>
<td>Species of Concern</td>
<td>Grows at the edges of oak woodlands, in dry roadside ditches, on basalt cliffs, along river banks and cliffs, on moist rocky slopes, and in moist lowland meadows.</td>
</tr>
<tr>
<td>Willamette daisy (Erigeron decumbens var. decumbens)</td>
<td>Endangered</td>
<td>Endangered</td>
<td>Grows in both seasonally flooded bottomland prairies and well-drained upland prairies at elevations ranging from 70 to 290 meters (240 to 950 feet).</td>
</tr>
<tr>
<td>Water howellia (Howellia aquatilis)</td>
<td>Threatened</td>
<td>Threatened</td>
<td>Grows in low-elevation ponds and sloughs. This species grows submersed or partially floating, in slow-moving water along pond edges, lake edges, and river oxbows.</td>
</tr>
<tr>
<td>Kincaid’s lupine (Lupinus sulphureus ssp.)</td>
<td>Threatened</td>
<td>Threatened</td>
<td>Grows primarily in native upland prairies and in open oak woodlands. This species is also found growing with perennial grasses in</td>
</tr>
</tbody>
</table>
Table 7: Listed and Candidate Plant Species with Potential to Occur within Analysis Area

<table>
<thead>
<tr>
<th>Species</th>
<th>State Status</th>
<th>Federal Status</th>
<th>Habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Kincaidiia</em></td>
<td></td>
<td></td>
<td>meadows, road rights-of-way, and along fencelines.</td>
</tr>
<tr>
<td>Columbia cress <em>Rorippa columbiae</em></td>
<td>Candidate</td>
<td>Under Review</td>
<td>This species grows in moist areas in gravelly soil, generally along rivers, near springs, or in sites that are vernaly wet, at lower to middle elevations. This species may also grow along drying edges of shallow lakes or occasionally along seasonal riverbeds and cyclically moist banks.</td>
</tr>
<tr>
<td>Whitetop aster <em>Sericocarpus rigidus</em></td>
<td>Threatened</td>
<td>Species of Concern</td>
<td>Grows in open woodlands and dry, open, often rocky coniferous forest.</td>
</tr>
<tr>
<td>Nelson’s checker-mallow <em>Sidalcea nelsoniana</em></td>
<td>Threatened</td>
<td>Threatened</td>
<td>Grows in wetland prairies and streamsides, roadsides, and fallow fields. In addition, it often occurs in areas where prairie habitat merges with deciduous woodland.</td>
</tr>
</tbody>
</table>

1 White rock larkspur, Willamette daisy, Kincaid’s lupine, whitetop aster, and Nelson’s checkermallow are federal and State-listed and candidate plant species that are included in an ODA plant conservation program. Specifically, all of these species are included in the same multiple species project to develop population density estimates for nine rare Willamette Valley prairie species. Water howellia, and Columbia cress are federal and State-listed and candidate plant species with the potential to occur within the site boundary that are not included in an ODA plant conservation program.

2 The applicant conducted two surveys for rare plants, including those that are included in an ODA plant conservation program (that is, white rock larkspur, Willamette daisy, Kincaid’s lupine, whitetop aster, and Nelson's checkermallow) during the optimum bloom time for these species. No rare plants were observed during these surveys. Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the proposed facility is consistent with the applicable ODA protection and

388 Final ASC, Exhibit Q, p. Q-19.
389 Final ASC, Attachments Q-2 and Q-3
conservation program established for white rock larkspur, Willamette daisy, Kincaid’s lupine, whitetop aster, and Nelson’s checker-mallow.

**White rock larkspur**

White rock larkspur is a state endangered species. This slender, perennial herb grows at the edges of oak woodlands, in dry roadside ditches, on basalt cliffs, along river banks and bluffs, on moist rocky slopes, and in moist lowland meadows. The species blooms from May through June. Threats to the species include application of roadside herbicide and loss of habitat to conversion for agricultural and residential use. Critical habitat has not been designated for white rock larkspur because it is not federally listed.

The scattered roadside ditches and mesic woodlands in the eastern and western portions of the site boundary offer potentially suitable habitat for the species. Although suitable habitat occurs within the site boundary, the site is unlikely to support this species because the corridor has been extensively modified by various ground disturbances including an aluminum reduction plant and subsequent site remediation and cleanup, industrial land uses, construction of drainage ditches, and the proliferation of weeds. A rare plant survey was conducted in Spring 2012 during the optimal bloom time for this species, and the white rock larkspur was not found within the survey area.\(^{390}\)

**Willamette daisy**

Willamette daisy is a state and federal listed endangered species. The species inhabits both seasonally flooded bottomland prairies and well-drained upland prairies at elevations ranging from 70 to 290 meters. The Willamette daisy blooms from June to early July. Threats to the species include habitat loss due to urban and agricultural development, successional encroachment into its habitat by trees and shrubs, competition with non-native weeds, and small population sizes.

The USFWS has designated critical habitat for Willamette daisy; however, the site boundary is not located within the designation. ORBIC had no record of Willamette daisy within the analysis area and the plant’s current distribution does not include Multnomah County. Potentially suitable habitat for the species within the site boundary includes seasonally flooded wetland habitat and open fields. However, the potentially suitable habitat within the site boundary has been previously disturbed and the soils are poorly-drained, making the Willamette daisy very unlikely to occur. A rare plant survey was conducted in Spring 2012 during the optimal bloom time for this species, and the Willamette daisy was not found.\(^{391}\)

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\(^{390}\) Final ASC, Exhibit Q, p. Q-8, Attachment Q-2.

\(^{391}\) Final ASC, Exhibit Q, pp. Q-8, Q-9.
Water howellia

Water howellia is a state and federal threatened species. This annual aquatic herb inhabits low-elevation ponds and sloughs. It grows submersed or partially floating, in slow-moving water along pond edges, lake edges, and river oxbows. Water howellia produces flowers from July through August. Threats to the species include changes in wetland hydrology, an increase in weedy species, noxious weeds, livestock grazing, and timber harvest activities. Critical habitat has not been designated for water howellia. Although its historic distribution included Multnomah County along the Columbia River floodplain, water howellia does not currently occur within Oregon. Additionally, ORBIC had no record of water howellia within the analysis area. Potentially suitable habitat for the species includes low elevation wetlands, forested wetlands, and small ponds in the site boundary. However, the potentially suitable habitat within the site boundary has been previously disturbed. A rare plant survey was conducted in Spring 2012 during the optimal bloom time for this species, and water howellia was not found.\textsuperscript{392}

Kincaid’s lupine

Kincaid’s lupine is a state and federal threatened species. This perennial herb is found in native upland prairies and in open oak woodlands. It is also found growing with perennial grasses in meadows, road rights-of-way, and along fence lines. It produces flowers from May to July. Threats to the species include habitat loss due to agricultural activities, urban development, roadside maintenance, and herbicide application. The site boundary is not located within the USFWS’s critical habitat designation for Kincaid’s lupine. The current distribution of Kincaid’s lupine does not include the site boundary or anywhere within Multnomah County. Potentially suitable habitat for this species includes marginal grassy areas in the site boundary. However, Kincaid’s lupine prefers heavier well-drained soils and the majority of onsite soils are poorly-drained. Additionally, ORBIC had no record of the species within the analysis area. The applicant conducted a rare plant survey in spring 2012 during the optimal bloom time for this species, and Kincaid’s lupine was not found.\textsuperscript{393}

Columbia cress

Columbia cress is a state candidate for listing as threatened or endangered. The species is also under review for potential federal listing. This species grows in moist areas in gravelly soil, generally along rivers, near springs, or in sites that are vernally wet, probably at lower to middle elevations. Columbia cress may also be found along drying edges of shallow lakes or occasionally along seasonal riverbeds and cyclically moist banks. The species is most readily identified from April to October. Threats to the species include changes in hydrology, current management of the Columbia River, reduced genetic diversity, and woody vegetation altering...
the community structure. Critical habitat has not been designated for Columbia cress because it does not yet have a federal status.

ORBIC has two records of Columbia cress occurring within the analysis area. Both records are located near the confluence of the Sandy and Columbia rivers near the river delta and water’s edge. In 1992, approximately 50 plants were observed along the northern edge of the Sandy River delta near the southern shore of the Columbia River in an area with little to no vegetation. In 1980, approximately 100 to 300 flowering plants were observed in the river delta near the old mouth of the Sandy River in cobble and gravel silt. Potentially suitable habitat for the species within the site boundary includes wetlands and other seasonally inundated areas; therefore, there is some potential for Columbia cress to occur in the Facility site boundary. A rare plant survey was conducted in spring 2012 during the optimal bloom time for this species, and Columbia cress was not found within the survey area. 394

Because of its recent presence in the area, in order to ensure that Columbia cress receives adequate protection, the Department recommends that the Council adopt the following condition:

**Condition I.1:** The certificate holder shall consult with the Oregon Department of Agriculture upon discovering Columbia cress within the site boundary in order to discuss protective measures.

**Whitetop aster**

Whitetop aster is a state threatened species. This aster is commonly found growing in open woodlands and dry, open, often rocky coniferous forest. Whitetop aster blooms briefly from late August to early September. Threats to the species include the invasion of its habitat by Douglas-fir and Scotch broom. ORBIC had no record of whitetop aster within the analysis area. Although most of the onsite soils are poorly drained, there is potentially suitable woodland habitat within the site boundary. A rare plant survey was conducted in summer 2012, during the optimal bloom time for this species, and whitetop aster was not found. 395

**Nelson’s checker-mallow**

Nelson’s checker-mallow is a state and federal threatened species. This perennial herb typically occupies wetland prairies and streamsides, roadsides, and fallow fields and often occurs where prairie merges with deciduous woodland. Nelson’s checker-mallow flowers from May to July. Threats to the species include mowing, plowing, stream channel alteration, recreational activities, fire suppression, and roadside spraying. Critical habitat has not been designated for Nelson’s checker-mallow. ORBIC has no record of the species within the analysis area and the

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394 Final ASC, Exhibit Q, p. Q-10.
395 Final ASC, Exhibit Q, pp. Q-10, Q-11, Attachment Q-3.
current distribution of Nelson’s checker-mallow does not include anywhere within Multnomah County. However, potentially suitable habitat for Nelson’s checkermallow includes the margins of Salmon Creek, ditches, roadsides, fencerows, and fallow fields. A rare plant survey conducted in Spring 2012 during the optimal bloom time for this species did not find any Nelson’s checker-mallow.\(^{396}\)

None of the species identified by the literature and ORBIC data search were identified within the site boundary during field surveys.\(^{397}\) To ensure the protection of State-listed and candidate plant species and to minimize impacts to potentially suitable plant habitat within the site boundary, the Department recommends that the Council adopt the following conditions\(^ {398}\):

**Condition I.2:** On the facility site, or if off the facility site for those areas where the certificate holder can obtain access, the certificate holder shall conduct pre-construction surveys within 1,000 feet of any area that would be disturbed by construction of the facility and shall, upon discovering any confirmed locations of State-listed or candidate plant species within the site boundary, submit proposed avoidance or mitigation measures to the Department for approval.

**Condition I.3:** The certificate holder shall preferentially use existing roads for Facility access and maintenance and locate underground utilities adjacent to existing or new roads, where practicable, to minimize associated disturbances.

Because no special-status plants were identified within the site boundary, the Department recommends that the Council find that, subject to the stated conditions, the design, construction, and operation of the Facility is not likely to cause a significant reduction in the likelihood of survival or recovery of any State-listed or candidate plant species.

**Wildlife Species**

The Council’s standard addresses wildlife species that the Oregon Fish and Wildlife Commission has listed as threatened or endangered. To identify threatened or endangered wildlife species, the applicant conducted a literature review of wildlife species that could occur within the analysis area. The applicant collected species data from ORBIC and USFWS, and consulted with ODFW for information about wildlife species in the analysis area.\(^ {399}\) Based on the literature review, the applicant determined that the bald eagle\(^ {400}\) and the streaked horned lark are the only two special-status species likely to occur within the analysis area. The applicant conducted

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\(^{396}\) Final ASC, Exhibit Q, p. Q-11.

\(^{397}\) Final ASC, Section Q.2.2.2, p. Q-7.

\(^{398}\) Oregon Department of Agriculture did not submit comments on the Application for Site Certificate.

\(^{399}\) Final ASC, Section Q.2.1, p. Q-2.

\(^{400}\) The bald eagle was delisted from the Federal Endangered Species Act in 2007 and delisted by ODFW in March 2012; however, it is currently a state sensitive vulnerable species.
field surveys for listed and candidate wildlife on January 5 and 6, 2012 and on May 30 and June 6, 2012 to coincide with the peak activity/breeding season for wildlife. Table 8 summarizes the special-status species that have the potential to occur within the analysis area.

Table 8: Protected or Candidate Wildlife Species with Potential to Occur within Analysis Area

<table>
<thead>
<tr>
<th>Species</th>
<th>State Status</th>
<th>Federal Status</th>
<th>Habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bald eagle <em>Haliaeetus leucocephalus</em></td>
<td>Delisted&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Delisted&lt;sup&gt;b&lt;/sup&gt;</td>
<td>Bald eagles are closely associated with freshwater, estuarine, and marine ecosystems with abundant prey and suitable habitat for nesting and communal roosting.</td>
</tr>
<tr>
<td>Streaked horned lark <em>Eremophila alpestris strigata</em></td>
<td>Sensitive Critical</td>
<td>Proposed as Threatened</td>
<td>Streaked horned larks are associated with bare ground or sparsely vegetated habitats and nest in grass seed fields, pastures, wetland mudflats, and disturbed habitats.</td>
</tr>
</tbody>
</table>

*Bald Eagle*

The bald eagle was delisted from the federal Endangered Species Act in 2007 and was also delisted in Oregon in March 2012; however, it is still federally protected under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA).

There is potentially suitable nesting and roosting habitat for bald eagles within the site boundary – individual large trees and stands of large trees, including forested wetland and forested riparian habitat located on the eastern side of the site boundary in the vicinity of Lot 3. However, the area immediately adjacent to the site boundary has been disturbed by recreational uses and industrial uses and the wooded habitat in the site boundary is subject to various levels of human disturbance. If bald eagles nest or roost within the site boundary, they are likely habituated to existing levels of noise and visual disturbance. The surrounding habitat outside of the site boundary provides higher quality nesting and foraging habitat for species.

Within the site boundary, bald eagles could be directly impacted by the loss of foraging habitat, increased potential for collision and electrocution associated with the new transmission lines.

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<sup>401</sup> Final ASC, Attachment P-2, Appendix A. The survey protocol for the spring 2012 wildlife survey, including the extent of the survey area, was coordinated with ODFW.

<sup>402</sup> Final ASC, Section Q.3, p. Q-7.

<sup>403</sup> Because the bald eagle was delisted by ODFW after the initial drafting of the ASC, it is discussed in detail in Exhibits P and Q.

Troutdale Energy Center
Proposed Order
December 16, 2013
increased noise and human presence during construction that could temporarily deter foraging eagles from using adjacent habitat. Although foraging bald eagles and other birds would be permanently displaced from the plant site, there are similar habitats throughout the immediate vicinity. The applicant proposes habitat impact minimization and mitigation measures in the Wildlife Habitat Monitoring and Mitigation Plan.\textsuperscript{404}

According to the ASC, no bald eagles are currently nesting within the site boundary. However, adult bald eagles were observed soaring over Lot 3 and Lot 6 during spring 2012 surveys.\textsuperscript{405} The nearest known bald eagle nesting site is located along the Columbia River near the south central shore of Government Island, approximately 4.7 miles from the site boundary. The ORBIC record summarizes annual observations of this site from 1999 to 2006; however, the last documented successful breeding attempt at this site was in 2000. The site was not occupied in 2002, 2003, 2004, and 2005, and it was not surveyed in 2006.\textsuperscript{406}

While the bald eagle has been delisted, it is protected federally under BGEPA and MBTA and therefore the Department recommends that the Council adopt the following condition:

\textbf{Condition I.4:} The certificate holder shall consult with USFWS and ODFW to discuss avoidance measures if a bald eagle is discovered nesting within 660 feet of the site boundary or roosting within the site boundary during pre-construction surveys.

\textit{Streaked horned lark}

The streaked horned lark is proposed for listing as a threatened species under the federal Endangered Species Act. The analysis area and site boundary do not fall within the proposed critical habitat for streaked horned lark.

Streaked horned larks are associated with bare ground or sparsely vegetated habitats and nest in grass seed fields, pastures, wetland mudflats, and disturbed habitats. The streaked horned lark breeds in sites with short herbaceous vegetation, open ground, an absence of woody vegetation, as well as non-vegetated areas. Breeding sites are often located in areas of remnant dry prairie, mud flats, or oak savannas while foraging occurs in grassland habitat. This species has evolved to prefer highly disturbed, early successional habitats such as gravel bars, burned grasslands, scoured or sediment deposited floodplains. Streaked horned larks have been increasingly reported utilizing human-made disturbed areas. Therefore, disturbed habitats, including sparse patches of vegetation associated with pastures or fallow fields, young Christmas tree farms, airport runways, gravel roads and roadsides, are also considered suitable habitat. Within the site boundary, streaked horned larks could be directly impacted by loss of degraded grassland habitat and non-vegetated areas within the gravel-capped brownfield site;

\textsuperscript{404} Final ASC, Exhibit P, Attachment P-3.
\textsuperscript{405} Lots 3 and 6 are within the site boundary. Final ASC, Attachment P-2.
\textsuperscript{406} Final ASC, Exhibit Q, pp. Q-11 – Q-13.
foraging habitat could be indirectly disturbed during construction; and increased noise and human presence could deter foraging individuals from using adjacent habitat during construction. The applicant proposes habitat minimization and mitigation measures as discussed in the WHMMP.\(^{407}\)

ORBIC had no record of streaked horned lark within the analysis area. However, wintering streaked horned larks have been documented in the vicinity at the Port of Portland in Multnomah County on a large dredge spoil expanse. Despite the heavily disturbed nature of the brownfield site, the short, grassy habitat provides potential foraging and nesting habitat for streaked horned lark. Potentially suitable habitat within the Facility site boundary includes the grassy, gravel-capped areas in Lot 3 and Lot 6, open non-vegetated areas in Lot 6, and surrounding fallow fields. Streaked horned larks were not detected during 2012 wildlife surveys.\(^{408}\)

In order to ensure that the streaked horned lark receives adequate protection, the Department recommends that the Council adopt the following condition:

**Condition I.5:** The certificate holder shall conduct pre-construction surveys for streaked horned larks that focus on the grassy, gravel-capped areas in Lot 3 and Lot 6 and open non-vegetated areas in Lot 6. If there is any lapse greater than one week between vegetation clearing and commencement of construction activities, the certificate holder shall repeat pre-construction surveys. If nesting birds are located within disturbance areas, the certificate holder shall submit proposed avoidance or mitigation measures to the Department for approval.\(^{409}\)

Neither of these wildlife species is currently listed by Oregon or the U.S. Fish and Wildlife Service as threatened or endangered species, therefore the applicant’s field surveys did not identify any state or federal listed species within the facility site boundary.\(^{410}\)

**Fish Species**

The Council’s standard addresses wildlife species that the Oregon Fish and Wildlife Commission has listed as threatened or endangered. To identify threatened or endangered fish species, the applicant conducted a literature review of fish species that could occur within the analysis area. The applicant collected species data from StreamNet, ORBIC and USFWS.\(^{411}\) Based on the literature review, the applicant determined that five special-status fish species are likely to

\(^{407}\) Final ASC, Exhibit P, Attachment P-3.
\(^{409}\) Final ASC, Section Q.5, p. Q-19.
\(^{411}\) Final ASC, Exhibit Q, Section Q.2.1, p. Q-2.
occur within the analysis area. Table 9 summarizes the special-status fish species that have the potential to occur within the analysis area.\textsuperscript{412}

<table>
<thead>
<tr>
<th>Species</th>
<th>State Status</th>
<th>Federal Status</th>
<th>Habitat</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chum salmon (Columbia River ESU) \textit{Oncorhynchus keta}</td>
<td>Sensitive-critical</td>
<td>Threatened</td>
<td>Documented to occur within the adjacent Columbia River, Sandy River, and associated tributaries</td>
</tr>
<tr>
<td>Coho salmon (Lower Columbia River ESU) \textit{Oncorhynchus kisutch}</td>
<td>Endangered</td>
<td>Threatened</td>
<td>Documented to occur within the adjacent Columbia River, Sandy River, and associated tributaries</td>
</tr>
<tr>
<td>Steelhead (Lower Columbia River ESU, summer and winter run) \textit{Oncorhynchus mykiss}</td>
<td>Sensitive-critical</td>
<td>Threatened</td>
<td>Documented to occur within the adjacent Columbia River, Sandy River, and associated tributaries</td>
</tr>
<tr>
<td>Chinook salmon (Lower Columbia River ESU, spring and fall run) \textit{Oncorhynchus tshawytscha}</td>
<td>Sensitive-critical</td>
<td>Threatened</td>
<td>Documented to occur within the adjacent Columbia River, Sandy River, and associated tributaries</td>
</tr>
<tr>
<td>Bull trout \textit{Salvelinus confluentus}</td>
<td>Critical</td>
<td>Threatened</td>
<td>Documented upstream of the site in the Columbia River upstream of Bonneville Dam and approximately 25 miles from the Facility site boundary</td>
</tr>
</tbody>
</table>

\textit{Chum Salmon: Columbia River ESU}

Columbia River chum salmon is a federal threatened species. Critical habitat was designated for Columbia River chum salmon in 2000. The nearest critical habitat to the Facility is the Columbia River.\textsuperscript{413} In Multnomah County, chum salmon are documented to occur only in the Columbia River in the Lower Columbia-Sandy River watershed, Lower Columbia-Clatskanie River watershed, and Lower Columbia River and primarily use these watersheds for migration. Although the site boundary does not include the Columbia or Sandy rivers, Salmon Creek does run through the western portion of the site, where the transmission line routes are proposed.

\textsuperscript{412} Final ASC, Exhibit Q, Section Q.3, p. Q-7.
\textsuperscript{413} Final ASC, Exhibit Q, p. Q-13.
Because the natural connection to the Columbia River has been altered, Salmon Creek does not provide suitable habitat for chum salmon.  

**Coho Salmon: Lower Columbia River ESU**

Lower Columbia River coho salmon is a state endangered and federal threatened species. No critical habitat has been designated for the Lower Columbia River coho salmon ESU. In Multnomah County, coho salmon occur in 44 streams, including the Columbia and Sandy rivers, in the vicinity of the site boundary. According to the ORBIC records, the Lower Columbia River coho salmon ESU has the potential to be present within the Salmon River, Upper Sandy River, Middle Sandy River, Bull Run/Little Sandy River, Gordon Creek/Lower Sandy River, Johnson Creek, Scappoose Creek/Multnomah Channel, and Columbia Gorge tributaries. This ESU has been documented using portions of or tributaries of these watersheds for spawning, rearing, and migration. Use of the Scappoose Creek/Multnomah Channel is mentioned for historical purposes because the Fairview Lake Dam is impassable and the Columbia Slough has been diked. Portions of the Gordon Creek/Lower Sandy River have also been affected by various dams and culverts. Although the site boundary does not include the Columbia or Sandy rivers, Salmon Creek does run through the western portion of the site, where transmission line Route 1 is proposed. Salmon Creek does not represent suitable habitat for coho salmon and can be considered poor salmonid habitat in general because the natural connection to the Columbia River has been altered.

**Steelhead: Lower Columbia River ESU, summer and winter runs**

Lower Columbia River steelhead is a federal threatened species. Critical habitat was designated for Lower Columbia River steelhead in 2000, however the site boundary is not included in this designation; the nearest critical habitat to the site boundary is in the Columbia and Sandy rivers. In Multnomah County, steelhead occur in 46 streams, including the Columbia and Sandy rivers, in the vicinity of the site boundary. According to the ORBIC records, the Lower Columbia River steelhead ESU is known or has the potential to be present within the following watersheds: Middle Columbia-Hood, Lower Columbia-Sandy, Lower Willamette, Salmon River, Upper Sandy River, Middle Sandy River, Bull Run/Little Sandy River, and Gordon Creek/Lower Sandy River, Johnson Creek, and Columbia Gorge tributaries. This ESU has the potential to be present or has been documented using portions of or tributaries of these watersheds for spawning, rearing, and migration. Although the site boundary does not include the Columbia or Sandy rivers, Salmon Creek does run through the western portion of the site, where transmission line Route 1 is proposed. Salmon Creek does not represent suitable habitat for steelhead and can be considered poor salmonid habitat in general because the natural connection to the Columbia River has been altered.

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414 Final ASC, Exhibit Q, P. Q-14.
416 Final ASC, Exhibit Q, p. Q-16.
Chinook Salmon: Lower Columbia River ESU, spring and fall runs

Lower Columbia River Chinook salmon is a federal threatened species. Critical habitat was designated for Lower Columbia River Chinook salmon in 2000 making the nearest critical habitat to the site boundary the Columbia and Sandy rivers. In Multnomah County, Chinook salmon occur in 36 streams, including the portions of the Columbia and Sandy rivers in the analysis area. According to the ORBIC records, the Lower Columbia River Chinook salmon ESU has the potential to be present within the following watersheds: Middle Columbia-Hood, Lower Columbia-Sandy, Lower Columbia-Clatskanie, Lower Columbia, Lower Willamette, Middle Sandy River, Columbia Gorge Tributaries, Gordon Creek/Lower Sandy River, and Bull Run/Little Sandy River. This ESU has the potential to be present or has been documented using portions of or tributaries of these watersheds for spawning, rearing, and migration. Although the site boundary does not include the Columbia or Sandy rivers, Salmon Creek does run through the western portion of the site, where transmission line Route 1 is proposed. Salmon Creek does not represent suitable habitat for Chinook salmon and can be considered poor salmonid habitat in general because the natural connection to the Columbia River has been altered.

Bull trout

Bull trout is federally listed as threatened. A recovery plan was drafted in 2005, but has not been finalized. Final critical habitat for bull trout was designated by USFWS in 2010. The nearest critical habitat to the site boundary is in the Columbia River. Although the site boundary is not located within the designated critical habitat, the analysis area includes portions of the Columbia River that are within the designation. However, ORBIC has no record of bull trout within the analysis area. The only stream in Multnomah County where bull trout are known to occur is elsewhere along the Columbia River. Salmon Creek does run through the western portion of the site, where transmission line Route 1 is proposed. Salmon Creek does not represent suitable habitat for bull trout and can be considered poor salmonid habitat in general because the natural connection to the Columbia River has been altered.

The facility layout was modified to avoid disturbances to aquatic habitats such as wetlands and streams. Avoidance measures include locating new access roads outside of streams and wetlands and locating underground utilities adjacent to existing or new roads as much as possible to minimize disturbances associated with construction and maintenance of access roads and underground utilities. Condition D.2 would ensure that the applicant implements erosion control measures and BMPs to ensure that disturbances to aquatic habitats are avoided.

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417 Final ASC, Exhibit Q, pp. Q-16 and Q-17.
418 Final ASC, Exhibit Q, p. Q-17.
419 Final ASC, Exhibit Q, pp. Q-17 and Q-18.
420 Final ASC, Exhibit Q, p. Q-19.
The applicant chose not to conduct focused fish surveys because no in-water work is planned for this project.\footnote{Final ASC, Exhibit P, p. P-23.} The applicant states that because no in-water work is required, there will be no disturbances to listed or candidate fish species.\footnote{Final ASC, Section Q.4, p. Q-20} In order to ensure that habitat for listed and candidate fish species is not affected by the construction or operation of the Facility, the Department recommends that the Council adopt the following condition:

**Condition I.6:** The certificate holder shall not conduct any in-water work during the construction of the facility.

In addition to the best management practices listed in the required NPDES 1200-C construction permit\footnote{Final ASC, Exhibit I, Attachment I-1.}, the Department recommends that the Council adopt the following conditions to ensure fish protection:

**Condition I.7:** The certificate holder shall place fencing along any stream channel to prevent siltation entering the water.

**Condition I.8:** The certificate holder shall prevent construction debris from falling into a stream channel and immediately remove any material that does fall into a stream channel in a manner that has minimal disturbance to the streambed and water quality.

**Condition I.9:** The certificate holder shall locate areas for fuel storage, refueling, and servicing of construction equipment in an upland location.

**Condition I.10:** Prior to use, the certificate holder shall clean all construction equipment to remove external oil, grease, dirt, or mud.

**Condition I.11:** The certificate holder shall prevent all petroleum products, fresh cement, or deleterious materials from entering any stream channel.

**Condition I.12:** The certificate holder shall place all wash sites in upland locations so that dirty wash water does not flow into stream channel or wetlands.

**Condition I.13:** The certificate holder shall ensure that all erosion control measures are in place at all times during the facility’s construction. The certificate holder shall not start construction until all temporary control devices are in place downslope or downstream of the project site.
The applicant proposes to dispose of the facility’s process water through evaporation or by treating, cooling, and sending it offsite through a new wastewater pipe for release into the Sandy River via the City of Troutdale’s existing outfall associated with its Water Pollution Control Facility. The applicant does not propose to construct any new outfall or other facilities in the river, or to undertake any activities in, on, or adjacent to the river. The applicant explains that the facility would draw intake water from an uncontaminated deep aquifer and from secondarily-treated wastewater, and that the facility’s process use would not add any significant substance to that water prior to discharge other than heat.

The applicant describes numeric and “narrative” water quality standards established by the Oregon Environmental Quality Commission (EQC) for the protection of fish and wildlife in the Sandy River at OAR Chapter 340, Division 41. These water quality standards must protect “designated uses” for the lower portion of the Sandy River, including year-round “Salmon & Trout Rearing & Migration” and “Salmon and Steelhead Spawning Use” from October 15 through June 15.

The applicant summarizes modeling results submitted in Section 5 of the Technical Evaluation Report contained in the National Pollution Discharge Elimination System (NPDES) permit application included as Attachment V-1 to the Application for Site Certificate. The applicant proposes to limit discharge temperatures to meet Total Maximum Daily Load requirements of 20.0°C during the summer and to limit discharge temperatures to 22.5°C during the remainder of the year, expressed as 7-day moving averages of daily maximum temperatures. The applicant’s summary of temperature modeling indicates that the combined discharges of the facility and the City of Troutdale’s wastewater treatment plant will not cause the river temperature to exceed the applicable temperature criterion outside the City of Troutdale’s existing mixing zone in the river. The applicant’s proposed 20.0°C and 22.5°C discharge temperatures would also meet “thermal plume” standards at OAR 340-041-0053(2)(d) that the EQC adopted to prevent adverse effects on fish in the mixing zone.

Based on the evidence in the record, the Department recommends that, subject to the stated conditions and mitigation measures, the Council find that the design, construction, and operation of the facility is not likely to cause a significant reduction in the likelihood of survival or recovery of any State-listed or candidate fish or wildlife species.

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424 Final ASC, Section P.3.2, p. P-17.
Mitigation

In order to minimize the possibility of impacts to potentially suitable habitat for threatened or endangered plant or wildlife species, the Department recommends that the Council adopt the following condition:

Condition I.14: The certificate holder shall adhere to the habitat impact minimization and mitigation strategies provided in the Wildlife and Habitat Monitoring and Mitigation Plan (Appendix D to this Order).

IV.I.2. Threatened and Endangered Species: Conclusions of Law

Based on these proposed findings and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the design, construction and operation of the proposed facility, taking into account mitigation, will not significantly reduce the likelihood of the survival or recovery of any threatened or endangered plant or wildlife species listed under Oregon law, in compliance with the Council’s Threatened and Endangered Species Standard.

IV.J. Scenic Resources [OAR 345-022-0080]

(1) Except for facilities described in section (2), to issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources and values identified as significant or important in local land use plans, tribal land management plans and federal land management plans for any lands located within the analysis area described in the project order.

(2) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

IV.J.1. Scenic Resources: Findings Of Fact

OAR 345-022-0080(1) applies only to scenic resources and values that have been identified as significant or important in local land use plans, tribal land management plans, and federal land management plans within the analysis area. Because the proposed facility is not a special criteria facility under OAR 345-015-0310, OAR 345-022-0080(2) does not apply to the proposed facility.
The applicant provides evidence about potential impacts to scenic resources in Exhibit R of the application. In addition, the applicant submitted additional analysis as that the Department identified as needed pursuant to OAR 345-015-0190(9). The Project Order identifies the analysis area for the Scenic Resources Standard as the area within the site boundary and 10 miles from the site boundary, including areas outside the state. In applying this standard, the Council focuses on the effects of facility structures on scenic resources described in “local land use plans, tribal land management plans and federal land management plans for any lands located within the analysis area described in the project order.” Local land use plans include city and county comprehensive plans as well as local management plans that apply to state-managed areas.

Several DPO comments raised concerns about the applicant’s visual assessment methods, the cooling tower plume, and a monitoring program for impacts to scenic resources. The Department addresses each of these issues in the recommended findings found in the following sections.

In Exhibit R, the applicant provides visual simulations to document potential views of facility components and plumes from some of the scenic resources identified in local, state, and federal land use management plans as well as other potentially sensitive areas. The following sections describe the potential visual impacts of the proposed facility, the scenic resources or values identified in the various management plans that the applicant reviewed, the potential for the facility to have a significant adverse impact on those identified resources, and the mitigation measures proposed by the applicant to reduce the proposed facility’s visual impact.

IV.J.1.a: Scenic Resources within the Analysis Area

In Exhibit R, the applicant provides a list of local, state, and federal land use and management plans pertaining to the 10-mile analysis area for Scenic Resources. The applicant explains that because no tribal lands are located within the 10-mile analysis area, Exhibit R does not include a review of tribal land management plans. The applicant describes the applicability of each identified land use or management plan to the analysis area, and provides the following table summarizing identified scenic resources in these plans.

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430 Project Order on Troutdale Energy Center, April 20, 2012, p. 23.
432 Final ASC, Section R.3.3.2, p. R-2.
434 Final ASC, Section R.5 and Table R-2.
Table 10: Scenic Resources Identified in Local, State, and Federal Land Use and Management Plans that Pertain to Lands within 10 Miles of the Site Boundary

<table>
<thead>
<tr>
<th>Scenic Resource</th>
<th>Managing Jurisdiction</th>
<th>Plan Where Scenic Resource Is Identified</th>
<th>Approximate Distance in Miles and Direction from Site Boundary¹</th>
</tr>
</thead>
</table>
| Columbia River Gorge NSA | Multiple              | *Columbia River Gorge Management Plan (2011)*  
*Columbia Gorge Management Unit Master Plan Summary (1994)*  
*Historic Columbia River Highway Master Plan (2006)*  
*SR-14 Corridor Management Plan, Columbia River National Scenic Area (1997)*  
*Lewis and Clark State Recreation Site, Comprehensive Plan (Volume One, General Park Plan) (2011)*  
*Statewide Trail Plan (2006)*  
*Multnomah County Comprehensive Framework Plan (2011)*  
*Clark County 20-Year Comprehensive Growth Management Plan (2011)*  
*Skamania County Comprehensive Plan (2007)*  
*City of Washougal Updated Comprehensive Plan (2003)*  
*Gresham Community Development Plan (2006)* | Nearest point: 0.2 mile northeast of the proposed Facility site |
| Historic Columbia River Highway | ODOT             | *Columbia River Gorge Management Plan (2011)*  
*Historic Columbia River Highway Master Plan (2006)* | 3.5 miles south of the proposed Facility site |
| Crown Point               | OPRD                | *Columbia River Gorge Management Plan (2011)*  
*Columbia Gorge Management Unit Master Plan Summary (1994)* | 7.2 miles east of the proposed Facility site |
Table 10: Scenic Resources Identified in Local, State, and Federal Land Use and Management Plans that Pertain to Lands within 10 Miles of the Site Boundary

<table>
<thead>
<tr>
<th>Scenic Resource</th>
<th>Managing Jurisdiction</th>
<th>Plan Where Scenic Resource Is Identified</th>
<th>Approximate Distance in Miles and Direction from Site Boundary</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-84, including rest stops</td>
<td>USDOT</td>
<td>Columbia River Gorge Management Plan (2011)</td>
<td>Nearest point: 0.8 mile southeast of the proposed Facility site</td>
</tr>
<tr>
<td>Portland Women’s Forum State Park</td>
<td>OPRD</td>
<td>Columbia River Gorge Management Plan (2011)</td>
<td>6.5 miles southeast of the proposed Facility site</td>
</tr>
<tr>
<td>Bridal Veil Falls State Park</td>
<td>OPRD</td>
<td>Columbia River Gorge Management Plan (2011)</td>
<td>9.9 miles east of the proposed Facility site</td>
</tr>
<tr>
<td>Rooster Rock State Park</td>
<td>OPRD</td>
<td>Columbia River Gorge Management Plan (2011)</td>
<td>7.1 miles east of the proposed Facility site</td>
</tr>
<tr>
<td>Guy W. Talbot State Park</td>
<td>OPRD</td>
<td>Columbia Gorge Management Unit Master Plan Summary (1994)</td>
<td>7.4 miles east of the proposed Facility site</td>
</tr>
<tr>
<td>Lewis and Clark SRA</td>
<td>OPRD</td>
<td>Lewis and Clark State Recreation Site, Comprehensive Plan (2011)</td>
<td>0.6 mile southeast of the proposed Facility site</td>
</tr>
<tr>
<td>Columbia River</td>
<td>Multiple</td>
<td>Columbia River Gorge Management Plan (2011)</td>
<td>Nearest Point: 0.6 mile north of the proposed Facility site</td>
</tr>
<tr>
<td>Washington State Route 14</td>
<td>WDOT</td>
<td>Columbia River Gorge Management Plan (2011)</td>
<td>4.3 miles northeast of the proposed Facility site</td>
</tr>
<tr>
<td>Sandy River</td>
<td>Multiple</td>
<td>Sandy Wild and Scenic River and State Scenic Waterway</td>
<td>0.1 mile north of the proposed Facility site</td>
</tr>
</tbody>
</table>
### Table 10: Scenic Resources Identified in Local, State, and Federal Land Use and Management Plans that Pertain to Lands within 10 Miles of the Site Boundary

<table>
<thead>
<tr>
<th>Scenic Resource</th>
<th>Managing Jurisdiction</th>
<th>Plan Where Scenic Resource is Identified</th>
<th>Approximate Distance in Miles and Direction from Site Boundary&lt;sup&gt;a&lt;/sup&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Larch Mountain Road</td>
<td>Multnomah County</td>
<td><em>Columbia River Gorge Management Plan</em> (2011)</td>
<td>7.1 miles east of the proposed Facility site</td>
</tr>
<tr>
<td>Rocky Butte State Scenic Corridor</td>
<td>OPRD</td>
<td><em>Columbia Gorge Management Unit Master Plan Summary</em> (1994)</td>
<td>6.5 miles west of the proposed Facility site</td>
</tr>
<tr>
<td>Government Island SRA</td>
<td>OPRD/Port of Portland</td>
<td><em>Government Island Master Plan</em> (2002)</td>
<td>1.1 miles west of the proposed Facility site</td>
</tr>
<tr>
<td>Mount Hood Scenic Byway</td>
<td>ODOT</td>
<td><em>Clackamas County Comprehensive Plan</em> (2010)</td>
<td>7.9 miles southeast of the proposed Facility site</td>
</tr>
<tr>
<td>Beaver Creek</td>
<td>Multiple</td>
<td><em>Troutdale Comprehensive Land Use Plan</em> (2011)</td>
<td>1.0 mile southeast of the proposed Facility site</td>
</tr>
<tr>
<td>Broughton Bluff</td>
<td>OPRD</td>
<td><em>Troutdale Comprehensive Land Use Plan</em> (2011)</td>
<td>1.3 miles southeast of the proposed Facility site</td>
</tr>
<tr>
<td>Washougal River</td>
<td>Multiple</td>
<td><em>City of Washougal Updated Comprehensive Plan</em> (2003)</td>
<td>1.4 miles north of the proposed Facility site</td>
</tr>
<tr>
<td>Fairview Lake</td>
<td>City of Fairview</td>
<td><em>Fairview Visioning Document 2022</em> (2002)</td>
<td>2.1 miles east of the proposed Facility site</td>
</tr>
<tr>
<td>Blue Lake</td>
<td>City of Fairview</td>
<td><em>Fairview Visioning Document 2022</em> (2002)</td>
<td>2.1 miles east of the proposed Facility site</td>
</tr>
<tr>
<td>Springwater Plan District</td>
<td>City of Gresham</td>
<td><em>Gresham Community Development Plan</em> (2006)</td>
<td>5.6 miles south of the proposed Facility site</td>
</tr>
</tbody>
</table>

<sup>a</sup> Approximate distances provided are measured from the tallest facility structure to the nearest point of the scenic resource located within the jurisdiction that identifies the resource in its local, state, or federal land use or management plan.

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**IV.J.1.b: Types of Potential Impacts to Scenic Resources**

**Potential Impacts from Design and Construction of the Facility**
The applicant states that the proposed facility would add “industrial elements” to the landscape that may be seen from some identified scenic resources. Large, potentially visible including the combustion turbine generator buildings, steam turbine generator buildings, outdoor heat recovery steam generators (HRSGs), HRSG exhaust stacks, mechanical draft cooling towers, a water treatment building and water tanks, a control and administration building, and generators and auxiliary transformers. The tallest component of the proposed facility is the exhaust stack for the combined-cycle power block, which would stand 159 feet tall. Other relatively tall elements of the proposed facility include the heat recovery steam generator (110 feet tall) and the exhaust stacks related to the simple-cycle power block (90 feet tall). Also, steel monopole structures making up the transmission line are expected to be approximately 85 feet tall. The applicant provides modeling data that shows that the height of plumes, when visible, will typically be less than 75 meters (m) (246 feet). For all seasons, the heights of visible plumes that could form will most frequently be between 0 and 25 m (0 and 82 feet) above the cooling tower. For most of the year (spring, summer, and fall), the lengths of the visible plumes that could form will most frequently be between 0 and 50 m (0 and 164 feet). During winter, the lengths of the visible plumes that could form are predicted to range between 100 and 200 m (328 and 656 feet).

Depending on the route chosen, the proposed 230-kV transmission line would extend between 0.9 miles and 1.8 miles from the power blocks on Lot 3 to the point of interconnection. Transmission towers would be up to approximately 85 feet in height, spaced approximately 500 feet apart. The conductor height would be approximately 55 feet above ground.

The applicant proposes to locate the facility within Troutdale Reynolds Industrial Park, in close proximity to several existing industrial uses. Existing development in TRIP includes series of 500-kilovolt (kV) and smaller transmission lines on lattice structures. In 2008, Federal Express constructed a 441,000 square foot ground package distribution warehouse within TRIP, on a 78-acre site directly west of Lot 3. Within one mile of TRIP, the Portland-Troutdale Airport, a Georgia-Pacific paper mill in Camas, Washington, and urban development of the Portland metropolitan area all influence the viewed landscape in the vicinity of the facility site. Because the facility site is situated near other industrial uses that are similar in scale and character, the construction of the proposed facility would not significantly change the current appearance of the viewed landscape in the vicinity of the site.

The applicant does not propose to remove vegetation from any scenic resources as part of construction and operation of the facility. Although construction of the facility would require

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436 Final ASC, Section B.4, Table B-1, p. B-19.
437 Final ASC, Figure Z-1.
440 Final ASC, Section R.2, p. R-1.
the removal of some trees on site, the applicant proposes to retain approximately 470 existing
trees with a trunk diameter of six inches or greater on Lot 3, including a stand of large
cottonwood trees on the northeast corner of Lot 3. The applicant also proposes to plant a
mixture of trees and shrubs for screening around the perimeter of the facility. The applicant
explains that, in accordance with the City of Troutdale’s landscaping requirements, the
proposed arrangement of perimeter plantings would screen views of the facility from NW
Swigert Way and areas to the northeast along the 40-mile Loop Trail.

Based on the evidence in the record, the Department recommends that the Council find that
the design and construction of the proposed facility are unlikely to directly result in a significant
adverse impact to scenic resources.

Potential Impacts from Operation of the Facility

Significant potential adverse impacts to scenic resources from the proposed facility could result
from visual effects of the cooling tower plume and emissions of visibility impairing pollutants
during operation of the facility.

The cooling tower plume may impact scenic resources where it would be visible in the
landscape as viewed from a given location. In some weather conditions, operation of the
facility’s cooling system would result in a visible plume of whitish water vapor, most frequently
below 82 feet above the cooling tower and less than 164 feet in length. Modeling results
described by the applicant indicate that the winter season would have the largest number of
predicted hours when the plume could be discerned by the general public, and the spring
season would have the least.

The applicant describes a typical plume and representative “worst case” plume and provides
photo simulations showing these simulated plumes from several points within the analysis area.
The potential impacts of visible plumes on specific scenic resources are described in Section
IV.J.1.c. Emission of visibility-impairing pollutants may impact scenic resources more generally
by contributing to haze in the vicinity of the facility, thus diminishing views from or within
protected areas within the analysis area. The applicant provides an analysis of the potential
impacts to scenic resources as a result of certain pollutants that the facility could emit at a
significant rate. The analysis presents the results of the applicant’s air dispersion modeling of
the impacts from the facility’s emissions of these potentially visibility-impairing pollutants;
particulate matter less than 10 micrometers in aerodynamic diameter (PM$_{10}$), particulate
matter less than 2.5 micrometers in aerodynamic diameter (PM$_{2.5}$), and oxides of nitrogen
(NOx). The applicant’s analysis considers whether these emissions would likely result in

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441 Final ASC, Section R.6, Section R.6.2, p. R-21 and Final ASC, Exhibit K, Figure K-3.
442 Final ASC, Section R.6.2, p. R-21 and Final ASC, Exhibit K, Figure K-3.
443 Final ASC, Section R.6.3.1, p. R-22.
impairments to visibility that could in turn adversely impact specific protected areas within the analysis area.\textsuperscript{444}

The applicant proposes the secondary National Ambient Air Quality Standards (NAAQS) as an appropriate benchmark to use in evaluating whether emission of visibility-impairing pollutants would result in significant adverse impacts to scenic resources within the analysis area. The applicant describes the purpose of the secondary National Ambient Air Quality Standards (NAAQS) established by the U.S. Environmental Protection Agency for certain “criteria” pollutants which include those pollutants that are identified as having reasonable potential to endanger the public welfare, including PM\textsubscript{10}, PM\textsubscript{2.5}, and NOx. The applicant explains that the federal Clean Air Act requires NAAQS to be set at levels that are requisite to “protect the public welfare from any known or anticipated adverse effects associated with the presence of the [criteria] pollutant in the ambient air.”\textsuperscript{445} The applicant notes that the Clean Air Act specifically identifies visibility impairment as an adverse effect to the public welfare to be prevented by the secondary NAAQS. Additionally, the Oregon Environmental Quality Commission adopted the secondary NAAQS for statewide applicability in Chapter 340, Division 202 of the Oregon Administrative Rules and Oregon’s Clean Air Act State Implementation Plan.\textsuperscript{446} The Department concurs with the applicant’s assessment that the secondary NAAQS adopted by the U.S. Environmental Protection Agency and into the rules administered by Oregon DEQ represent appropriate points of reference for determining the likelihood of visibility impairment from facility air emissions to cause significant adverse impacts to scenic resources.

The applicant provides a table showing secondary NAAQS for particulate matter less than 10 micrometers in aerodynamic diameter (PM\textsubscript{10}), particulate matter less than 2.5 micrometers in aerodynamic diameter (PM\textsubscript{2.5}), and oxides of nitrogen (NOx), stated in terms of micrograms per cubic meter. The applicant analyzes the facility’s potential emissions of these pollutants according to the modeling protocol approved by DEQ for that purpose.\textsuperscript{447} The applicant presents results of a comparison between modeled emissions of those pollutants to “significant air quality impact levels” (SIL), which are regulatory screening levels applied by Oregon DEQ to identify emissions from a proposed new source that would not cause or contribute to a violation of the secondary NAAQS.\textsuperscript{448} For those protected areas within the analysis area with a modeled impact greater than the SIL, the applicant conducted a competing source analysis, which added modeled concentrations of pollutants from the facility to concentrations modeled from other, preexisting emissions sources and to representative background concentrations in that area in order to provide a “total concentration” of pollutants in relation to the NAAQS.\textsuperscript{449}

\textsuperscript{446} CH2M HILL, “Troutdale Energy Center: Scenic Resources Visibility Analysis,” July 12, 2013, pp. 1 and 2.
\textsuperscript{448} CH2M HILL, “Troutdale Energy Center: Protected Areas Visibility Analysis,” June 26, 2013, Table 3.
The applicant provides results of this “enhanced analysis,” showing that the facility’s emissions, when added to pollutant concentrations resulting from existing sources and background, will not cause or contribute to a secondary NAAQS exceedance at any of the scenic resources for which the applicant conducted the enhanced analysis.\textsuperscript{450}

Recommended condition F.1 would ensure that air emissions from the facility do not impair visibility associated with scenic resources in the analysis area by requiring that the applicant submit a Department of Environmental Quality Air Containment Discharge Permit covering the facility and demonstrating that the facility will not cause air emissions in violation of secondary NAAQS.

Accordingly, the Department recommends that the Council find that the construction and operation of the proposed facility is not likely to result in significant adverse impacts from air emissions to protected areas within the analysis area.

\textit{IV.J.1.c: Potential Impacts to Scenic Resources and Values and Proposed Mitigation}

OAR 345-022-0080 requires that the Council determine that the design, construction, and operation of the proposed facility will not have a significant adverse impact to any significant or important scenic resources and values in the analysis area. OAR 345-001-0010(53) defines “significant” as follows:

\textit{(53) “Significant” means having an important consequence, either alone or in combination with other factors, based upon the magnitude and likelihood of the impact on the affected human population or natural resources, or on the importance of the natural resources affected, considering the context of the action or impact, its intensity, and the degree to which possible impacts are caused by the proposed action. Nothing in this definition is intended to require a statistical analysis of the magnitude or likelihood of a particular impact.}

In order to apply this standard to specific scenic resources, the Department first evaluates the possibility of an adverse impact from design, construction, or operation of the facility affecting the identified resource. If a reasonable possibility exists that the facility may result in a significant adverse impact on an identified scenic resource, the Department then considers the significance of the possible impact using the criteria in OAR 345-001-0010(53).

In Exhibit R, the applicant describes conducting a visual impact analysis for the proposed facility based on standard methodology adopted by the Federal Highway Administration in \textit{Visual Impact Assessment for Highway Projects} (FHWA, 1988).\textsuperscript{451} Staff has reviewed the applicant’s

\textsuperscript{450} CH2M HILL, “Troutdale Energy Center: Protected Areas Visibility Analysis,” June 26, 2013, Table 4.
\textsuperscript{451} The FHWA methodology consists of six steps:

1) Establish the project’s visual limits (viewshed)
rationale for using the FHWA methodology, which the applicant describes as one of three widely used methodologies to conduct visual analysis. Staff concurs with the applicant’s assessment that the FHWA Visual Impact Assessment for Highway Projects is an appropriate methodology with which to assess potential visual impacts within the multijurisdictional context of the analysis area.  

Throughout the analysis of potential impacts to identified scenic resources, the applicant discusses the results of a viewshed analysis conducted using Environmental Systems Research Institute (ESRI) ArcGIS software to identify the areas within the 10-mile analysis area from which facility components would be visible. The applicant states that the line-of-sight model used to conduct the viewshed analysis accounts for topography and height of features, but does not take into account the screening role of vegetation and existing structures. The applicant only provided mapped results for two of the scenic resources under consideration, and as a result the Department can only verify that the facility would likely not be visible from these two locations. On May 22, 2013, the Department identified a need for additional information pursuant to OAR 345-015-0190(9). In response, the applicant submitted photos and additional analysis related to each identified scenic resource within the analysis area.

The various scenic resources within the analysis area are described below, along with the Department’s analysis of potential impact, which utilizes: (1) Exhibit R; (2) the supplemental analysis submitted by the applicant on June 26, 2013; (3) the supplemental analysis submitted by the applicant on August 15, 2013; and (4) the Department’s own analysis and assessment.

**Columbia River Gorge National Scenic Area**

In 1986, the U.S. Congress passed the National Scenic Areas Act, which designated approximately 292,000 acres of southern Washington and northern Oregon as the Columbia River Gorge National Scenic Area (“CRGNSA” or “Scenic Area”). The proposed facility site is located just outside of the CRGNSA, about 1,000 feet east of the Scenic Area’s boundary at the Sandy River. The plan includes a goal to “emphasize protection and enhancement of Gorge landscapes seen from key viewing areas,” and three policies adopted to help achieve that goal:

1. **2) Determine who has views of the project (viewers)**
2. **3) Describe and assess the landscape that exists before project construction (affected environment)**
3. **4) Determine and evaluate views of and from the project for before and after project construction (using simulations)**
4. **5) Describe the potential visible changes to the project area and its surroundings that would result from the proposed project**
5. **6) Assess the response of viewers looking at and from the project, before and after project construction (viewer sensitivity)**

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452 Final ASC, Section R.3.3.3, pp. R-3 and R-4.
453 Final ASC, Section R.3.3.1, p. R-2.

Troutdale Energy Center
Proposed Order
December 16, 2013

161
• Policy 2: “Except for new production and/or development of mineral resources, new
development on lands seen from key viewing areas shall be visually subordinate to its
landscape setting.”

• Policy 3: “In developing conditions of approval, agencies shall emphasize those elements
that, in combination, provide effective, long-term scenic resource protection.”

• Policy 4: “New utility transmission lines, transportation and communication facilities,
docks and piers, and repairs and maintenance of existing lines, roads, and facilities shall
be visually subordinate as seen from key viewing areas to the maximum extent
practicable.”

The National Scenic Area Act, which governs all National Scenic Areas, specifically states that
management directives for the Columbia River Gorge NSA do not apply directly to areas outside
the Columbia River Gorge NSA Boundary. However, under OAR 345-022-0080, management
plans such as the Gorge Management Plan provide inventories of “significant or important”
scenic resources and values within the analysis area. Accordingly, the applicant has used the list
of designated key viewing areas (KVAs) in the Gorge Management Plan as a framework for the
purpose of identifying significant or important scenic resources for the portion of the analysis
area that falls within the Columbia River Gorge NSA.

The Gorge Management Plan uses these identified key viewing areas (KVAs) to analyze scenic
resources from important public locations that provide views of the Columbia River Gorge NSA.
The Plan includes a goal to “Emphasize protection and enhancement of Gorge landscapes seen
from key viewing areas.” Several of the policies adopted to implement this goal require various
types of new development to be “visually subordinate” from KVAs. The glossary of the Plan
defines “visually subordinate” in relevant part as follows:

“A description of the relative visibility of a structure or use where that structure or use does
not noticeably contrast with the surrounding landscape, as viewed from a specified vantage
point (generally a key viewing area, for the Management Plan). As opposed to structures
that are fully screened, structures that are visually subordinate may be partially visible. They
are not visually dominant in relation to their surroundings.”

455 Final ASC, Section R.5.1.1, p. R-7.
456 The savings provisions of the National Scenic Area Act state at 16 U.S.C. 544o(a): “Nothing in sections
544 to 544p of this title shall … establish protective perimeters or buffer zones around the scenic area or each
special management area. The fact that activities or uses inconsistent with the management directives for the
scenic area or special management areas can be seen or heard from these areas shall not, of itself, preclude
such activities or uses up to the boundaries of the scenic area or special management areas.”
I-1-5 and I-1-6.
The Gorge Management Plan does not apply the “visually subordinate” standard to “developed landscape settings” similar to the proposed facility site. However, the criteria for determining visual subordinance closely resembles the Council’s “not likely to cause a significant adverse impact” standard for evaluating impacts to scenic resources and values. As a result, this analysis incorporates the criteria for visually subordinate development in determining whether impacts are likely to result in significant adverse impacts in instances where the proposed facility site would likely be visible from a designated KVA.459

Identified KVAs are listed in the glossary of the Gorge Management Plan, without specific descriptions of locations or boundaries. The analysis of the areas below assumes that KVAs conform to either park boundaries or, in this case of rivers, areas of open water. Of the 24 KVAs identified in the Gorge Management Plan, ten are located within the ten-mile analysis area for scenic resources:

- The Historic Columbia River Highway, which is approximately 3.5 miles southeast of the proposed Facility at its nearest point. The Highway is managed by the Oregon Department of Transportation (ODOT).
- Crown Point, which is approximately 7.2 miles east of the proposed Facility, and includes the popular tourist attraction, Vista House. Crown Point and Vista House are managed by the OPRD.
- Interstate 84, which is approximately 0.8 mile southeast of the proposed Facility at its nearest point. I-84 is managed by ODOT.
- Portland Women’s Forum State Park, which is approximately 6.5 miles east of the proposed Facility. Portland Women’s Forum State Park is managed by OPRD.
- Bridal Veil Falls State Park, which is approximately 9.9 miles east of the proposed Facility. Bridal Veil Falls State Park is managed by OPRD.
- Rooster Rock State Park, which is approximately 7.1 miles east of the proposed Facility. Rooster Rock State Park is managed by OPRD.
- The Columbia River, which is approximately 0.6 mile north of the proposed Facility at its nearest point. The Columbia River is managed by a variety of local, county, state, and federal entities.
- Washington State Route 14, which is approximately 4.3 miles northeast of the proposed Facility at its nearest point. SR 14 is managed by the Washington State Department of Transportation (WSDOT).

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459 DPO comments from the Friends of the Gorge incorrectly infer that because the Department’s analysis incorporates criteria from the Gorge Management Plan for determining “visual subordinance” the Department has adopted direct application of all National Scenic Area standards in its analysis of compliance with Council siting standards. (See comments from Richard Till, Friends of the Columbia Gorge, September 24, 2013, pg. 13.)
The Sandy River, which is approximately 0.1 mile north of the proposed Facility at its nearest point. The Sandy River is managed by a variety of local, county, and state entities.

- Larch Mountain Road, which is approximately 7.1 miles east of the proposed Facility site. Larch Mountain Road is managed by the Multnomah County Department of Transportation.

**Historic Columbia River Highway**

The *Columbia River Gorge Management Plan* identifies the portion of the Historic Columbia River Highway located within the Columbia River Gorge National Scenic Area as a Key Viewing Area. In addition, the *Historic Columbia River Highway Plan*, adopted by the Oregon Department of Transportation in 2006, also serves a management document for the portion of the highway located within the National Scenic Area. At its closest point, the portion of the highway within the National Scenic Area is located approximately 3.5 miles southeast of the proposed facility site.\(^{460}\)

The applicant provides photos taken from the Historic Columbia River Highway, looking northwest towards the proposed facility site at distances of approximately 1.3 miles and 3.4 miles away. Both photos show dense deciduous and evergreen vegetation screening views of the facility.\(^{461}\)

The applicant explains that even in the absence of vegetative screening, other factors diminish the quality of views from the portion of within the National Scenic Area and analysis area. Although the applicant does not indicate the posted and designed speed limits along this portion of the route, the presumed speed of vehicles traveling along a state highway and winding path of travel lanes would limit the duration of potential views. The applicant states that the visibility of facility components would be increasingly limited by distance effects as the route moves from 3.5 miles from the facility site at its closest point within the National Scenic Area to 10.0 miles at the edge of the analysis area. The applicant refers to the visual simulation provided in Figure 1c of Attachment R-2 of a Representative Worst Case plume as viewed from Crown Point, at a distance of 7.2 miles from the facility site, to show an example of potential visibility from a similar distance as portions of the highway within the analysis area.

In addition, the applicant states that the viewed landscape looking from the highway to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the

\(^{460}\) Final ASC, Table R-2, p. R-16 through R-18.

Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.  

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the applicable portions of the highway. The Department recommends that the Council find that impacts from the proposed facility to scenic resources or values associated with the portion of the Historic Columbia River Highway within the analysis area are not likely to occur due to the presence of screening vegetation and limited duration of views toward the facility site. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude impacts from the proposed facility to scenic values associated with the portion of the Historic Columbia River Highway located within the analysis area from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources or values associated with the portion of the Historic Columbia River Highway located within the analysis area.

*Crown Point*

The *Columbia River Gorge Management Plan* identifies Crown Point, located approximately 7.2 miles southeast of the proposed facility site, as a Key Viewing Area. The Vista House at Crown Point is a historic observatory and Oregon State Park. The Vista House is built on a promontory sitting 733 feet above the Columbia River and 7.2 miles east of the proposed Facility. Vista House serves over million visitors annually, and is known for its views of the Columbia River Gorge. The applicant describes the view to the west from Vista House towards the proposed facility site as a “secondary” view, based on the arrangement of a series of telescopes available to visitors, which only allow views to the east. Although views to the west may be less popular with visitors, neither the evidence on the record or contained in the *Gorge Management Plan* support the applicant’s qualification of the view to the west as a “secondary” view with “moderate viewer concern.”

The applicant provides visual simulations showing existing views and views depicting both typical and representative worst case plume from the proposed facility, as viewed from the western side of the Vista House parking lot at Crown Point. The visual simulations show a clear, 

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463 Final ASC, Table R-2, pp. R-16 through R-18.
unobstructed line of sight towards the facility site. The visual simulations depicting typical and representative worst case plumes also show the mitigating effects of distance from viewing the proposed facility site from 7.2 miles away, as well as existing discordant visual elements including I-84, the Port of Camas-Washougal Industrial Park, and the plume produced by the Georgia-Pacific paper mill in Camas.\footnote{Final ASC, Attachment R-2, Figures 1a through 1c.} As noted above, policies from the Gorge Master Plan do not apply directly to the facility site. However, in defining “visually subordinate,” the Gorge Master Plan provides a helpful framework for evaluating the significance of the potential visual impacts depicted in Figures 3a-3c. The definition states that a visually subordinate development may be partially visible, but “not dominant” in relation to its surroundings.\footnote{Columbia River Gorge National Scenic Area Master Plan, p. Glossary-21.} As Figures 3a-3c show, the potentially visible portion of the plume represents a very small object within the viewed landscape from 7.2 miles, and does not noticeably contrast with similar visible features of existing development in the general vicinity, including the visible plume from the Georgia-Pacific mill.

The Department recommends that the Council find that impacts from the proposed facility to scenic resources or values at Crown Point are not likely to occur due to the limited visibility of the facility site from a distance of 6.5 miles. Additionally, the Department recommends that the Council find that the existing industrial features within the viewed landscape preclude impacts from the proposed facility to scenic values at Crown Point from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources or values at Crown Point.

\textbf{Interstate 84, including rest stops}

The Columbia River Gorge Management Plan identifies “I-84, including rest stops,” as a Key Viewing Area. The portion of I-84 within the Columbia River Gorge National Scenic Area is located approximately 0.8 miles southeast of the proposed facility site at its closest point and extends within the analysis area to 10.0 miles east of the proposed facility site.

The applicant provides a photo taken from I-84, looking northwest towards the proposed facility site at a distance of approximately 0.7 miles. The applicant also provides a photo taken from a designated viewpoint/rest area looking northwest towards the proposed facility site at a distance of approximately 5.7 miles away. Both photos show dense deciduous and evergreen vegetation screening views of the facility.\footnote{CH2M Hill, “Troutdale Energy Center: Supplemental Scenic Resource Analysis,” June 26, 2013, Appendix A, Photos 4 and 5, pp. A-2 and A-3.} The applicant explains that even in the absence of vegetative screening, other factors would diminish the quality of views from the portion of I-84.
within the analysis area. The applicant states that “given the high speed of travel on this
highway, viewing duration would be brief, thereby minimizing the overall visual impact along I-
84.”469 The Department notes that the applicant makes this assertion in a caption describing a
photo that shows views from a designated viewpoint/rest area, a location specifically intended
to allow vehicle parking and longer duration views. However, speed limits along the applicable
portion of I-84 range from 50 to 60 miles per hour,470 and viewers in vehicles traveling on the
freeway would likely experience brief viewing durations from most locations.

The applicant also states that the visibility of facility components would be increasingly limited
by distance effects as the freeway moves from 0.8 miles from the facility site at its closest point
to 10.0 miles at the edge of the analysis area. The applicant refers to the visual simulation
provided in Figure 1c of Attachment R-2 of a Representative Worst Case plume as viewed from
Crown Point, at a distance of 7.2 miles from the facility site, to show an example of potential
visibility from a similar distance as portions of I-84 within the analysis area. In addition, the
applicant states that the viewed landscape looking from the park to the proposed facility site
would include many other examples of large scale urban and industrial development, including
the Troutdale-Portland Airport, existing plumes produced by the Georgia-Pacific paper mill in
Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale
transmission line.471

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the
applicant’s assertion that existing industrial uses encroach on the landscape that would be
viewed in the absence of vegetation toward the direction of the facility site from the applicable
portion of I-84 and rest stops. The Department recommends that the Council find that impacts
from the proposed facility to scenic resources or values associated with the applicable portion
of I-84 within the analysis area are not likely to occur due to the presence of screening
vegetation and limited duration of views toward the facility site. The Department recommends
that the Council find that impacts from the proposed facility to scenic resources or values
associated with rest stops along the applicable portion of I-84 are not likely to occur due to the
presence of screening vegetation. Additionally, the Department recommends that the Council
find that, even in the absence of screening vegetation, the existing industrial features within
the viewed landscape would likely preclude impacts from the proposed facility to scenic values
associated with the portion of I-84 and rest stops located within the analysis area from meeting
the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that
the design, construction and operation of the facility, taking into account mitigation, are not

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469 CH2M Hill, “Troutdale Energy Center: Supplemental Scenic Resource Analysis,” June 26, 2013,
470 OAR 734-020-011(b).
and 6.
likely to result in significant adverse impact to scenic resources or values associated with the
portion of Interstate 84 and rest stops located within the analysis area.

**Washington State Route 14**

The *Columbia River Gorge Management Plan* identifies Washington State Route 14, located
approximately 4.3 miles northeast of the proposed facility site at its closest point, as a Key
Viewing Area. In addition, the *SR-14 Corridor Management Plan, Columbia River Gorge National
Scenic Area*, adopted by Washington Department of Transportation in 1997, also serves a
management document for the portion of SR-14 located within the National Scenic Area.\(^\text{472}\) The
*Corridor Management Plan* describes a vision for this portion of SR-14 as “highlighting,
protecting, and restoring the scenic, natural and cultural riches, communities and recreation
sites along the corridor, and standing as a beautiful attraction in itself.” The *Corridor
Management Plan* also includes a policy that “new or replacement structures [should] consider
designs that are compatible with existing historical structures and landscape setting.”\(^\text{473}\)

The applicant provides a photo taken from SR-14, looking south towards the proposed facility
site from near its east crossing of Camas Slough onto Lady Island. Although the photo shows a
relatively clear view to the southeast, it also shows dense deciduous and evergreen vegetation
screening obscuring more direct views of the facility facing due south.\(^\text{474}\)

The applicant explains that even in the absence of vegetative screening, other factors diminish
the quality of views from the portion of SR-14 within the analysis area. Although the applicant
does not indicate the posted and designed speed limits along this portion of the route, the
presumed speed of vehicles traveling along a state highway would limit the duration of
potential views. The applicant states that the visibility of facility components would be
increasingly limited by distance effects as the route moves from 4.3 miles from the facility site
at its closest point to 10.0 miles at the edge of the analysis area. The applicant refers to the
visual simulation provided in Figure 1c of Attachment R-2 of a Representative Worst Case
plume as viewed from Crown Point, at a distance of 7.2 miles from the facility site, to show an
example of potential visibility from a similar distance as portions of SR-14 within the analysis
area. In addition, the applicant states that the viewed landscape looking from the park to the
proposed facility site would include many other examples of large scale urban and industrial
development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the
Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv
Ostrander-Troutdale transmission line.\(^\text{475}\)

\(^{472}\) Final ASC, Table R-2, p. R-16 through R-18.
\(^{473}\) Final ASC, Section 5.2.8, p. R-11.
\(^{474}\) CH2M Hill, “Troutdale Energy Center: Supplemental Scenic Resource Analysis,” June 26, 2013,
The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the park, although distance and topography suggest that the Troutdale-Portland Airport, I-84, and Georgia-Pacific paper mill plumes are unlikely to encroach on typical lines of sight from SR-14. The Department recommends that the Council find that impacts from the proposed facility to scenic resources or values associated with the portion of SR-14 within the analysis area are not likely to occur due to the presence of screening vegetation and limited duration of views toward the facility site. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude impacts from the proposed facility to scenic values associated with the portion of SR-14 located within the analysis area from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources or values associated with the portion of Washington State Route 14 located within the analysis area.

Portland Women’s Forum State Park

The Columbia River Gorge Management Plan identifies the Portland Women’s Forum State Park, located approximately 6.5 miles southeast of the proposed facility site, as a Key Viewing Area. The applicant provides a photo taken from within the park, showing dense deciduous and evergreen vegetation screening potential views of the facility. The applicant explains that even in the absence of vegetative screening, the visibility of facility components would be limited by distance effects from viewing the facility from 6.5 miles away. Because the view from the park to the facility is within the same line of sight as views from Crown Point to the facility, but 0.7 miles closer, the applicant refers to the visual simulation provided in Figure 1c of Attachment R-2 of a Representative Worst Case plume as viewed from Crown Point for the purpose of comparison. In addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line. The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of

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476 Final ASC, Table R-2, p.
vegetation toward the direction of the facility site from within the park. The Department
recommends that the Council find that impacts from the proposed facility to scenic resources
or values at the Portland Women’s Forum State Park are not likely to occur due to the presence
of screening vegetation and limited visibility of the facility site from a distance of 6.5 miles.
Additionally, the Department recommends that the Council find that, even in the absence of
screening vegetation, the existing industrial features within the viewed landscape would likely
preclude impacts from the proposed facility to scenic values at the Portland Women’s Forum
State Park from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that
the design, construction and operation of the facility, taking into account mitigation, are not
likely to result in significant adverse impact to scenic resources or values at the Portland
Women’s Forum State Park.

Bridal Veil Falls State Park

The Columbia River Gorge Management Plan identifies Bridal Veil Falls State Park, located
approximately 9.9 miles east of the proposed facility site, as a Key Viewing Area. The
applicant provides photos taken from within the park, showing dense deciduous and evergreen
vegetation screening potential views of the facility. The applicant also provides a photo
showing a clear, unobstructed line of sight toward the facility site from the Overlook Trail
viewpoint in the park. This photo also shows mitigating effects of distance from viewing the
proposed facility site from 9.9 miles away, as existing large industrial features near the facility,
such as the plume produced by the Georgia-Pacific paper mill and transmission line structures
are not discernible.

In addition, the applicant states that even in the absence of vegetative screening, the viewed
landscape looking from the park to the proposed facility site would include I-84, a large-scale
developed element which runs adjacent to the park and would likely occupy the foreground of
views toward the proposed facility site. The Department has reviewed aerial photos of the
vicinity to verify the applicant’s assertion that the existing interstate freeway would encroach
on the landscape that would be viewed in the absence of vegetation toward the direction of the
facility site from within the park. The Department recommends that the Council find that
impacts from the proposed facility to scenic resources or values at Bridal Veil Falls State Park
are not likely to occur due to the presence of screening vegetation and limited visibility of the
facility site from a distance of 9.9 miles. Additionally, the Department recommends that the

480 Final ASC, Table R-2, p.
481 CH2M Hill, “Troutdale Energy Center: Supplemental Scenic Resource Analysis,” June 26, 2013,
Appendix A, Photos 7 and 8, pp. A-4.
482 CH2M Hill, “Troutdale Energy Center: Supplemental Scenic Resource Analysis,” June 26, 2013,
Council find that, even in the absence of screening vegetation, the existing I-84 freeway within the viewed landscape would preclude impacts from the proposed facility to scenic values at Bridal Veils Falls State Park from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources or values at the Bridal Veil Falls State Park.

**Rooster Rock State Park**

The *Columbia River Gorge Management Plan* identifies Rooster Rock State Park, located approximately 7.1 miles east of the proposed facility site, as a Key Viewing Area. The applicant provides a photo taken from within the park, showing dense deciduous and evergreen vegetation on Reed Island in the Columbia River screening potential views of the facility. The applicant explains that even in the absence of vegetative screening, the visibility of facility components would be limited by distance effects from viewing the facility from 7.1 miles away. Because the view from the park to the facility is within the same general line of sight as views from Crown Point to the facility, but 0.4 miles closer, the applicant refers to the visual simulation provided in Figure 1c of Attachment R-2 of a Representative Worst Case plume as viewed from Crown Point for the purpose of comparison. In addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line. The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the park. The Department recommends that the Council find that impacts from the proposed facility to scenic resources or values at Rooster Rock State Park are not likely to occur due to the presence of screening vegetation and limited visibility of the facility site from a distance of 7.1 miles. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude impacts from the proposed facility to scenic values at Rooster Rock State Park from meeting the definition of “significant” at OAR 345-001-0010(53).

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484 Final ASC, Table R-2, p. R-16 through R-18.
Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources or values at the Rooster Rock State Park.

**Guy W. Talbot State Park**

The *Columbia River Gorge Management Plan* identifies Guy W. Talbot State Park, located approximately 7.4 miles east of the proposed facility site, as a Key Viewing Area.\(^{488}\) The applicant provides photos taken facing west toward the proposed facility site from the main parking area within the park, the parking area at Latourell Falls, and Latourell Falls Trail. These photos show dense deciduous and evergreen vegetation screening potential views of the facility.\(^{489}\) The applicant explains that even in the absence of vegetative screening, the visibility of facility components would be limited by distance effects from viewing the facility from 7.4 miles away. Because the view from the park to the facility is within the same general line of sight as views from Crown Point to the facility, but 0.2 miles further, the applicant refers to the visual simulation provided in Figure 1c of Attachment R-2 of a Representative Worst Case plume as viewed from Crown Point for the purpose of comparison.\(^{490}\) In addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.\(^{491}\) The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the park. The Department recommends that the Council find that impacts from the proposed facility to scenic resources or values at Guy W. Talbot State Park are not likely to occur due to the presence of screening vegetation and limited visibility of the facility site from a distance of 7.1 miles. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude impacts from the proposed facility to scenic values at Guy W. Talbot State Park from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not

\(^{488}\) Final ASC, Table R-2, p. R-16 through R-18.
likely to result in significant adverse impact to scenic resources or values at Guy W. Talbot State Park.

**Larch Mountain Road**

The *Columbia River Gorge Management Plan* identifies the portion of Larch Mountain Road located within the Columbia River Gorge National Scenic Area as a Key Viewing Area. At its closest point, the portion of Larch Mountain Road within the National Scenic Area is located approximately 7.1 miles southeast of the proposed facility site. The applicant provides a photo taken from Larch Mountain Road, looking northwest towards the proposed facility site at a distance of approximately 7.1 miles away, showing dense deciduous and evergreen vegetation screening views of the facility.

The applicant explains that even in the absence of vegetative screening, visibility of facility components would be increasingly limited by distance effects as the route moves from 7.1 miles from the facility site at its closest point within the National Scenic Area to 10.0 miles at the edge of the analysis area. The applicant refers to the visual simulation provided in Figure 1c of Attachment R-2 of a Representative Worst Case plume as viewed from Crown Point, at a distance of 7.2 miles from the facility site, to show an example of potential visibility from a similar distance as portions of Larch Mountain Road within the analysis area. In addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrand-Troutdale transmission line.

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the applicable portions of Larch Mountain Road. The Department recommends that the Council find that impacts from the proposed facility to scenic resources or values associated with the portion of the Larch Mountain Road within the analysis area are not likely to occur due to the presence of screening vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude impacts from the proposed facility to scenic values associated with the portion of Larch Mountain Road located within the analysis area from meeting the definition of “significant” at OAR 345-001-0010(53).

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492 Final ASC, Table R-2, p. R-16 through R-18.
Based on the evidence in the record, the Department recommends that the Council find that
design, construction and operation of the facility, taking into account mitigation, are not
likely to result in significant adverse impact to scenic resources or values associated with the
portion of the Larch Mountain Road located within the analysis area.

Columbia River

The Columbia River Gorge Management Plan identifies the portion of the Columbia River within
the Columbia River Gorge National Scenic Area as a Key Viewing Area. The nearest portion of
the river is approximately 0.6 miles north of the proposed facility site.\(^{495}\) The applicant states
that the river is also identified as a significant or important scenic resource in the
comprehensive plans for the cities of Troutdale, Camas, Vancouver, and Washougal all identify
the Columbia River as a significant scenic resource.\(^{496}\) The applicant provides relevant excerpts
from discussions of scenic values of the Columbia River in comprehensive plans from the cities
of Troutdale, Camas, Vancouver, and Washougal in Attachment R-3.

The Troutdale Comprehensive Land Use Plan, as amended through 2011, identifies views to the
Columbia River as a significant scenic resource, stating that “Troutdale has a particularly scenic
location, with views of points outside the community, including the Columbia River […]”.\(^{497}\) The
applicant provides visual simulations showing existing views and views depicting both typical
and representative worst case plume from the proposed facility, as viewed from two selected
points in the City of Troutdale towards the Columbia River. Figures 2a, 2b, and 2c show views
toward the Columbia River from SE Harlow Avenue at SE 2\(^{nd}\) Street in Troutdale, and show
vegetation and urban development screening potential views of the facility, as well as
discordant elements such as distribution lines and building rooftops. Figures 3a, 3b, and 3c
show views toward the Columbia River from SW Sturges Lane at SW Berryessa Place in
Troutdale, and show dense deciduous and evergreen vegetation screening potential views of
the facility.\(^{498}\)

In addition, the applicant explains that even in the absence of vegetative screening, the viewed
landscape looking from the viewpoints shown in Figures 2a-2c and 3a-3c to the Columbia River
in the direction of the proposed facility site would include many other examples of large scale
urban and industrial development, including the Troutdale-Portland Airport, the Federal
Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.\(^{499}\)

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the
applicant’s assertion that existing industrial uses encroach on the landscape that would be

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\(^{496}\) Final ASC, Table R-2, p. R-16 through R-18.
\(^{497}\) City of Troutdale Comprehensive Land Use Plan, as amended through July 2011, p. 15.
\(^{498}\) Final ASC, Attachment R-2, Figures 2a, 2b, 2c, 3a, 3b, and 3c.
viewed in the absence of vegetation toward the direction of the facility site from the river. The
Department recommends that the Council find that impacts from the proposed facility to scenic
resources or values to views of the Columbia River from the City of Troutdale are not likely to
occur due to the presence of screening vegetation and development. Additionally, the
Department recommends that the Council find that, even in the absence of screening
vegetation, the existing urban and industrial features within the viewed landscape would likely
preclude impacts from the proposed facility to scenic values from views of the Columbia River
from the City of Troutdale from meeting the definition of “significant” at OAR 345-001-
0010(53).

The Columbia River Gorge Scenic Area Management Plan describes key viewing areas as “those
portions of important public roads, parks or other vantage points within the Scenic Area from
which the public views Scenic Area landscapes.” In considering the scenic resources or values
associated with the Columbia River as a KVA within the Scenic Area, the Department evaluates
impacts to scenic views obtained from the Columbia River by boat. The applicant provides a
photo taken from the southern bank of the Columbia River, facing east toward the facility site
from a distance of approximately 2.3 miles. This photo shows vegetation that would fall within
the presumed line of sight from viewers on boats on the Columbia River to the proposed facility
site. This photo shows dense deciduous and evergreen vegetation screening potential views of
the facility. In addition, the applicant states that the viewed landscape looking from the
Columbia River to the proposed facility site would include many other examples of large scale
urban and industrial development, including the Troutdale-Portland Airport, Federal Express
distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the
applicant’s assertion that existing industrial uses encroach on the landscape that would be
viewed in the absence of vegetation toward the direction of the facility site from on the river.
The Department recommends that the Council find that impacts from the proposed facility to
scenic resources or values associated with views from the Columbia River are not likely to occur
due to the presence of screening vegetation. Additionally, the Department recommends that
the Council find that, even in the absence of screening vegetation, the existing industrial
features within the viewed landscape would likely preclude impacts from the proposed facility
to scenic resources or values associated with views from the Columbia from meeting the
definition of “significant” at OAR 345-001-0010(53).

The applicant provides an excerpt from the Parks and Open Space element of the City of
Washougal Updated Comprehensive Plan which states the following:

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“Shorelines provide open space benefits through natural, scenic, or recreational values. The City of Washougal has an abundance of shoreline resources along the Columbia and Washougal Rivers. The primary benefit of shorelines is the experience derived from being in close proximity to and having views and potential access to the two major rivers in the UGA.”

The applicant provides a photo taken from the north bank of the Columbia River, in the City of Washougal facing east toward the proposed facility site from a distance of approximately 2.1 miles. The photo shows that the viewed landscape from this location includes many other examples of large scale urban and industrial development, including the plume generated by the Georgia-Pacific paper mill in Camas and the BPA 500-kV Ostrander-Troutdale transmission line. The Department recommends that the Council find that the existing industrial features within the viewed landscape would likely preclude impacts from the proposed facility to scenic resources or values associated with the portion of the Columbia River shoreline within the City of Washougal from meeting the definition of “significant” at OAR 345-001-0010(53).

The applicant states that the Vancouver Comprehensive Plan 2011-2030 discusses scenic resources in the Vancouver Shoreline Management Master Program goals section, which identifies the shoreline of the Columbia River as a scenic resource and provides the following goal in Section 2.11:

The goal for views and aesthetics is to assure that the public’s opportunity to enjoy the physical and aesthetic qualities of shorelines of the state, including views of the water is protected to the greatest extent feasible.

The applicant provides a photo taken from the north bank of the Columbia River, in the City of Vancouver, facing southeast toward the proposed facility site from a distance of approximately 9.6 miles. The photo shows that the viewed landscape from this location includes many other examples of large scale urban and industrial development, including the Portland International Airport and I-205 freeway. The Department recommends that the Council find that the existing industrial features within the viewed landscape would likely preclude impacts from the proposed facility to scenic resources or values associated with the portion of the Columbia River shoreline within the City of Vancouver from meeting the definition of “significant” at OAR 345-001-0010(53).

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504 Final ASC, Section R.5.3.12, p. R-15.
The applicant states that the Environmental element of the *City of Camas Comprehensive Plan* includes by reference goals and policies of the *Park, Recreation and Open Space Comprehensive Plan*:

*Strategy EN-1: Consistent with the adopted parks, recreation, and open space Comprehensive Plan, develop a citywide interconnected network of publicly-owned or preserved natural open space to protect environmentally sensitive land, create a sense of openness, provide scenic views, and provide space for trail systems.*

The applicant also provides an excerpt from the *Park, Recreation, and Open Space Comprehensive Plan* adopted by the City of Camas in 2007 as an element of the *City of Camas Comprehensive Plan*. The excerpt provided by the applicant contains the following policy:

*2H: Encourage support, and, where possible, initiate activities, to preserve, conserve, or improve the shorelines of the Columbia and Washougal Rivers, Lacamas Creek, and Lacamas and Fall Leaf Lakes.*

Although Policy 2H pertains to the shoreline of the Columbia River, it does not describe the shoreline or river as a scenic resource, and does not describe scenic values associated with the shoreline or river. The Department recommends that the Council find that, based on the information provided by the applicant, the *City of Camas Comprehensive Plan* does not identify the Columbia River as a significant or important scenic resource or value for the purposes of OAR 345-022-0080.

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources or values associated with the applicable portions of the Columbia River.

*Sandy River*

The *Columbia River Gorge Management Plan* identifies the portion of the Sandy River within the Columbia River Gorge National Scenic Area as a Key Viewing Area. The nearest portion of the river is approximately 500 feet north of the proposed facility site. The applicant states that the river is also identified as a significant or important scenic resource in the *Sandy Wild and Scenic River and State Scenic Waterway Management Plan* (1993), the *Multnomah County Comprehensive Framework Plan* (2011), and the *Troutdale Comprehensive Land Use Plan*.

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506 Final ASC, Section R.5.3.7, pp. R-13 and R-14.
507 Final ASC, Attachment R-3.
The applicant provides relevant excerpts from discussions of scenic values of the Sandy River in these management plans in Attachment R-3.

The City of Troutdale Comprehensive Land Use Plan, as amended through 2011, states under the heading “Open Spaces and Scenic Areas” that the City’s Parks Master Plan designates the Sandy River corridor as part of a public open space/greenway system. The Comprehensive Land Use Plan does not mention the Sandy River in the next paragraph, which directly discusses scenic views. The applicant explains that neither the Troutdale Comprehensive Land Use Plan or the City of Troutdale Master Parks Plan contain any goals, policies, or objectives that pertain to scenic resources within the analysis area. The Department recommends that the Council find that, based on the information provided by the applicant, the City of Troutdale Comprehensive Land Use Plan and the City of Troutdale Master Parks Plan do not identify the Sandy River as a significant or important scenic resource or value for the purposes of OAR 345-022-0080.

Although the portion of the Sandy River near its confluence with the Columbia River lies less than one quarter mile from the proposed facility site, the Sandy Wild and Scenic River and State Scenic Waterway Management Plan, adopted by Oregon Parks and Recreation Department in 1993, applies to an area approximately 9.1 miles southeast of the facility. The plan adopts a management goal of protecting the “scenic quality created by the combination of agricultural and natural features.” The Multnomah County Comprehensive Framework Plan contains a policy 16-F to “conserve scenic resources and protect their aesthetic experience for the enjoyment of future generations.” The Comprehensive Framework Plan applies an overlay zone to the portion of the river designated as a State Scenic Waterway to “assure the scenic resources of these areas are not diminished as new development occurs.”

The Columbia River Gorge Scenic Area Management Plan describes key viewing areas as “those portions of important public roads, parks or other vantage points within the Scenic Area from which the public views Scenic Area landscapes.” In considering the scenic resources or values associated with the Sandy River as a KVA within the Scenic Area, the Department evaluates impacts to scenic views obtained from the Sandy River by boat. The applicant provides a visual simulation showing existing views and views depicting both typical and representative worst case plume from the proposed facility, as viewed from the Sandy River Delta Recreational Area along the east bank of the Sandy River, looking west toward the facility. Figures 4a-4c show the results of this simulation, including dense evergreen and deciduous vegetation screening.

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509 Final ASC, Table R-2, pp. R-16 through R-18.
510 City of Troutdale Comprehensive Land Use Plan, as amended through July 2011, p. 15.
511 Final ASC, Section R.5.3.5, pp. R-12 and R-13.
512 Final ASC, Section R.5.2.1, p. R-8.
513 Multnomah County Comprehensive Framework Plan, 2011, Policy 16-F.
potential views of the facility. Because of the close proximity of the viewpoint used in the visual simulation to potential viewpoints on the river itself, the Department also considers the results of this simulation in evaluating potential impacts to scenic values associated with viewers on the river.

The applicant explains that even in the absence of vegetative screening, the viewed landscape from the Recreation Area would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line. The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from the location shown in the photo simulation and from various potential viewpoints along the Sandy River.

The Department recommends that the Council find that impacts from the proposed facility to scenic resources or values associated with the Sandy River are not likely to occur due to the presence of screening vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would preclude impacts from the proposed facility to scenic values associated with the Sandy River from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources or values associated with the applicable portions of the Sandy River.

Lewis and Clark State Recreation Area

The Lewis and Clark State Recreation Area, Comprehensive Plan, adopted in 2011, describes the 57-acre SRA, which at its closest point is located approximately 0.6 miles east of proposed facility site. The SRA includes a popular swimming area on the Sandy River, as well as public boat launch and trail to Broughton Bluff. The SRA lies within the Columbia River Gorge National Scenic Area but the Columbia River Gorge Management Plan does not identify it as a Key Viewing Area. The specific goals of the SRA do not identify important visual or scenic resources, but OPRD goals for all parks and recreation areas include protection of these resources. The applicant provides photos taken from within commonly used areas in the SRA showing dense

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515 Final ASC, Attachment R-2, Figures 4a, 4b, and 4c.
deciduous and evergreen vegetation screening potential views of the facility. The applicant explains that even in the absence of vegetative screening, the viewed landscape from within the SRA would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the main use areas of the SRA. The Department recommends that the Council find that impacts from the proposed facility to scenic resources or values at the Lewis and Clark State Recreation Area are not likely to occur due to the presence of screening vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would preclude impacts from the proposed facility to scenic values at Lewis and Clark State Recreation Area from meeting the definition of “significant” at OAR 345-001-0010(53).

The applicant provides a photo taken from the summit of Broughton Bluff showing a clear, unobstructed line of sight towards the facility site. The photo shows that the viewed landscape from this location includes many other examples of large scale urban and industrial development, including the City of Camas, Washington, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line. The Department recommends that the Council find that, due to the existing industrial features within the viewed landscape, impacts from the proposed facility to scenic resources or values on Broughton Bluff would not meet the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources or values at the Lewis and Clark State Recreation Site.

Rocky Butte State Scenic Corridor/Joseph Wood Hill Park

Exhibit R and Supplemental Scenic Resource Analysis identify the “Rocky Butte State Scenic Corridor,” located approximately 6.5 miles west of the proposed facility site, as a scenic

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Troutdale Energy Center
Proposed Order

Troutdale Energy Center
Proposed Order

December 16, 2013

Based on the Department’s research, OPRD has not developed a park or other scenic area to date in the vicinity of Rocky Butte. However, in 1991 the City of Portland adopted the City of Portland Scenic Resources Protection Plan, and amended its zoning code to enact regulations within the Rocky Butte Plan District to “preserve and enhance the forested areas of the butte, views from the butte, historic architectural elements, and the natural scenic qualities of the butte.” Since that time, the City of Portland has designated a 2.38 acre area at the summit of Rocky Butte as Joseph Wood Hill Park. As a result, the Department’s analysis considers potential impacts to Joseph Wood Hill Park and the Rocky Butte Plan District.

The City of Portland’s regulations implementing the Rocky Butte Plan District state that “Rocky Butte has been identified as an important natural resource which includes a scenic drive and scenic views from the roadway and from the top of the butte.” The Scenic Resources Protection Plan also includes a map depicting “Scenic Viewpoints (No Special Height Restrictions)” spanning out to the west, north, and east of the summit, including in the direction of proposed facility site. Because the plan applies only to areas within the City of Portland’s land use jurisdiction, zoning regulations adopted to protect the identified scenic resource focus on preventing the development of obstructions or visually discordant elements within the Rocky Butte Plan District itself.

The applicant provides a photo taken from the viewpoint at Joseph Wood Hill Park at the summit of Rocky Butte, at an elevation of approximately 615 feet. The photo shows a clear, unobstructed line of sight towards the facility site. The photo also shows mitigating effects of distance from viewing the proposed facility site from 6.5 miles away, as well as existing discordant visual elements including I-84 and the plume produced by the Georgia-Pacific paper mill in Camas. The Department recommends that the Council find that impacts from the proposed facility to scenic resources or values at Joseph Wood Hill Park or within the Rocky Butte Plan District are not likely to occur due to the limited visibility of the facility site from a distance of 6.5 miles. Additionally, the Department recommends that the Council find that the existing industrial features within the viewed landscape preclude impacts from the proposed facility to scenic values at Joseph Wood Hill Park or within the Rocky Butte Plan District from meeting the definition of “significant” at OAR 345-001-0010(53).

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[521] Final ASC, Table R-2.
[525] City of Portland Scenic Resources Protection Plan, March 13, 1991, pp. 75 and 76. Development standards adopted in Chapter 33.570 pertain to issues such as tree removal, height of structures, street setback, and lighting.
Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources or values at Joseph Wood Hill Park or within the Rocky Butte Plan District.

**Government Island State Recreation Area**

The *Government Island Management Plan*, adopted in 2002, is the managing document for Government Island, located in the Columbia River approximately 1.1 miles west of proposed facility site at its closest point. The Port of Portland owns the island, and leases an area used by boaters and campers to OPRD. The *Management Plan* does not directly mention scenic resources, other than a description of Multnomah County’s Parks and Open Space and Commercial Forest Use zoning of the island, the purpose of which is to “conserve and protect wildlife habitat and scenic value.”

The applicant describes the SRA itself as a series of islands in the Columbia River accessible only by boat, with two docks and a floating tie-up on the north end of the island. Fishing, hiking, and camping are permitted on the perimeter of the area, but the interior of the island is reserved for cattle ranching and off-limits to recreational users.

The applicant provides a photo taken from the northbound span of the I-205 Glenn L. Jackson Memorial Bridge, facing east toward the facility site. The photo shows dense stands of deciduous vegetation screening views toward the facility. The applicant anticipates that the density of vegetation, particularly along the eastern shore of Government Island, is such that tree trunks and branches will provide screening during winter months. The Department cannot verify this assertion based on the evidence in the record. The applicant acknowledges that facility structures and the cooling tower plume may be more visible from the southern and western portions of the island.

The applicant explains that the viewed landscape from within the SRA would include many other examples of large scale urban and industrial development, including developed areas of the City of Camas, Washington, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line. The Department has reviewed aerial photos of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that could be viewed in the absence of vegetation toward the direction of the facility site from within the main use areas of the SRA. The Department recommends that the Council find that, although impacts from the proposed facility to scenic resources or values at the Government Island State Recreation Area may occur, the management plan does not clearly define significant or

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527 Final ASC, Section R.5.2.5, p. R-10.
528 Final ASC, Section R.6.4.4, p. R-30.
530 Final ASC, Section R.6.4.4, p. R-30.
important scenic resources or values within the SRA, and existing industrial features within the viewed landscape preclude impacts from the proposed facility to scenic values at Government Island State Recreation Area from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources or values at the Government Island State Recreation Site.

**Mount Hood Scenic Byway**

The Clackamas County Comprehensive Plan, updated in 2010, identifies the byway as a significant scenic resource. A portion of the byway lies within the analysis area, approximately 8.0 miles southeast of proposed facility site at its closest point.\(^{531}\) The applicant provides the results of a viewshed analysis developed using Environmental Systems Research Institute (ESRI) ArcGIS software using a line-of-sight model and topographical data to identify the areas within the analysis area from which facility components might be visible.\(^{532}\) The Department has reviewed the results of the viewshed analysis to verify the applicant’s assertion that, due to intervening topography, the facility would not be visible from the applicable portion of the Mount Hood Scenic Byway. The Department recommends that the Council find that, because the facility would not be visible from the byway, the proposed facility would not result in an impact to identified scenic resources or values associated with the Mount Hood Scenic Byway.

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in significant adverse impact to scenic resources or values associated with the portion of the Mount Hood Scenic Byway within the analysis area.

**Beaver Creek**

The City of Troutdale Comprehensive Land Use Plan, as amended in 2011, identifies Beaver Creek as a significant scenic resource. The applicant explains that the Comprehensive Land Use Plan identifies views of Beaver Creek as scenic, rather than views from Beaver Creek, quoting the following from the Plan: “Troutdale has a particularly scenic location, with views of […] Beaver Creek.”\(^{533}\) The Department has reviewed the relevant portions of the Comprehensive Land Use Plan and finds that the Plan only identifies views of Beaver Creek as significant or important.

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\(^{532}\) CH2M Hill, “Troutdale Energy Center: Supplemental Scenic Resource Analysis,” June 26, 2013, Figure 2.

\(^{533}\) Final ASC, Section R.6.4.6, p. R-31.
The applicant provides a map (Figure R-1) showing the relative location of Beaver Creek to the proposed facility site, and concludes that nearly all views of Beaver Creek will be obtained by viewers south of I-84, looking east to Beaver Creek. The applicant refers to Figure K-1 of the application, which shows that nearly all of the land north of the freeway is zoned for industrial use. The applicant explains that the facility would be within the line of sight of views from residential, commercial, or recreational areas located south of I-84. The Department finds that the northern edge of the proposed facility site lies within less than 1,000 feet of the northern city limit of Troutdale, meaning that the facility could only occupy the line of sight towards Beaver Creek for a very small percentage of land within Troutdale. The Department has reviewed the maps provided by the applicant to evaluate the applicant’s conclusion that nearly all views of Beaver Creek would be obtained from south of I-84. In addition, the Department reviewed a photo simulation of provided by the applicant which shows that existing buildings and topographical barriers would likely preclude any views of Beaver Creek from north of the proposed facility. The Department recommends that the Council find that, because Beaver Creek is not visible from viewing areas near the facility site under existing conditions, impacts from the proposed facility to scenic resources or values associated with views of Beaver Creek are not likely to occur.

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources or values identified for Beaver Creek.

**Broughton Bluff**

The *City of Troutdale Comprehensive Land Use Plan*, as amended in 2011, identifies Broughton Bluff as a significant scenic resource. The applicant explains that the *Comprehensive Land Use Plan* identifies views of Broughton Bluff as scenic, rather than views from Broughton Bluff, quoting the following from the *Plan*: “Troutdale has a particularly scenic location, with views of [...] Broughton Bluff.” The Department has reviewed the relevant portions of the *Comprehensive Land Use Plan* and finds that the *Plan* only identifies views of Broughton Bluff as significant or important. The Department analyzes potential impacts to scenic values associated with views from Broughton Bluff in the preceding discussion of the Lewis and Clark State Recreation Area.

The applicant provides visual simulations showing existing views and views depicting both typical and representative worst case plume from the proposed facility, as viewed from the 40-Mile Loop Trail, looking southeast toward Broughton Bluff and the proposed facility site. The

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535 Final ASC, Attachment R-2, Figure 5a.
537 Final ASC, Attachment R-2, Figures 5a, 5b, and 5c.
applicant notes that this view, approximately 1.5 miles from Broughton Bluff and 0.2 miles from
the proposed facility site, provides one of the closest unobstructed views of the facility.\textsuperscript{538} The
visual simulations show a clear, unobstructed line of sight towards the facility site, with
generating components, cooling towers, and the cooling tower plume prominently visible in the
foreground. The visual simulations also show existing discordant visual elements occupying the
viewed landscape from this location, including the Federal Express distribution facility and
extensive infrastructure for several high voltage transmission lines.\textsuperscript{539} The applicant also states
that, under existing conditions, nearly all views of Broughton Bluff from north of I-84 are
impacted by existing industrial development, and the viewpoint used for the visual simulation
in Figures 5a-5c represents one of the few places where the proposed facility would impact
views of the bluff.\textsuperscript{540} The Department has reviewed aerial photos and topographic maps of the
vicinity to verify the applicant’s assertion that existing industrial uses encroach on the
landscape that would be viewed toward the direction of the facility site from areas north of I-
84, including along the 40-Mile Loop Trail.

The Department recommends that the Council find that the existing industrial features within
the viewed landscape preclude impacts from the proposed facility to scenic values associated
with views to Broughton Bluff from meeting the definition of “significant” at OAR 345-001-
0010(53).

Based on the evidence in the record, the Department recommends that the Council find that
the design, construction and operation of the facility, taking into account mitigation, are not
likely to result in significant adverse impact to scenic resources or values associated with views
to Broughton Bluff.

\textbf{Washougal River}

The \textit{City of Washougal Updated Comprehensive Plan}, as amended in 2003, identifies scenic
values derived from the Washougal River, which is located about 1.4 miles north of the
proposed facility site at its closest point.\textsuperscript{541} The applicant explains that the \textit{Updated
Comprehensive Plan} does not include specific goals or policies related to scenic resources
associated with the Washougal River, but does quote the following policy from the Parks and
Open Space element of the plan:

\begin{quote}
“Shorelines provide open space benefits through natural, scenic, or recreational values. The
\textit{City of Washougal has an abundance of shoreline resources along the Columbia and
Washougal Rivers. The primary benefit of shorelines is the experience derived from being in

\begin{footnotesize}
\begin{itemize}
\item \textsuperscript{538} Final ASC, Section R.6.4.7, pp. R-31 and R-32.
\item \textsuperscript{539} Final ASC, Attachment R-2, Figures 5a, 5b, and 5c.
\item \textsuperscript{540} Final ASC, Section R.6.4.7, p. R-32.
\item \textsuperscript{541} Final ASC, Table R-2, pp. R-16 through R-18.
\end{itemize}
\end{footnotesize}
close proximity to and having views and potential access to the two major rivers in the UGA."

The applicant provides the results of a viewshed analysis developed using Environmental Systems Research Institute (ESRI) ArcGIS software using a line-of-sight model and topographical data to identify the areas within the analysis area from which facility components might be visible. The Department has reviewed the results of the viewshed analysis to verify the applicant’s assertion that, due to intervening topography, the facility would not be visible from the applicable portion of the Washougal River. The Department recommends that the Council find that, because the facility would not be visible from the river, the proposed facility would not result in an impact to identified scenic resources or values associated with the Washougal River.

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources or values associated with the portion of the Washougal River within the analysis area.

Fairview Lake

The Fairview Visioning Document, adopted by the City of Fairview in 2002, identifies Fairview Lake as a significant scenic resource. The nearest portion of the lakes is approximately 2.1 miles west of Lot 3, where the largest facility components would be constructed and where the cooling tower plume would originate. The applicant also states that a single 230-kV transmission line pole would be located within 0.6 miles of the lake, but that the “230-kV transmission line is not anticipated to be visible from any portion of the lakes.” The applicant proposes to connect the line using 85 foot tall steel monopole structures. Based on the evidence provided in the record, the Department cannot verify the applicant’s assertion that the transmission line would not be visible from Fairview Lake.

The applicant provides a photo taken from the south bank of Fairview Lake, facing east toward the facility site from a distance of approximately 2.4 miles. The photo shows dense deciduous and evergreen vegetation screening potential views of the facility, as well as discordant elements such as transmission line towers and residential areas developed at an urban density. In addition, the applicant states that the viewed landscape looking from the park to

542 CH2M Hill, “Troutdale Energy Center: Supplemental Scenic Resource Analysis,” June 26, 2013, Figure 3.
543 Final ASC, Table R-2, p. R-16 through R-18.
544 Final ASC, Section R.6.4.9, p. R-32.
545 Final ASC, Section R.6.4.9, p. R-32.
the proposed facility site would include many other examples of large scale urban and industrial
development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the
Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv
Ostrander-Troutdale transmission line. The applicant also explains that, because the
proposed facility site is located east of Fairview Lake, the proposed facility would not impact
views of the lakes from residences in the City of Fairview.

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the
applicant’s assertion that existing industrial uses encroach on the landscape that would be
viewed in the absence of vegetation toward the direction of the facility site from the lake. The
Department recommends that the Council find that impacts from the proposed facility to scenic
resources or values at Fairview Lake are not likely to occur due to the presence of screening
vegetation. Additionally, the Department recommends that the Council find that, even in the
absence of screening vegetation, the existing urban and industrial features within the viewed
landscape would likely preclude impacts from the proposed facility to scenic values at Fairview
Lake from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that
the design, construction and operation of the facility, taking into account mitigation, are not
likely to result in significant adverse impact to scenic resources or values at the Fairview Lake.

**Blue Lake**

The *Fairview Visioning Document*, adopted by the City of Fairview in 2002, identifies Blue Lake
as a significant scenic resource. The nearest portion of the lakes is approximately 2.1 miles
west of Lot 3, where the largest facility components would be constructed and where the
cooling tower plume would originate. The applicant also states that a single 230-kV
transmission line pole would be located within 0.6 miles of the lake, but that the “230-kV
transmission line is not anticipated to be visible from any portion of the lakes.” The applicant
proposes to connect the line using 85 foot tall steel monopole structures. Based on the
evidence provided in the record, the Department cannot verify the applicant’s assertion that
the transmission line would not be visible from Blue Lake. The applicant provides a photo taken
from the north bank of Blue Lake, facing east toward the facility site from a distance of
approximately 2.1 miles. The photo shows dense deciduous and evergreen vegetation
screening potential views of the facility, as well as discordant elements such as transmission

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549 Final ASC, Section R.6.4.9, p. R-32.
550 Final ASC, Table R-2, p. R-16 through R-18.
551 Final ASC, Section R.6.4.9, p. R-32.
line towers and residential areas developed at an urban density. The applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line. The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from the lake. The Department recommends that the Council find that, although facility components on Lot 3 and a steel monopole associated with the proposed 230-kV transmission line may impact scenic resources or values at Blue Lake, existing urban and industrial features within the viewed landscape preclude impacts from the proposed transmission line tower to scenic values at Blue Lake from meeting the definition of “significant” at OAR 345-001-0010(53). Additionally, the Department recommends that the Council find that the existing urban and industrial features within the viewed landscape would likely preclude impacts from the proposed facility to scenic values at Blue Lake from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources or values at the Blue Lake.

**Springwater Plan District**

The Gresham Community Development Plan, updated in 2006, identifies the Springwater Plan District (Springwater), located approximately 5.6 miles south of the proposed facility site, as a significant scenic resource. The applicant provides a photo taken facing northwest toward the proposed facility site from within Springwater. These photos show dense deciduous and evergreen vegetation screening potential views of the facility. In addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line. The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the

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553 CH2M HILL, “Troutdale Energy Center: Supplemental Scenic Resource Analysis,” June 26, 2013, Appendix A, Photo 30, p. A-15. Note that in an August 14, 2013 email, the applicant clarifies that the photo caption for Photo 30 incorrectly states that the photo shows a view from Fairview Lake and that Photo 30 was taken from Blue Lake.


555 Final ASC, Table R-2, p. R-16 through R-18.


landscape that would be viewed in the absence of vegetation toward the direction of the
facility site from within the park. The Department recommends that the Council find that
impacts from the proposed facility to scenic resources or values in the Springwater Plan District
are not likely to occur due to the presence of screening vegetation. Additionally, the
Department recommends that the Council find that, even in the absence of screening
vegetation, the existing industrial features within the viewed landscape would likely preclude
impacts from the proposed facility to scenic values in the Springwater Plan District from
meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that
the design, construction and operation of the facility, taking into account mitigation, are not
likely to result in significant adverse impact to scenic resources or values in the Springwater
Plan District.

IV.J.2 Scenic Resources: Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the
recommended site certificate conditions, the Department recommends that the Council find
that the proposed facility complies with the Council’s Siting Standards for Scenic Resources.

IV.L. Recreation [OAR 345-022-0100]

(1) Except for facilities described in section (2), to issue a site certificate, the Council must
find that the design, construction and operation of a facility, taking into account
mitigation, are not likely to result in a significant adverse impact to important
recreational opportunities in the analysis area as described in the project order. The
Council shall consider the following factors in judging the importance of a recreational
opportunity:

(a) Any special designation or management of the location;

(b) The degree of demand;

(c) Outstanding or unusual qualities;

(d) Availability or rareness;

(e) Irreplaceability or irretreivability of the opportunity.

(2) The Council may issue a site certificate for a special criteria facility under OAR 345-
015-0310 without making the findings described in section (1). However, the Council may
apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

IV.L.1: Recreation: Findings of Fact

OAR 345-022-0100(1) applies only to those recreational opportunities that the Council finds “important” using the factors listed in the sub paragraphs of section (1) of the standard. Because the proposed facility is not a special criteria facility under OAR 345-015-0310, OAR 345-022-0100(2) does not apply to the proposed facility. The applicant provides evidence about potential impacts to important recreation opportunities in Exhibit T of the application. In addition, the applicant submitted additional analysis as that the Department identified as needed pursuant to OAR 345-015-0190(9).558 The Project Order identifies the analysis area for the Recreation Standard as the area within the site boundary and five miles from the site boundary.

OAR 345-022-0100 requires that the Council determine that the design, construction, and operation of the proposed facility will not have a significant adverse impact to any recreational opportunities in the analysis area. OAR 345-001-0010(53) defines “significant” as follows: (53) “Significant” means having an important consequence, either alone or in combination with other factors, based upon the magnitude and likelihood of the impact on the affected human population or natural resources, or on the importance of the natural resources affected, considering the context of the action or impact, its intensity, and the degree to which possible impacts are caused by the proposed action. Nothing in this definition is intended to require a statistical analysis of the magnitude or likelihood of a particular impact.

In order to apply this standard to recreational opportunities, the Department first evaluates the possibility of an adverse impact from design, construction, or operation of the facility affecting the identified recreational opportunity. If a reasonable possibility exists that the facility may result in a significant adverse impact on an identified recreational opportunity, the Department then considers the significance of the possible impact using the criteria in OAR 345-001-0010(53).

IV.L.1.a: Recreational Opportunities within the Analysis Area

The area within the proposed facility’s site boundary offers no public recreational opportunities; all opportunities described below are within the analysis area.559 Within the analysis area, recreational areas include wildlife viewing, camping, boating, hiking, photography, angling, scenic drives, and cycling.560

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559 Final ASC, Section Section T-2, p. T-2.
560 ASC Figure T-1, p. T-1.
Given the proposed facility’s proximity to a number of metropolitan areas and the presence of the Columbia River Gorge National Scenic Area within the analysis area, the applicant identified a large number of recreational opportunities. Of the 110 recreational opportunities identified within the analysis area, the applicant’s analysis shows that the vast majority (96) of these opportunities do not satisfy the criteria prescribed in OAR 345-022-0100 to be considered important recreational opportunities because they lack special designation or management, are not unusual, and could be replaced if impacted.\textsuperscript{561} In the ASC, the applicant includes a comprehensive list\textsuperscript{562} of all recreational opportunities identified within the analysis area and a recreational importance evaluation for recreational opportunities that do not satisfy the criteria established in OAR 345-022-0100.\textsuperscript{563}

The applicant identifies eighty-two city parks and six trails that are not described in the application even though they are located within the five-mile analysis area in Oregon and Washington. The applicant states that these parks are not considered “important” under the Council standard. In addition, a variety of golf courses, recreational vehicle (RV) parks, and marinas are located within the analysis area. In Attachment T-2, the applicant provides an analysis of the importance of various recreational opportunities within the analysis area under the OAR 345-022-0100 criteria. The Department concurs with this analysis.

The applicant identifies 14 recreational resources that it asserts satisfy the OAR 345-022-0100 criteria and are therefore “important” recreational opportunities under this standard. The applicant listed these 14 important recreational opportunities in Table T-1 of Exhibit T of the ASC. The applicant concludes that the following recreational opportunities are each an important recreation opportunity for purposes of OAR 345-022-0100: Columbia River Gorge National Scenic Area, Sandy River Delta Recreation Area, Lewis and Clark State Recreation Area, Lewis and Clark National Historic Trail, Historic Columbia River Highway, Reed Island State Park, 40-Mile Loop Trail, Sandy River Water Trail, Lower Columbia River Water Trail, Blue Lake Regional Park, Mount Hood Scenic Byway, Government Island State Recreation Area, Sandy River National Wild and Scenic River, and Dabney State Recreation Area.\textsuperscript{564}

Section IV.L.1.c, below, describes the recreation opportunities identified by the applicant within the analysis area and includes the Department’s recommendation to the Council regarding the “importance” of the recreation opportunity and potential impacts to those recreation opportunities.

\textit{IV.L.1.b: Types of Impacts to Recreational Opportunities}

\textsuperscript{561} Final ASC, Attachment T-2
\textsuperscript{562} Final ASC, Attachment T-1.
\textsuperscript{563} Final ASC, Attachment T-2, p. T-5.
\textsuperscript{564} Final ASC, Section T.2, pp. T-3 through T-4
The Council must be able to find that, taking into account mitigation, the facility’s design, construction and operation are not likely to result in a significant adverse impact to an important recreational opportunity. A significant adverse impact could be from either a direct or indirect loss of a recreational opportunity.\(^{565}\)

None of the important recreation opportunities identified above are within the facility’s site boundary, but they are within the analysis area.\(^{566}\) Since none of the important recreational opportunities are located within the site boundary, no important recreational opportunity would be directly altered as a result of the Facility’s construction or operation. Therefore, no direct recreational loss will occur. The Department evaluates potential indirect loss\(^{567}\) of recreation opportunity by evaluating potential noise, traffic, and visual impacts at all identified important recreational opportunities.\(^{568}\)

### Noise Resulting from Facility Construction or Operation

In Exhibit X, the applicant provides information about predicted noise levels resulting from construction and operation of the facility. Because the recreational opportunities closest to the proposed facility site are not designated “quiet areas” or other identified noise-sensitive receptors, there are no applicable noise requirements contained in DEQ noise regulations at OAR Chapter 340, Division 35. However, although the noise regulations are not directly applicable to the 40-Mile Loop Trail, the applicant’s evidence regarding compliance with these regulations, which protect humans from impacts of excessive noise emissions,\(^{569}\) is relevant in considering the potential impacts of the facility on recreational opportunities in the analysis area.

Table X-5 shows composite construction site noise levels ranging from 81 dBA to 87 dBA at the 70 foot distance to 40-Mile Loop Trail, the nearest protected area. The applicant explains that because the primary use of the trail is jogging, biking, or walking, the recreational user’s exposure to construction noise would be limited in duration. In addition, the applicant states that current use of the 40-Mile Loop Trail, as well as other recreational opportunities within an audible distance of the facility, are already subject to industrial sources of noise including the Portland-Troutdale Airport, the Federal Express distribution facility, and automobile traffic on I-84.\(^{570}\) During operation, the applicant estimates noise generated by the facility at more than 55 dBA at the edge of the Columbia River Gorge National Scenic Area (CRGNSA), a recreational opportunity within 1,040 the site boundary. The applicant states that this noise level would

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\(^{565}\) OAR 345-022-0100
\(^{566}\) Final ASC, Section T.3, p. T-11
\(^{567}\) OAR 345-021-0010(1)(t)(B)(ii) through (iv).
\(^{568}\) Final ASC, Section T.3, p. T-11.
\(^{569}\) OAR 340-035-0005(1) provides that it is a public policy of the State of Oregon “To provide a coordinated state-wide program of noise control to protect the health, safety, and welfare of Oregon citizens from the hazards and deterioration of quality of life imposed by excessive noise emissions.”
\(^{570}\) Final ASC, Section T.3, p. T-12.
Troutdale Energy Center
Proposed Order

attenuate with distance to reach approximately 45 dBA within 3,500 feet of the edge of the CRGNSA.\textsuperscript{571}

The Department recommends that the Council find that the predicted noise resulting from construction and operation of the facility would not result in a significant adverse impact to important recreational opportunities within the analysis area.

\textbf{Increased traffic resulting from facility construction or operation}

The applicant anticipates that the majority of facility-related traffic during construction and operation will approach the facility site from I-84, which passes through the Columbia River Gorge National Scenic Area, a recreational opportunity.\textsuperscript{572} The major collectors that connect the facility site to I-84, NW Sundial Road and NE Marine Drive, do not pass through or near any protected area. In Exhibit U, the applicant provides 2010 traffic counts provided by the Oregon Department of Transportation, which show 29,600 average daily trips on I-84 at milepost 17.71.\textsuperscript{573}

The applicant states that during construction, facility related traffic will consist of deliveries of construction materials and commuting trips by construction workers. The applicant estimates that construction of the facility will add a maximum of 1,025 daily trips, consisting of 500 daily workers traveling to and from work and an additional 25 trips for mobilization and demobilization of materials during peak construction. The applicant estimates that, over the projected 24-month construction period, the workforce will average 350 people, adding approximately 725 daily trips to and from the facility.

The applicant explains that delivery of heavy equipment (approximately 30 to 40 pieces of equipment) would be infrequent and would occur during the initial months of the 24-month construction period. The applicant provides information about the proposed access routes that would be used for delivery of heavy equipment. The proposed routes primarily avoid roadways that are used to access important recreational opportunities in the analysis areas, such as the Historic Columbia River Highway, the Mount Hood Scenic Byway, and I-84.\textsuperscript{574}

The applicant estimates that during operation, commuting trips by staff and occasional maintenance and delivery trips will add approximately 44 daily commuting trips.\textsuperscript{575}

\textsuperscript{571} Final ASC, Section X.2, pp. X-6 and X-7.
\textsuperscript{572} Final ASC, Section L.4, p. L-4.
\textsuperscript{573} Final ASC, Section U.4.7.3, Table U-3, p. U-11.
\textsuperscript{574} Final ASC, Section T.3, p. T-12.
\textsuperscript{575} Final ASC, Section L.4, p. L-4.
The Department recommends that the Council find that the expected increase in daily traffic resulting from construction and operation of the facility is unlikely to result in a significant adverse impact to important recreational opportunities in the analysis area.

**Visual Impacts of Facility Structures or Plumes**

In Exhibit R, the applicant states that the proposed facility would add “industrial elements” to the landscape, including the combustion turbine generator buildings, steam turbine generator buildings, outdoor heat recovery steam generators (HRSGs), HRSG exhaust stacks, mechanical draft cooling towers, a water treatment building and water tanks, a control and administration building, and generators and auxiliary transformers. The tallest component of the proposed facility is the exhaust stack for the combined-cycle power block, which would stand 159 feet tall. Other relatively tall elements of the proposed facility include the heat recovery steam generator (110 feet tall) and the exhaust stack related to the simple-cycle power block (90 feet tall). Steel monopole structures making up the transmission line are expected to be approximately 85 feet tall.\(^{577}\) The applicant provides modeling data that shows that the height of plumes, when visible, will typically be less than 75 meters (m) (246 feet).\(^{578}\) For all seasons, the heights of visible plumes that could form will most frequently be between 0 and 25 m (0 and 82 feet) above the cooling tower. For most of the year (spring, summer, and fall), the lengths of the visible plumes that could form will most frequently be between 0 and 50 m (0 and 164 feet). During winter, the lengths of the visible plumes that could form are predicted to range between 100 and 200 m (328 and 656 feet).\(^{579}\)

These facility structures and plumes may be visible from important recreational opportunities within the analysis area. The Department evaluates potential visual impacts from facility structures and plumes to specific recreational opportunities in further detail in Section IV.L.1.c below.

**IV.L.1.c: Potential Impacts to Important Recreational Opportunities in the Analysis Area**

**A. Columbia River Gorge National Scenic Area**

The applicant explains that the Columbia River Gorge National Scenic Area (CRGNSA) has been designated under the National Scenic Area Act as a National Scenic Area and is managed under the Columbia River Gorge Management Plan (2011), developed by the Columbia River Gorge Commission.\(^{580}\) The CRGNSA is managed jointly by the Columbia River Gorge Commission and the U.S. Forest Service. The special designation encompasses 292,500 acres over 83 miles and

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\(^{577}\) Final ASC, Section B.4, Table B-1, p. B-19.

\(^{578}\) Final ASC, Figure Z-1.

\(^{579}\) Final ASC, Section Z.2, p. Z-1.

\(^{580}\) Final ASC, Table T-1, p. T-3.
recognizes the CRGNSA for its outstanding landscapes, hiking, wildlife viewing, fishing, windsurfing and other recreational opportunities. The CRGNSA boundary is located 0.2 miles east of the facility’s site boundary and, as stated in the application, recreational opportunities within the CRGNSA are in high demand due to its proximity to the Portland Metro Area and surrounding population centers. The applicant acknowledges that because of the high demand for recreational opportunities within Oregon’s only National Scenic Area, the CRGNSA’s uncommon and irreplaceable recreational opportunities satisfy the criteria of OAR 345-022-0100 and therefore makes the CRGNSA an important recreational opportunity. Based on the evidence provided by the applicant, the Department recommends that the Council conclude that the CRGNSA offers an important recreational opportunity.

1. Recreational Opportunities Located Within or Partially Within the Columbia River Gorge National Scenic Area

Six of the 14 important recreational opportunities identified by the applicant within the analysis area are located either partially or entirely within the Columbia River Gorge National Scenic Area.

**Sandy River Delta National Recreation Area**

The Sandy River Delta National Recreation Area is located 0.2 miles east of the facility’s site boundary. The recreation area is managed by the U.S. Forest Service and offers trails for running, hiking, horseback riding, and bird-watching, and provides access to the Sandy and Columbia River shorelines. Public use is restricted to a portion of the area in an effort to protect and enhance wildlife habitat and function within the area. Portions of the trail system have views of high-voltage transmission lines. Noting the abundance of high quality recreational resources throughout the CRGNSA, the applicant asserts that this recreation opportunity is somewhat uncommon and somewhat replaceable. Based on the high demand for recreation at this area and its uncommon recreational opportunities, the Department recommends that the Council conclude that the Sandy River Delta National Recreation Area offers an important recreational opportunity.

The applicant provides information about potential visual impacts of the facility to the Sandy River Delta Recreation Area in Exhibit L. The applicant provides a visual simulation showing existing views and views depicting both typical and representative worst case plume from the proposed facility, as viewed from the Sandy River Delta Recreational Area along the east bank of the Sandy River, looking west toward the facility. Figures 4a-4c in Attachment R-2 show the existing conditions of the area as well as the results of the photo simulations showing what the view may look like with the facility in place. Both simulations show existing dense evergreen

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581 Final ASC pp. T-3 and T-5.
582 ASC p. T-3.
583 ASC p. T-3, T-5.
and deciduous vegetation screening potential views of the facility.\textsuperscript{584} The applicant explains that even in the absence of vegetative screening, the viewed landscape from the Recreation Area would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.\textsuperscript{585} The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from the Recreation Area.

The Department recommends that the Council find that impacts from proposed facility structures or plumes to the Sandy River Delta Recreation Area are not likely to occur due to the presence of screening vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would preclude impacts from proposed facility structures or plumes to the Sandy River Delta Recreation Area from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, are not likely to result in significant adverse impact to recreational opportunities associated with the Sandy River Delta Recreation Area.

\textit{Lewis and Clark State Recreation Area}

The Lewis and Clark State Recreation Area is located 0.6 miles southeast of the facility’s site boundary. The Oregon Parks and Recreation Department manages this State Recreation Area, which commemorates the location where the Lewis and Clark Expedition camped and explored the area in November, 1805. The recreation area is situated at the mouth of the Sandy River and is one of the entrances to the Historic Columbia River Highway. The recreation area includes one of the most popular swimming areas on the Sandy River, a public boat launch, as well as a trail to Broughton Bluff, the geologic boundary between the Cascade Range and the Willamette Valley. The degree of demand for this recreation area is high in part because of its proximity to the City of Troutdale and also because of the variety of recreational opportunities available.

The applicant acknowledges that recreational opportunities available at the Lewis and Clark State Recreation Area are uncommon and irreplaceable given the historic significance of the area as well as the unique geologic backdrop of Broughton Bluff and access to the Sandy River. Due to its high degree of demand and outstanding recreational opportunities, the Department

\textsuperscript{584} Final ASC, Attachment R-2, Figures 4a, 4b, and 4c.

recommends that the Council conclude that the Lewis and Clark State Recreation Area satisfies the criteria of OAR 345-022-0100 as an important recreational opportunity.\footnote{Final ASC, Table T-1, p. T-3; and Section T.2.2.2, p. T-6.} The applicant provides information about potential visual impacts to the Lewis and Clark State Recreation Area in Exhibit L. The applicant provides photos taken from within commonly used areas in the SRA showing dense deciduous and evergreen vegetation screening potential views of the facility.\footnote{CH2M Hill, “Troutdale Energy Center: Supplemental Scenic Resource Analysis,” June 26, 2013, Appendix A, Photo 14 and Photo 15, pp. A-7 and A-8.} The applicant explains that even in the absence of vegetative screening, the viewed landscape from within the SRA would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.\footnote{CH2M Hill, “Troutdale Energy Center: Supplemental Scenic Resource Analysis,” June 26, 2013, p. 9.} The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the main use areas of the SRA. The Department recommends that the Council find that visual impacts from facility structures or plumes to the Lewis and Clark State Recreation Area due to the presence of screening vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would preclude visual impacts from facility structures or plumes to the Lewis and Clark State Recreation Area from meeting the definition of “significant” at OAR 345-001-0010(53).

The applicant provides a photo taken from the summit of Broughton Bluff, a geologic feature and hiking opportunity located within the SRA, which shows a clear, unobstructed line of sight towards the facility site.\footnote{CH2M Hill, “Troutdale Energy Center: Supplemental Scenic Resource Analysis,” June 26, 2013, Appendix A, Photo 27, p. A-14.} The applicant explains that the viewed landscape from this location includes many other examples of large scale urban and industrial development, including the City of Camas, Washington, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.\footnote{Final ASC, Section 6.4.2, p. R-26.} The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape as viewed toward the direction of the facility site from the top of Broughton Bluff. The Department recommends that the Council find that, due to the existing industrial features within the viewed landscape, visual impacts from facility structures or plumes to Broughton Bluff would not meet the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not

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586 Final ASC, Table T-1, p. T-3; and Section T.2.2.2, p. T-6.
likely to result in a significant adverse impact to recreational opportunities associated with the Lewis and Clark State Recreation Area.

**Lewis and Clark National Historic Trail**

The nearest portion of the Lewis and Clark National Historic Trail is located 0.6 miles southwest of the facility’s site boundary and is managed by the National Park Service through the *Lewis and Clark National Historic Trail Comprehensive Plan for Management and Use* (NPS, 1982). This historic trail spans 11 states and covers the approximately 3,700 mile Lewis and Clark Expedition route. The applicant’s analysis indicates that, within the 5-mile analysis area, there is moderate demand for recreational opportunities along the trail. Recreational opportunities fairly common for the area include hiking, plant and wildlife viewing, photography, and mountain biking. The majority of visitors recreate at the Points of Interest along the trail; the only Point of Interest located within the 5-mile analysis area is the Lewis and Clark State Recreation Area.

Given the historical significance of the trail and the recreational opportunities available throughout this location, the applicant concludes that the recreational opportunities are uncommon and irreplaceable.

The Department recommends that the Council find that due to its historic significance and its designation by NPS as a National Historic Trail, the Lewis and Clark National Historic Trail satisfies the criteria of OAR 345-022-0100 as an important recreational opportunity.\(^\text{591}\)

The portion of the trail closest to the facility runs through the Lewis and Clark State Recreation Area to potential viewpoints on the river itself that are also closest to the facility. Therefore, the Department also considers the results of the evidence provided by the applicant for that location in evaluating potential impacts to recreational opportunities associated with viewers on the trail. In findings on potential visual impacts to the Lewis and Clark State Recreation Area, the Department recommends that the Council find that the design, construction, and operation of the facility would not result in significant adverse impacts to recreational opportunities associated with the Lewis and Clark State Recreation Area. Accordingly, the Department recommends that the Council find that the design, construction, and operation of the facility would not result in a significant adverse impact to recreational opportunities associated with the Lewis and Clark National Historic Trail.

**Historic Columbia River Highway**

The nearest portion of the Historic Columbia River Highway is located 1.1 miles south of the facility site boundary. The highway is managed jointly by the Oregon Parks and Recreation

\(^{591}\) Final ASC, Table T-1, p. T-3; and Section T.2.2.2, p. T-6.
Department and the Oregon Department of Transportation through the *Historic Columbia River Highway Master Plan* (ODOT, 1996), and is listed as a National Historic Landmark on the National Register of Historic Places. It is an approximately 70-mile scenic drive between the cities of Troutdale and The Dalles that provides access to numerous recreational opportunities such as hiking, biking, sailing, windsurfing, fishing, photography and access to the Vista House at Crown Point and Multnomah Falls tourist destinations beyond the analysis area.

Within the analysis area, the highway is in moderate to high demand as a recreational opportunity, provides intermittent scenic views of the Sandy River, and serves as a point of access to Dabney State Recreation Area and the portion of the Sandy River designated as “Wild and Scenic.” Due to its scenic views, special designation as a National Historic Landmark, and the access that it provides to important recreational opportunities, the applicant recognizes that the highway is an uncommon and irreplaceable piece of recreational infrastructure.592 The Department recommends that the Council find that the Historic Columbia River Highway satisfies the criteria of OAR 345-022-0100 and offers an important recreational opportunity.

The applicant provides information about the potential visual impacts of the facility to the Historic Columbia River Highway in Exhibit L. The applicant provides photos taken from the Historic Columbia River Highway, looking northwest towards the proposed facility site at distances of approximately 1.3 miles and 3.4 miles away. Both photos show dense deciduous and evergreen vegetation screening views of the facility.593

The applicant explains that even in the absence of vegetative screening, other factors diminish the quality of views from the portion of the highway within the analysis area. Although the applicant does not indicate the posted and designed speed limits along this portion of the route, the presumed speed of vehicles traveling along a state highway and winding path of travel lanes would limit the duration of potential views. The applicant states that the visibility of facility components would be increasingly limited by distance effects as the route moves from 3.5 miles from the facility site at its closest point within the National Scenic Area to 10.0 miles at the edge of the analysis area. The applicant refers to the visual simulation provided in Figure 1c of Attachment R-2 of a Representative Worst Case plume as viewed from Crown Point, at a distance of 7.2 miles from the facility site, to show an example of potential visibility from a similar distance as portions of the highway within the analysis area.

In addition, the applicant states that the viewed landscape looking from the highway to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the

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592 Final ASC, Table T-1, p. T-3; and Section T.2.2.4, pp. T-6 and T-7.
Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.\textsuperscript{594}

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the applicable portions of the highway. The Department recommends that the Council find that visual impacts from the proposed facility to the portion of the Historic Columbia River Highway within the analysis area are not likely to occur due to the presence of screening vegetation and limited duration of views toward the facility site. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude visual impacts from the proposed facility to the portion of the Historic Columbia River Highway located within the analysis area from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to important recreational opportunities associated with the portion of the Historic Columbia River Highway located within the analysis area.

\textit{Reed Island State Park}

The nearest portion of Reed Island State Park is located 2.7 miles east of the facility site boundary in the State of Washington. The 510-acre marine park on the Columbia River is accessible only by boat and is managed by the Washington State Parks and Recreation Commission. The park provides recreational opportunities such as bird watching, boating, camping, and picnicking. The demand for this area is low because the park is only accessible by boat and the park only offers two primitive campsites and no restrooms.

However, the same features that restrict access to the Reed Island State Park and limit availability of recreational amenities also make the park an uncommon recreational opportunity for individuals seeking a more rugged recreational experience. The park is one of only two resources within the 5-mile analysis area that allows camping via exclusive boat access. The applicant states that while the recreational opportunities provided at the park are uncommon, they are also somewhat replaceable given the abundant camping and hiking opportunities throughout the CRGNSA. The Department recommends that the Council find that Reed Island State Park satisfies the criteria of OAR 345-022-0100 and offers an important recreational opportunity.\textsuperscript{595}

\textsuperscript{595} Final ASC, Table T-1, p. T-3; and Section T.2.2.5, p. T-7.
Because of the proximity of the portion of Reed Island State Park closest to the facility to the Sandy River Delta Recreation Area, the Department also considers the results of the evidence provided by the applicant for that location in evaluating potential impacts to recreational opportunities associated with viewers on the trail. In findings on potential visual impacts to the Sandy River Delta Recreation Area, the Department recommends that the Council find that the design, construction, and operation of the facility would not result in significant adverse impacts to recreational opportunities associated with the Sandy River Delta Recreation Area. Reed Island state park is located on the same line-of-sight toward the facility as the Sandy River Delta Recreation area, but approximately 2.5 miles further east. Accordingly, the Department recommends that the Council find that the design, construction, and operation of the facility would not result in a significant adverse impact to recreational opportunities associated with Reed Island State Park.

2. Recreational Opportunities Located Outside the Columbia River Gorge National Scenic Area

Eight of the 14 recreational opportunities the applicant identifies as important within the 5-mile analysis area are located outside of the Columbia River Gorge National Scenic Area.

40-Mile Loop Trail

The nearest portion of the 40-Mile Loop Trail is located less than 0.1 miles (approximately 70 feet) north of the facility site boundary. It is a system of connected recreational trails in the Portland metropolitan area maintained by the 13 local jurisdictions it crosses; however planning efforts for the trail are managed by the 40-Mile Loop Land Trust. The trail was originally proposed in 1904 as part of the planning for the Lewis and Clark Centennial Exposition and World’s Fair. The loop is not yet complete, though the planned trail has been lengthened to more than 140 miles to include all of Multnomah County and to connect more than 30 parks, including Portland’s Waterfront Park, the Springwater Corridor, and Powell Butte Nature Park. The trail provides recreational opportunities for hikers, runners, cyclists, skateboarders, and horseback riders and is the closest recreation opportunity to the Facility. The portion of the 40-Mile Loop Trail within the analysis area has views of high voltage transmission lines and industrial development.

The applicant states that staff of the Port of Portland, which owns and manages land surrounding the trail, indicates that the degree of demand for the trail adjacent to the facility is high. Considering the amount of hiking, biking, and jogging opportunities available within the analysis area, its high degree of demand, and uniqueness as an extensive, integrated trail network, the applicant asserts that the opportunities provided are somewhat uncommon and somewhat replaceable. The Department recommends that the Council find that the 40-Mile

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596 Final ASC, Section T.2.3.1, p. T-8.
Loop Trail offers an important recreational opportunity that satisfies the criteria of OAR 345-022-0100.\textsuperscript{597}

The applicant provides photo simulations that show a clear, unobstructed line of sight towards the facility site, with generating components, cooling towers, and the cooling tower plume prominently visible in the foreground. The visual simulations also show existing discordant visual elements occupying the viewed landscape from this location, including the Federal Express distribution facility and extensive infrastructure for several high voltage transmission lines.\textsuperscript{598} The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed toward the direction of the facility site from areas north of the facility along the 40-Mile Loop Trail.

The Department recommends that the Council find that the existing industrial features within the viewed landscape preclude impacts from the proposed facility to recreational opportunities associated with the 40-Mile Loop Trail from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in significant adverse impact to recreational opportunities associated with the 40-Mile Loop Trail.

\textit{Sandy River Water Trail}

The 38-mile Sandy River Water Trail is located on the Sandy River between Alder Creek and the Columbia River, 0.1 mile northeast of the facility’s site boundary at its closest point. The Bureau of Land Management and the Oregon Parks and Recreation Department manage the water trail in coordination with local jurisdictions. This trail provides a water trail for boating, kayaking, and other water sports. OPRD provides maps showing areas of interest and put-in/take-out locations along the river.\textsuperscript{599}

The demand for this recreational opportunity is moderate because access to the trail is limited to recreational users with watercrafts. However, the unique nature of the trail, some of which is set to the backdrop to a portion of the Sandy River designated as “Wild and Scenic,” makes this recreational opportunity uncommon and irreplaceable according to the applicant. The Department recommends that the Council find that the Sandy River Water Trail satisfies the criteria of OAR 345-022-0100 and offers an important recreational opportunity.\textsuperscript{600}

\textsuperscript{597} Final ASC ASC, Table T-1, p. T-4; and Section T.2.3.1, pp. T-7 and T-8.
\textsuperscript{598} Final ASC, Attachment R-2, Figure 5a.
\textsuperscript{599} Final ASC, Table T-1, p. T-4; and Section T.2.3.2, p. T-8.
\textsuperscript{600} Final ASC, Table T-1, p. T-4; and Section T.2.3.2, p. T-8.
Because of the close proximity of the viewpoint used in the visual simulation for the Sandy River Delta Recreation Area to potential viewpoints on the river itself that are closest to the facility, the Department also considers the results of this simulation in evaluating potential impacts to recreational opportunities associated with viewers on the river. In findings on potential visual impacts to the Sandy River Delta Recreation Area, the Department recommends that the Council find that the design, construction, and operation of the facility would not result in significant adverse impacts to recreational opportunities associated with the Sandy River Delta Recreation Area. Accordingly, the Department recommends that the Council find that the design, construction, and operation of the facility would not result in a significant adverse impact to recreational opportunities associated with the Sandy River Water Trail.

**Lower Columbia River Water Trail**

The nearest portion of the 146-mile Lower Columbia River Water Trail is located 0.4 miles north of the Facility’s site boundary. The Lower Columbia River Estuary Partnership (CREP) provides input and guidance into the trail’s development and management with support from the U.S. Environmental Protection Agency and U.S. Fish and Wildlife Service. The water trail provides a 146-mile water trail for boating, kayaking, and other water sports on the Lower Columbia River from the Bonneville Dam to the Pacific Ocean. CREP provides maps showing campsites, areas of interest, and restaurants to stop at along the water trail.

The demand for this recreational opportunity is moderate since access to the trail is limited to recreational users with watercrafts. However, the applicant states that the unique nature of the trail, much of which is set to the backdrop of the CRGNSA, makes this recreational opportunity uncommon and irreplaceable. The Department recommends that the Council find that the Lower Columbia River Water Trail satisfies the criteria of OAR 345-022-0100 and offers an important recreational opportunity.\(^{601}\)

The applicant provides a photo taken from the southern bank of the Columbia River, facing east toward the facility site from a distance of approximately 2.3 miles. This photo shows vegetation that would fall within the presumed line of sight from viewers on boats on the Columbia River to the proposed facility site. This photo shows dense deciduous and evergreen vegetation screening potential views of the facility.\(^{602}\) In addition, the applicant states that the viewed landscape looking from the Columbia River to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.\(^{603}\) The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the

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\(^{601}\) Final ASC, Table T-1, p. T-4; and Section 2.3.3, p. T-8.


landscape that would be viewed in the absence of vegetation toward the direction of the facility site from on the river. The Department recommends that the Council find that visual impacts from the proposed facility to recreational opportunities associated with views from the Columbia River are not likely to occur due to the presence of screening vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude visual impacts from the proposed facility to recreational opportunities associated with views from the Lower Columbia Water Trail from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in significant adverse impact to recreational opportunities associated with the Lower Columbia Water Trail.

**Blue Lake Regional Park**

The nearest portion of Blue Lake Regional Park is located 0.4 miles west of the Facility’s site boundary. The 82-acre park with a 64-acre spring fed natural lake is managed by Metro. The park features a small water park for children and the lake provides boating, fishing, and swimming opportunities for recreational users. Picnicking, hiking, and group sports are also popular activities in the park.

The demand for this recreational area is high given the variety of recreational opportunities available and the proximity of the park to the cities of Portland, Fairview, Gresham, and Troutdale. While a recreational facility that offers all of these opportunities in one place is somewhat uncommon within the analysis area, the opportunities themselves are somewhat common given the abundant supply of hiking, picnicking, and water sport opportunities available within the analysis area. Therefore, the applicant states that the recreational opportunities are considered somewhat uncommon and somewhat replaceable. The Department recommends that the Council find that Blue Lake Regional Park satisfies the criteria of OAR 345-022-0100 and offers an important recreational opportunity.

The applicant provides a photo taken from the north bank of Blue Lake, facing east toward the facility site from a distance of approximately 2.1 miles. The photo shows dense deciduous and evergreen vegetation screening potential views of the facility, as well as discordant elements such as transmission line towers and residential areas developed at an urban density. The applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including

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604 CH2M HILL, “Troutdale Energy Center: Supplemental Scenic Resource Analysis,” June 26, 2013, Appendix A, Photo 30, p. A-15. In an August 14, 2013 email, the applicant clarifies that the photo caption for Photo 30 incorrectly states that the photo shows a view from Fairview Lake and that Photo 30 was taken from Blue Lake.
the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line. The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from the lake. The Department recommends that the Council find that the existing urban and industrial features within the viewed landscape would likely preclude impacts from the proposed facility to recreational opportunities at Blue Lake from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in significant adverse impact to recreational opportunities at Blue Lake.

**Mount Hood Scenic Byway**

The nearest portion of the 105-mile Mount Hood Scenic Byway is located 0.8 miles south of the Facility’s site boundary and is managed jointly by the Oregon Department of Transportation and the U.S. Forest Service through the Mount Hood National Scenic Byway Interpretive Plan and Design Guidelines (USFS, 2009). The Federal Highway Administration has designated it as a Scenic Byway because it offers outstanding geologic scenery and access to waterfalls, temperate rainforests, and the last leg of the Oregon Trail at Barlow Road.

The byway has a high degree of demand, primarily from users accessing recreational opportunities outside of the analysis area, including Mount Hood and Multnomah Falls. Within the 5-mile analysis area, the byway provides scenic views of Mount Hood, but does not provide direct access to any of the important recreational opportunities identified by the applicant. Therefore, the applicant states that the recreational opportunities provided by the byway within the 5-mile analysis area are somewhat uncommon and somewhat replaceable. The Department recommends that the Council find that the Mount Hood Scenic Byway satisfies the criteria of OAR 345-022-0100 and offers an important recreational opportunity.

The applicant provides the results of a viewshed analysis developed using Environmental Systems Research Institute (ESRI) ArcGIS software using a line-of-sight model and topographical data to identify the areas within the analysis area from which facility components might be visible. The Department has reviewed the results of the viewshed analysis to verify the applicant’s assertion that, due to intervening topography, the facility would not be visible from the applicable portion of the Mount Hood Scenic Byway. The Department recommends that the Council find that, because the facility would not be visible from the byway, the proposed facility

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606 Final ASC, Table T-1, p. T-4; and Section T.2.3.4, p. T-9.
607 CH2M Hill, “Troutdale Energy Center: Supplemental Scenic Resource Analysis,” June 26, 2013, Figure 2.
would not result in an impact to recreational opportunities associated with the Mount Hood Scenic Byway.

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in significant adverse impact to recreational opportunities associated with the portion of the Mount Hood Scenic Byway within the analysis area.

**Government Island State Recreation Area**

The nearest portion of Government Island State Recreation Area is located 1.1 miles west of the Facility’s site boundary. The Oregon Parks and Recreation Department manages this marine park comprised of a series of islands in the Columbia River. The area is accessible only by boat and has two docks and a floating tie-up on the north side of the main island. The recreation area offers opportunities for fishing, and camping is permitted around the perimeter of the area. Hiking trails are also present throughout the island, though the interior of the island is still used for cattle ranching and is off limits to recreational users.

The demand for this recreation area is moderate to low because the recreation area is only accessible by boat and there is a limited supply of campsites, restrooms, and picnic tables available for public use. The applicant states that the recreation area is uncommon because it is one of only two resources within the analysis area that allows camping via exclusive boat access, but the recreational opportunities provided at the recreation area are somewhat replaceable given the abundant camping and hiking opportunities throughout the CRGNSA. The Department recommends that the Council find that the Government Island State Recreation Area satisfies the criteria of OAR 345-022-0100 and offers an important recreational opportunity.608

The applicant provides a photo taken from the northbound span of the I-205 Glenn L. Jackson Memorial Bridge, facing east toward the facility site. The photo shows dense stands of deciduous vegetation screening views toward the facility. The applicant anticipates that the density of vegetation, particularly along the eastern shore of Government Island, is such that tree trunks and branches will provide screening during winter months.609 The Department cannot verify this assertion based on the evidence in the record. The applicant acknowledges that facility structures and the cooling tower plume may be more visible from the southern and western portions of the island.

The applicant explains that the viewed landscape from within the SRA would include many other examples of large scale urban and industrial development, including developed areas of the City of Camas, Washington, existing plumes produced by the Georgia-Pacific paper mill in

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608 Final ASC, Table T-1, p. T-4; and Section T.2.3.5, p. –T-9.
Troutdale Energy Center
Proposed Order

December 16, 2013

Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale
transmission line. The Department has reviewed aerial photos of the vicinity to verify the
applicant’s assertion that existing industrial uses encroach on the landscape that could be
viewed in the absence of vegetation toward the direction of the facility site from within the
main use areas of the SRA. The Department recommends that the Council find that, although
visual impacts from facility structures or plumes to Government Island State Recreation Area
may occur, existing industrial features within the viewed landscape preclude impacts from
proposed facility structures or plumes to recreational opportunities associated with
Government Island State Recreation Area from meeting the definition of “significant” at OAR
345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that
the design, construction and operation of the facility are not likely to result in a significant
adverse impact to recreational opportunities associated with Government Island State
Recreation Area.

Sandy River National Wild and Scenic River

The nearest portion of the Sandy River National Wild and Scenic River, a segment of the Sandy
River designated under the Wild and Scenic Rivers Act, is located 2.7 miles southeast of the
Facility’s site boundary. The Sandy River is managed by the Bureau of Land Management
through the Sandy River Basin Integrated Management Plan (BLM, 2008). The Wild and Scenic
designation extends along the river between Dodge Park and Dabney State Recreation Area.
This portion of the Sandy River is extremely popular with anglers and provides outstanding
sport fishery and exceptional recreation opportunities for nature study, day-use activities, and
non-motorized boating or floating. The recreational demand for the Sandy River is high given
the quality and variety of recreational opportunities available. There are no other Wild and
Scenic waterways within the analysis area. As a result of this Wild and Scenic designation, the
recreational opportunities in this area are considered uncommon and irreplaceable.

The Department recommends that the Council find that the Sandy River Wild and Scenic River
satisfies the criteria of OAR 345-022-0100 and offers an important recreational opportunity.

The applicant provides a photo taken from the Sandy River, Wild and Scenic River, showing
topographic barriers and dense deciduous and evergreen vegetation screening potential views
of the facility. In addition, the applicant states that the viewed landscape looking from the
park to the proposed facility site would include many other examples of large scale urban and
industrial development, including the Troutdale-Portland Airport, I-84, existing plumes

611 The Wild and Scenic Rivers Act, 16 USC 1274 [100][C].
612 Final ASC, Table T-1, p. T-4 and Section T.2.3.6, p. T-10.
produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.\textsuperscript{614}

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from that segment of the river. The Department recommends that the Council find that visual impacts from proposed facility structures or plumes to the nearest portion of Sandy River, Wild and Scenic River are not likely to occur due to the presence of screening topography and vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude visual impacts from proposed facility structures and plumes to the nearest segment of Sandy River, Wild and Scenic River from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in a significant adverse impact to recreational opportunities associated with the Sandy River, Wild and Scenic River.

\textit{Dabney State Recreation Area}

The nearest portion of Dabney State Recreation Area is located 2.8 miles southeast of the Facility’s site boundary and within the segment of the Sandy River that has been designated under the Wild and Scenic Rivers Act.\textsuperscript{615} The recreation area is managed by the Oregon Parks and Recreation Department and offers a variety of recreational opportunities including: swimming, boating, a picnic location along the Historic Columbia River Highway, trails and a disc golf course. The recreation area also provides a wide range of recreational amenities including multiple covered picnic shelters, large picnic tables, briquette grills, and a boat ramp.

As a result of the recreational amenities offered, and the fact that the recreation area is located within a segment of a Wild and Scenic River, the recreational demand for this area is high, particularly in the summer. According to the applicant, the amenities provided at the recreation area, combined with the adjacent Wild and Scenic segment of the Sandy River make the recreation opportunities at this location uncommon and irreplaceable. The Department recommends that the Council find that the Dabney State Recreation Area satisfies the criteria of OAR 345-022-0100 and offers an important recreational opportunity.\textsuperscript{616}

The applicant provides a photo taken from Dabney SRA, showing topographic barriers and dense deciduous and evergreen vegetation screening potential views of the facility.\textsuperscript{617} In

\textsuperscript{615} The Wild and Scenic Rivers Act, 16 USC 1274 [100][C].
\textsuperscript{616} Final ASC, Table T-1, p. T-4; and Section T.2.3.7, p. T-10.
addition, the applicant states that the viewed landscape looking from the park to the proposed facility site would include many other examples of large scale urban and industrial development, including the Troutdale-Portland Airport, I-84, existing plumes produced by the Georgia-Pacific paper mill in Camas, the Federal Express distribution facility, and the BPA 500-kv Ostrander-Troutdale transmission line.618

The Department has reviewed aerial photos and topographic maps of the vicinity to verify the applicant’s assertion that existing industrial uses encroach on the landscape that would be viewed in the absence of vegetation toward the direction of the facility site from within the Dabney SRA. The Department recommends that the Council find that visual impacts from proposed facility structures or plumes to the Dabney SRA are not likely to occur due to the presence of screening topography and vegetation. Additionally, the Department recommends that the Council find that, even in the absence of screening vegetation, the existing industrial features within the viewed landscape would likely preclude visual impacts from proposed facility structures and plumes to recreational opportunities associated with Dabney SRA from meeting the definition of “significant” at OAR 345-001-0010(53).

Based on the evidence in the record, the Department recommends that the Council find that the design, construction and operation of the facility are not likely to result in a significant adverse impact to recreational opportunities associated with Dabney State Recreation Area.

Based on the evidence in the record, the Department recommends that the Council find that visual impacts of facility structures or plumes resulting from construction and operation of the facility are unlikely to result in a significant adverse impact to important recreational opportunities within the analysis area.

IV.L.2. Recreation: Conclusions of Law

Based on the foregoing findings of fact and conclusions, the Department recommends that the Council find that the design, construction and operation of the proposed facility are not likely to result in a significant adverse impact to any important recreational opportunities in the analysis area, in compliance with the Council’s Recreation Standard.

IV.K. Historic, Cultural and Archaeological Resources [OAR 345-022-0090]

(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impacts to:

(a) Historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places;

(b) For a facility on private land, archaeological objects, as defined in ORS 358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c); and

(c) For a facility on public land, archaeological sites, as defined in ORS 358.905(1)(c),

(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

(3) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

IV.K.1. Historic, Cultural, and Archaeological Resources: Findings of Fact

OAR 345-022-0090 requires the Council to find that, taking into account mitigation, the construction and operation of the proposed facility is not likely to have a significant adverse impact on historic, cultural, or archaeological resources, archaeological objects and archaeological sites specified in OAR 345-022-0090(1). OAR 345-022-0090(2) and (3) do not apply to this application because the proposed facility would not produce power from wind, solar or geothermal energy and the facility is not a special criteria facility as defined in OAR 345-015-0310. Therefore, only the standards in OAR 345-022-0020(1)(a) through (c) apply to the proposed facility.

The applicant provides information regarding historic, cultural, and archaeological resources in Exhibit S of the ASC. The Project Order identifies the analysis area as all areas within the site boundary.

The applicant retained CH2M HILL to conduct a cultural and archaeological survey. CH2M HILL reviewed archaeological records maintained by the Oregon State Historic Preservation Office (SHPO) for the area within the site boundary and its vicinity. CH2M HILL’s file searches included previous cultural resource inventories and known archaeological sites and isolates within 0.5 miles of the site boundary. In addition, CH2M HILL conducted a pedestrian archaeological survey on December 19, 2011. CH2M HILL conducted the pedestrian surveys in accordance with SHPO guidelines and standards in order to document the presence or absence of surface-exposed archaeological resources in the survey area and to investigate the potential for subsurface deposits. The applicant documented the results of these surveys in a confidential report submitted as Attachment S-1 to Exhibit S.

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The applicant’s desktop and field surveys do not identify any known historic or cultural resources within the analysis area that are listed, or would likely be eligible for listing, on the National Register of Historic Places. Field surveys conducted by the applicant do not identify any archaeological sites or objects within the analysis area. The majority of proposed facility construction would occur on lands on Lot 3 that have been significantly disturbed during past use, including subsurface soil remediation involving approximately 37,000 tons of soil that were removed due to contamination and replaced with fill. The applicant asserts that because of past remediation and fill activity, these areas are unlikely to contain any intact soils or archaeological resources.

Based on the applicant’s representation in Exhibit S that desktop and pedestrian surveys do not identify any known historic or cultural resources, the Department recommends that the Council find that the construction and operation of the facility are not likely to result in significant adverse impact to historic or cultural resources described in OAR 345-022-0090(1)(a) through (c). However, some ground disturbing activities associated with construction of the facility have the potential to reveal historic or cultural resources not identified through desktop or pedestrian surveys. Further, in the absence of mitigation, these ground disturbing activities have the potential to result in a significant adverse impact to previously unidentified historic or cultural resources. In order to avoid potential impacts to later-discovered resources, the Department recommends that Council adopt the following condition:

**Condition K.1:** The certificate holder shall cease all ground-disturbing activities in the immediate area if any archaeological or cultural resources are found during construction of the facility pending the results of a qualified archeologist’s evaluation of the significance of the find. The certificate holder shall notify the Department and the Oregon State Historic Preservation Office (SHPO) of the find. If SHPO determines that the resource is significant, the certificate holder shall make recommendations to the Council for mitigation, including avoidance, field documentation, and data recovery, in consultation with the Department, SHPO, interested tribes and other impacted parties. The certificate holder shall not restart work in the affected area until the certificate holder has demonstrated to the Department and SHPO that it has complied with archaeological resource protection regulations.

The applicant provided copies of the confidential cultural resources survey report, along with the full ASC, to cultural resource coordinators for the Confederated Tribes of Warm Springs; Confederated Tribes of Grand Ronde; Confederated Tribes of Siletz; and Confederated Tribes of Umatilla on April 1, 2013. ODOE received no comments on the proposed facility from these tribes. In order to ensure that these tribes have the opportunity to provide information on any resources described in OAR 345-022-0090(1)(f). For private land, “archaeological objects” are defined at ORS 358.905(1)(a). “Archaeological sites” (on public or private land) are defined at ORS 358.905(1)(c).

**Note:**

- Final ASC, Section S.5, p. S-3.
- Final ASC, Section S.8.1, p. S-4. For private land, “archaeological objects” are defined at ORS 358.905(1)(a). “Archaeological sites” (on public or private land) are defined at ORS 358.905(1)(c).
historic or cultural resources discovered during construction of the facility, the Department recommends that the Council adopt the following condition:

**Condition K.2:** Before beginning construction, the certificate holder must inform the Confederated Tribes of Warm Springs, Confederated Tribes of Grand Ronde, Confederated Tribes of Siletz, and the Confederated Tribes of the Umatilla prior to commencement of site disturbing activities and invite tribal representatives to be present during all ground-breaking activities.

The applicant has not surveyed certain portions of the analysis area (approximately 25 acres in total) during the pedestrian survey due to intervening vegetation. In order to prevent inadvertent destruction of cultural resources, the applicant proposes to conduct subsurface shovel tests prior to construction in those previously unsurveyed areas where construction activities are planned. The applicant proposes the following specific areas for shovel tests, as shown in Figure S-2 of the ASC:

- The parts of Lots 3 and 6 where facility components are proposed and are currently covered by impenetrable blackberry thickets;
- If transmission line Route 1 is built, the part of the route corridor that extends west from Sundial to the PGE Blue Lake substation on the north and south sides of Salmon Creek;
- The north side of NW Swigert Way in the lawn associated with the Federal Express Facility;
- If either transmission line Route 2 or Route 3 is built, the part of those routes that extend north of Sundial Road from Swigert Way to the BPA Troutdale substation and the PP&L Troutdale substation;
- The 20-foot-wide easement associated with the process water lines bordering the east side of Lot 6 and extending east toward the City WPCF.

In order to ensure compliance with these mitigation measures, the Department recommends that the Council adopt the following condition:

**Condition K.3:** The certificate holder must employ qualified personnel to conduct field investigations of all areas to be disturbed during construction that lie outside the previously-surveyed areas, including shovel testing in all areas recommended in Figure S-2 of the Application for Site Certificate, included in Appendix E to this Order. The certificate

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624 Final ASC, Section 5.8.3, p. S-5.
holder must provide a written report of the field investigations to the Department and Oregon SHPO prior to construction activities in those areas. If potentially significant historic, cultural, or archaeological sites are found during the field investigations, the certificate holder must instruct all construction personnel to avoid the identified sites and must implement appropriate measures to protect the sites, including the measures described in Condition K.1.

IV.K.2. Historic, Cultural, and Archaeological Resources: Conclusions of Law

Based on these proposed findings and conclusions, and subject to compliance with the recommended site certificate conditions, staff recommends that the Council find that the construction and operation of the proposed facility are not likely to result in significant adverse impacts to historic, cultural, or archaeological resources, in compliance with the Council’s Historical, Cultural, and Archaeological Resources Standard.

IV.M. Public Services [OAR 345-022-0110]

(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to the ability of public and private providers within the analysis area described in the project order to provide: sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.

(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

(3) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

IV.M.1. Public Services: Findings of Fact

The applicant must establish compliance with OAR 345-022-0110(1). OAR 345-022-0110(2) and (3) do not apply to the proposed facility because the facility would not produce power from wind, solar, or geothermal energy, and it is not a special criteria facility as defined in OAR 345-015-0310.
The applicant provides information in Exhibit U about potential impacts of the facility on public services. The Project Order identifies the analysis area for the Public Services standard as the area within the site boundary and 10 miles from the site boundary. The analysis area includes portions of Multnomah and Clackamas Counties in Oregon, and Clark and Skamania Counties in Washington. The application identifies the following incorporated communities within the analysis area: Damascus, Fairview, Gresham, Happy Valley, Maywood Park, Portland, Troutdale, and Wood Village. Communities in the State of Washington are also within the analysis area, although the applicant asserts that EFSC does not have jurisdiction to include conditions in the Site Certificate for potential impacts outside the State of Oregon. The Public Services standard does not exclude consideration of impacts to public services outside the State of Oregon. However, the Department recommends that the Council find that, because of the geographic barrier formed by the Columbia River, and the consequent limited access from the site to locations within the State of Washington, the proposed facility would not likely result in significant adverse impacts to service providers within the portion of the analysis area that lies in Washington State.

**Sewers and Sewage Treatment**

The applicant explains that the City of Troutdale Water Pollution Control Facility (WPCF), a sanitary treatment plant within the analysis area, provides sewer service to residents of Troutdale and other nearby areas. The WPCF also provides sewer service to Lot 3, where most facility components would be located. The applicant explains that sanitary wastes during construction would be collected onsite in portable toilets provided by a privately-contracted service, and therefore will not impact local sewage service providers. The applicant estimates that during operation, the facility would generate approximately 750 gallons of sanitary waste per day. The applicant proposes to discharge sanitary waste to the existing City of Troutdale sanitary sewer line for disposal at the WPCF. The applicant states that the WPCF currently has unused capacity for approximately 1 million gallons per dry-weather day, or more than 1,000 times the estimated sanitary waste load that the proposed facility would add. In order to ensure that sanitary wastewater is discharged to a provider with sufficient capacity, the Department recommends that the Council adopt the following condition:

**Condition M.1:** During operation, the certificate holder shall discharge sanitary wastewater generated at the facility to the existing City of Troutdale sanitary sewer system.

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625 Final ASC, Section U.3, p. U-1.
626 Final ASC, Section U.3, p. U-1.
627 Final ASC, Section U.3.2.3, p. U-3.
628 Final ASC, Section U.4.2.1, p. U-6.
In addition, in order to ensure proper permission and coordination prior to installation of connections to local utilities and rights of way, the Department recommends that the Council adopt the following condition, as recommended by the City of Troutdale:

**Condition M.2:** Prior to installation, the certificate holder shall obtain a City of Troutdale Public Works Permit for each utility connection to the City’s water, sewer, and stormwater systems, for each driveway access to a public street, for construction of any other public works facilities and for construction of public or private facilities within the City’s public rights-of-way.

Based on the evidence in the record, the Department recommends that the Council find that the construction and operation of the facility would not likely result in significant adverse impact to sewers and sewage treatment providers in the analysis area.

**Water**

The applicant explains that the City of Troutdale Public Works Department provides water services to Lot 3, where most facility components would be located. The applicant estimates use of approximately 15.2 million gallons of water over a 24-month construction period, which the applicant proposes to purchase from the City of Troutdale. In Exhibit O, the applicant provides a letter from the City of Troutdale confirming the availability of adequate water supply from the City for the construction phase, and a large diameter supply main nearby to deliver water to the site.

The applicant provides information about the availability of water during operation in Exhibit O of the application. The applicant proposes to use reclaimed (gray) water from the City of Troutdale WPCF for process water during facility operation; the reclaimed water would be filtered, treated, and stored in a service water tank for use as fire water, cooling tower makeup, and demineralization water where needed. The City of Troutdale anticipates that there would be sufficient effluent available from the WPCF to provide an average flow rate of approximately 1.3 million gallons of reclaimed water per day. During facility operation, the Port of Portland would supply water from its wells to provide additional process water to meet the water requirement that cannot be provided by the WPCF. The applicant provides a letter from the Port of Portland stating that the Port has sufficient existing water rights and is willing to sell up to 11.5 million gallons of groundwater per day to the facility. Recommended Condition S.2 would limit the facility’s water use from the Port of Portland to be within the scope of water rights held by the Port.

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630 Comment letter from Elizabeth McCallum, City of Troutdale, May 1, 2013.
631 Final ASC, Attachment O-2.
632 Final ASC, Attachment O-2
633 Final ASC, Exhibit U, Section U.3.2.4, p. U-3.
634 Final ASC, Attachment O-3
In Section IV.S of this proposed order, the Department evaluates the potential for the facility to construct and operate the facility without adversely affecting the availability of water to other holders of valid water rights that would draw from the same resource, as required by the Ground Water Act of 1955. Recommended Condition S.1 would require the certificate holder to obtain potable water during construction and operation from the City of Troutdale’s domestic water supply. Recommended Condition S.2 would limit the amount of water that the certificate holder could obtain from the Port of Portland during construction and operation of the facility.

Accordingly, the Department recommends that the Council find that the construction and operation of the facility would not likely result in significant adverse impact to water providers in the analysis area.

**Storm Water Drainage**

The applicant describes the stormwater system that serves properties within the Troutdale Reynolds Industrial Park, which consists of a stormwater line beginning at the southeast corner of the site near NW Swigert Way. The applicant also discusses other existing stormwater drainage service to Lot 3, including service provided by the City of Troutdale, Sandy Drainage Improvement Company, and ODOT (associated with some public roads).\(^{635}\)

The applicant explains that stormwater during construction will be managed in compliance with an NPDES 1200-C permit, which includes a site-specific Erosion and Sediment Control Plan (ESCP).\(^{636}\) The applicant provides a copy of the NPDES 1200-C registration application, ESCP, and concurrence letter from the Oregon DEQ in Attachment I-1 to the application. Recommended Condition D.2 would require the certificate holder to implement best management practices from the ESCP during construction of the facility.

During operation, the applicant proposes to direct storm water from the proposed facility to the existing TRIP stormwater system. The applicant explains that stormwater from secondary containment areas would be collected, treated if necessary, and sent to the existing TRIP stormwater system. The applicant proposes to carry out storm water quality treatment at the facility in accordance with the applicable requirements of the Oregon DEQ’s NPDES 1200-Z Permit, the City of Portland’s Stormwater Management Manual, the City of Troutdale’s Construction Standards for Public Work Facilities, TDC 5.800 Stormwater Management, and applicable Sandy Drainage Improvement Company (SDIC) management standards.\(^{637}\) The

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\(^{635}\) Final ASC, Section U.3.25, p. U-3.

\(^{636}\) Final ASC, Section U.4.4.1, p. U-8.

\(^{637}\) Final ASC, Section U.4.4.2, pp. U-8 and U-9. The Department received DPO comments from the Sandy Drainage Improvement Company (SDIC) and the Multnomah County Drainage District (MCDD), which operates SDIC (See DPO comments from Byron Woltersdorf, Sandy River Drainage District, September 26, 2013 and Kayla Mullis, Multnomah County Drainage District, September 26, 2013). The MCDD/SDIC comments raise
applicant provides a copy of the NPDES 1200-Z registration application, Stormwater Pollution Control Plan (SWPCP) and concurrence letter from the Oregon DEQ in Attachment V-2 to the application.

Accordingly, the Department recommends that the Council find that the construction and operation of the facility would not likely result in a significant adverse impact to storm water drainage providers in the analysis area.

**Solid Waste Management**

The applicant explains that the City of Troutdale provides solid waste management service to the area within the site boundary through an exclusive franchise agreement with Waste Management, Inc., a private waste-hauling company. Waste Management hauls solid waste to its Troutdale Transfer Station, where the waste is then moved to the Arlington Landfill, approximately 120 miles east of the proposed facility site. The applicant anticipates that construction of the facility would generate approximately 40 tons of non-hazardous solid waste per month. The applicant estimates that operation of the facility would generate approximately five tons of solid waste per year and would consist of waste from office, shop and warehouse activities. The applicant proposes that solid waste generated during construction and operations would be collected for disposal by a licensed solid waste collector.

Accordingly, the Department recommends that the Council find that the construction and operation of the facility would not likely result in a significant adverse impact to solid waste management in the analysis area.

**Housing**

The applicant estimates that approximately 500 construction workers would be employed at the facility over the course of the 24-month construction period and that up to 100 of these concerns that the proposed facility has not obtained an encroachment permit for the toe of the adjacent U.S. Army Corps of Engineers levee, and that SDIC is obligated to review and approve stormwater plans within the district. The Department concurs with the Hearing Officer’s assessment that the encroachment permit appears to be a federally-delegated permit outside of the Council’s jurisdiction, and that the stormwater plan review issue is not described thoroughly in the comments. The Department’s recommended findings explain that the applicant has provided sufficient evidence to demonstrate that the proposed facility would not likely result in a significant adverse impact to stormwater drainage providers in the analysis area. The approval of a site certificate for the proposed facility does not absolve the applicant of any obligation to obtain necessary approvals outside of the Council’s jurisdiction.

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638 Final ASC, Exhibit U, Section U.3.2.6, p. U-3.
639 Final ASC, Exhibit U, Section U.3.2.6, p. U-3.
640 Final ASC, Section V.2.1.1, p. V-2
641 Final ASC, Exhibit V, p. V-3.
positions may be filled from outside the area and would, therefore, require temporary housing. The applicant provides a table listing the number of total housing units and vacancy rates for communities within the analysis area as reported in the 2010 U.S. Census. The table indicates over 400,000 total housing units in Multnomah and Clackamas Counties in 2010, with vacancy rates of roughly 4% to 7%. The table shows that in Troutdale and Fairview over 200 housing units were vacant in 2010 in each city. The applicant also states that sufficient housing for workers is available at several hundred hotels and motels within the analysis area. The applicant does not provide specific information about the number of hotel rooms or vacancy rates. Nonetheless, the Department finds that, given the proposed facility’s location in major metropolitan area, the applicant’s assertion that construction workers on the facility would have many hotel or motel lodging options available is a reasonable conclusion.

The applicant describes a permanent operations staff of approximately 26 people employed at the facility, with as many as 15 of these employees coming from outside the analysis area and requiring permanent housing. The applicant provides a table showing that the City of Troutdale had a housing vacancy rate of 4 percent in 2010 for its 5,900 housing units, with more than 200 housing units vacant. Accordingly, the Department recommends that the Council find that the construction and operation of the facility would not likely result in a significant adverse impact to housing in the analysis area.

Traffic Safety for Ground Transportation

The applicant explains that Multnomah County Road Services, the Oregon Department of Transportation (ODOT), and the Washington Department of Transportation (WDOT) are the primary agencies providing road services in the analysis area. The applicant anticipates that a majority of facility-related traffic during construction and operations would utilize Interstate 5 (I-5), Interstate 205 (I-205), Interstate 84 (I-84), NE Marine Drive, NW Sundial Road, and NW Swigert Way. The applicant proposes to provide direct access to the facility via an extension of NW Swigert Way that would be completed by the Port of Portland as part of its planned Phase II development of TRIP. Condition E.6 would require that the NW Swigert Way extension is completed prior to commencement of operation of the facility.

642 Final ASC, Exhibit U, Section U.3.2.8, p. U-4.
643 Final ASC, Section U.2.3.7, Table U-2, p. U-4.
Aside from construction of the Port of Portland’s extension of NW Swigert Way, the applicant does not propose other changes to the current roadway configuration to allow transportation of heavy equipment during construction. The applicant provides an analysis of equipment delivery options, which identifies approximately 30 to 40 pieces of heavy equipment that would require delivery during the initial months of the facility’s 24-month construction period. The applicant also states that pavement surfaces may deteriorate during construction, which could affect traffic safety. The applicant proposes to establish agreements with the City of Troutdale and Multnomah County on restoration responsibilities for roads that could be used to transport heavy equipment. In comments on the site certificate application, Multnomah County Land Use and Transportation Program confirmed the potential for impacts described by the applicant, and recommended a condition to require coordination between the applicant and the Multnomah County engineer on potential mitigation. In order to ensure that construction-related damage to roads from affecting traffic safety, the Department recommends that the Council adopt the following conditions:

**Condition M.3:** Prior to beginning construction, the certificate holder shall establish an agreement with the City of Troutdale to restore all City-jurisdictional road surfaces degraded by construction vehicles to their preconstruction condition.

**Condition M.4:** Prior to beginning construction, the certificate holder shall establish an agreement with Multnomah County to restore all County-jurisdictional road surfaces degraded by construction vehicles to their preconstruction condition.

The applicant expects that facility construction would add a maximum of 1,025 daily trips, consisting of 500 daily commuter trips (to and from work for the maximum workforce) and an additional 25 trips for mobilization and demobilization of materials. The applicant provides 2010 Traffic Volume Tables from the Oregon Department of Transportation, which show 29,600 average daily trips on I-84 at milepost 17.71, where the freeway passes through Troutdale. The Department finds that the maximum daily trips anticipated by the applicant represent a potential increase in average daily traffic of approximately 3.5% on the applicable portion of I-84, and would only occur on a temporary basis.

Based on the evidence in the record, the Department recommends that the Council find that the construction of the proposed facility would likely not result in a significant adverse impact to traffic safety in the analysis area.
The applicant explains that during operations, the proposed facility would operate three daily shifts, which would result in approximately 44 additional daily trips to I-84, I-205, NE Marine Drive, and NW Sundial Road. The applicant notes that Multnomah County classifies NE Marine Drive and NW Sundial Road as major collectors. In addition to commuting trips by operations staff, the applicant anticipates infrequent trucks for delivery of backup fuel oil, chemical deliveries, and delivery of parts required for routine maintenance of facility components. Based on the 2010 Traffic Volume Tables provided by the applicant, the Department finds that the anticipated addition of approximately 44 daily trips, spread out over three shifts, would result in an increase of approximately 0.1% to 0.3% at interchanges to the east and west of TRIP, and less than 0.1% on I-84 milepost 17.71.

Based on the evidence in the record, the Department recommends that the Council find that the operation of the proposed facility would likely not result in a significant adverse impact to ground traffic safety in the analysis area.

Traffic Safety for Air Transportation

The Port of Portland operates the Portland-Troutdale Airport, which is located within the analysis area, approximately 1,500 feet south of the proposed facility site. The airport has one 5,400-foot runway, one FAA control tower, and 15 businesses located onsite. The airport is primarily used for flight training, recreational flights, and business flights. Because of the proposed facility’s proximity to the Portland-Troutdale airport, structures planned for this location are subject to review by the FAA pursuant to 14 CFR Part 77 to determine whether construction of the facility could interfere with flight paths and present a hazard to aviation.

The applicant provided information about cooling tower effects in Exhibit Z of the application. The applicant explains that the proposed facility would utilize mechanical-draft wet cooling towers. Heat rejection would be provided for the combined-cycle plant by a mechanical draft, eight-cell, counter flow cooling tower. The simple-cycle plant requires a mechanical draft, two-cell, counter-flow cooling tower. Therefore, total heat rejection for the facility would be provided by a 10-cell cooling tower. Mechanical-draft cooling towers use fans to force air into the cooling tower and through a fine spray of heated water, where evaporation cools the water stream and transfers heat to the air. The warm, moist air exhausts vertically, dispelling excess heat. Ground level fogging can occur when a cooling tower plume approaches ground level. Icing can occur during periods when ground level fogging coincides with freezing surface temperatures. Either event may adversely affect local driving conditions. The assessment of the

656 Final ASC, Exhibit U
657 Final ASC, Section Z.1, p. Z-1.
plume’s visual impact is of particular concern to the FAA because of the proposed facility’s proximity to the Portland-Troutdale Airport.\textsuperscript{658}

The applicant used the CALPUFF dispersion model (Version 6.262) to predict the frequency and associated dimensions of the visible plumes that would potentially occur from the water vapor emissions associated with the cooling towers. Required physical parameters such as exit cell dimensions, exit velocity, tower heat rejection rates, and downwash dimensions for the cooling tower were estimated and modeled to determine the frequency of occurrence of visible plumes as well as the associated plume lengths and heights. Seasonal heat input and ambient air intake associated with the plume-abatement system were also included. The CALPUFF model predicts the potential for cooling tower plume visibility from the proposed facility by referencing the actual hourly meteorological conditions that existed during the 5 year period between 2005 and 2009.\textsuperscript{659}

Following comments on the Notice of Intent that raised concern about the size and frequency of non-abated cooling towers, the applicant modified the facility design to utilize plume abatement technology.\textsuperscript{660} The proposed facility would include a mechanical-draft evaporative cooling system. The applicant also proposes to install an air-to-air heat exchanger to reduce the frequency and size of potential visible plumes.\textsuperscript{661} The Hearing Officer Report recommends that the Department include a condition in the Proposed Order to require incorporation of the plume abatement technology relied upon by the applicant in dispersion modeling presented in the application.\textsuperscript{662} However, because the application represents unequivocally that the facility will include plume abatement technology,\textsuperscript{663} and that representation is a binding commitment on the applicant, the applicant would be required to implement the abatement technology in the absence of a related condition. The application for site certificate provides detailed information on the types of technology that the applicant would employ to reduce the size and frequency of plumes. Accordingly, the Department does not include recommend a condition related to plume abatement technology in this order.

The dispersion model submitted by the applicant predicts the location and frequency of ground-level fogging and ice formation using two scenarios. The first scenario considers potential fogging and ice formation at regularly spaced locations along a 5-km-by-5-km domain centered on the Facility. The second scenario focuses on the runway of the Portland-Troutdale Airport; the access road and loading area of the neighboring Federal Express facility; and locations along Interstate 84 (I-84).\textsuperscript{664}

\textsuperscript{658} Final ASC, Section Z.2, p. Z-3.
\textsuperscript{659} Final ASC, Section Z.2, p. Z-3.
\textsuperscript{660} Final ASC, Section R.7.3, p. R-34.
\textsuperscript{661} Final ASC, Section R.3.2, p. R-21.
\textsuperscript{662} Hearing Officer Report, p. 7.
\textsuperscript{663} Final ASC, Section Z.
\textsuperscript{664} Final ASC, Section Z.2, p. Z-3.
The model predicted no plume-induced fog or ice for the runway, Federal Express Facility, or I-84. The model predicted a maximum of 8 hours per year of ground-level fogging and 8 hours per year of ground-level icing at a limited number of receptors on the facility-centered grids. Because weather patterns may vary from those applied in the modeling analysis, the Department recommends that the Council adopt the following condition to require the implementation of certain safety measures if the Council finds that the proposed facility contributes significantly to ground-level fogging or icing along public roads and causes a significant threat to public safety:

**Condition M.5:** If the Council finds, at any time during facility operation, that cooling tower emissions are likely to contribute significantly to ground-level fogging or icing along public roads and to cause a significant threat to public safety, the certificate holder shall cooperate with appropriate local public safety authorities regarding implementation of safety measures, such as posting warning signs on affected roads. Within 30 days of such a finding by Council, the certificate holder shall obtain approval of proposed safety measures from the Department.

The Department received comments from the City of Troutdale requesting that the site certificate include a condition requiring that TEC submit FAA Form 7460-1 applications to the City with the facility’s building permit application, and comply with conditions that the Oregon Department of Aviation may deem necessary. In order to ensure that air safety measures are coordinated with state and local authorities, the Department recommends that the Council adopt the following condition:

**Condition M.6:** Before beginning construction, the certificate holder must submit a Notice of Proposed Construction or Alteration to the Federal Aviation Administration (FAA), Oregon Department of Aviation, and City of Troutdale identifying the final location of the facility exhaust stacks. The certificate holder must promptly notify the Department and the City of Troutdale of the responses from the FAA and the Oregon Department of Aviation.

The Department received many DPO comments from pilots and other stakeholders of the Troutdale Portland Airport expressing concern about the proximity of the facility’s vapor plume to the airport and possible impacts on aviation safety. In response, comments from the applicant note that the Port of Portland is the owner and operator of the airport and conducted its own independent review to determine if the proposed facility would be compatible with airport operations. The applicant provides slides from a presentation summarizing the results of the report with the FAA. The applicant’s comments also cite a number of reports and judicial decisions establishing the FAA as having sole jurisdiction over safety in the National Airspace.

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665 Agency comment from Elizabeth McCallum, City of Troutdale, May 1, 2013.
666 The Department received approximately forty oral or written comments raising concerns about aviation safety. Those comments are included in the index provided provided in Appendix C.
Troutdale Energy Center
Proposed Order

System. The applicant provides a study by Williams Aviation Consultants analyzing the potential impacts of the proposed facility on aeronautical operations and flight safety. The study does not anticipate an increase to safety risks for pilots and finds no need for changes to airport procedures or operations as a result of facility construction and operation. The Oregon Department of Aviation conducted a preliminary review of the application and recommended language similar to proposed Condition M.6, requiring the applicant to provide FAA Form 7460-1 applications to the FAA, and Oregon Department of Aviation. The applicant provides copies of 131 FAA Form 7460-1 applications that were submitted to the FAA on June 29, 2012. On April 24, 2013, the applicant provided copies of determinations of no hazard to air navigation made by the FAA in response to each application.

Based on the evidence in the record, the Department recommends that the Council find that the operation of the proposed facility would likely not result in a significant adverse impact to air traffic safety in the analysis area.

Police Protection

The applicant explains that the Troutdale Police Department would provide law enforcement and emergency service for the area within the site boundary. The applicant provides a letter from the Troutdale Police Department stating that the Troutdale Police Department is a full service agency and discussing coordination between the applicant and the Troutdale Police Department. The Police Department also notes that the applicant proposes to have 24-hour security services for the site during construction. The applicant states that additional law enforcement service is available from the Oregon State Police Portland Area Command located in Milwaukie, Oregon.

During construction, the applicant proposes to secure the facility site through the use of temporary chain-link security fencing around the perimeter of the site, along with controlled entrance/exit points to the construction area. In order to ensure that the applicant implements these measures to prevent potential incidents that would require a police response from occurring, the Department recommends that the Council adopt the following condition:

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668 Final ASC, Attachment Z-1.
669 Agency comment from Jeff Caines, Aviation Planner, Oregon Department of Aviation, September 24, 2013.
670 Email from Jeremy Sande, CH2M HILL, confirming mail delivery of FAA 7460-1 Determinations for Troutdale Energy Center, April 24, 2013.
671 Final ASC, Section U.3.2.9, p. U-4.
672 Final ASC, Attachment U-1.
673 Final ASC, Section U.3.2.9, p. U-5.
**Condition M.7:** During construction of the facility, the applicant shall install temporary chain-link security fencing around the perimeter of the site, and maintain controlled entrance and exit points to the construction area.

The applicant proposes permanent security measures during facility operation, including security fencing and security cameras to monitor the facility 24 hours per day.\(^{674}\) The applicant asserts that the relatively small increase in the permanent population in the analysis area would not result in a significant disruption in the ability of the police department to provide public services.\(^{675}\) The Department concurs with this analysis. Accordingly, the Department recommends that the Council find that the construction and operation of the proposed facility would likely not result in a significant adverse impact to police services in the analysis area.

**Fire Protection**

The applicant explains that Gresham Fire and Emergency Services (GFES), under contract to the City of Troutdale, would provide fire protection and emergency medical response services to the Facility.\(^{676}\) The applicant provides correspondence from GFES indicating that the applicant had coordinated with GFES on potential fire safety requirements for the facility.\(^{677}\) To prevent impacts to the availability of fire protection services, the applicant proposes to implement fire protection measures recommended for this type of facility and as required by the State Fire Marshal and by ORS 480.420, including isolation equipment, automatic fire suppression equipment, and fire water supply.\(^{678}\)

In addition, recommended Condition E.7 would require the applicant to install fire hydrants on Lot 3 according to GFES requirements.

For these reasons, and subject to compliance with the recommended conditions, the Department recommends that the Council find that construction and operation of the facility would not likely have significant adverse impacts on the ability of Gresham Fire and Emergency Services to provide fire protection services.

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\(^{674}\) Final ASC, Section U.4.9, p. U-12.

\(^{675}\) Final ASC, Section U.4.9, p. U-12. The applicant notes that the estimated permanent population increase represents less than 0.1% of the population of the City of Troutdale. The Department further notes that this represents an even smaller percentage increase to the total population in the analysis area.

\(^{676}\) Final ASC, Section U.3.2.10, p. U-5

\(^{677}\) Final ASC, Attachment B-2.

\(^{678}\) Final ASC, Section U.4.10, p. U-12.
Health Care

The applicant explains that the nearest hospital to the proposed facility is Legacy Mount Hood Medical Center, located approximately 4 miles south of the proposed facility site.\textsuperscript{679} The applicant describes the facility as a short-term, acute care hospital that primarily serves residents of Gresham and Troutdale. The applicant states that Mount Hood Medical Center has 84 beds, 10 of which are reserved for intensive care patients.\textsuperscript{680} The Department concurs with the applicant’s analysis that the estimated 500 construction workers and 45 new permanent residents associated with the facility would not cause a noticeable increase in area population,\textsuperscript{681} and thus would not likely result in a significant adverse impact to a local health care system that serves a large metropolitan population.

Accordingly, the Department recommends that the Council find that construction and operation of the facility are not likely to have significant adverse impacts on the ability of health care providers to deliver services.

Schools

The facility would be located in the Reynolds School District 7, which operates 22 schools and serves approximately 10,700 students in a geographical area that includes the City of Troutdale and portions of the cities of Gresham and Wood Village.\textsuperscript{682} The applicant explains that construction of the facility would not result in increased demand for school facilities, because the applicant anticipates that temporary workers would not bring families with them. The applicant estimates that during operation, approximately 15 new students would be added to the District roles.\textsuperscript{683} Although the applicant does not provide information about existing student capacity in the Reynolds School District, the Department finds that an addition of 15 students would represent a less than 0.1% increase to the overall student population in the district.

The Department recommends that the Council find that this proportionately small increase in student population would not likely result in a significant adverse impact on the ability of the Reynolds School District to provide services.

\textsuperscript{679}Final ASC, Section U.4.11, p. U-12.
\textsuperscript{680}Final ASC, Section U.3.2.11, p. U-5. Although not described by the applicant, the Department notes that the analysis area, which includes a significant portion of the Portland metropolitan area, includes several hospitals providing a wide range of emergency, primary, and secondary care options.
\textsuperscript{681}Final ASC, Section U.4.11, p. U-13.
\textsuperscript{682}Final ASC, Section U.3.2.12, p. U-5
\textsuperscript{683}Final ASC, Section U.4.12, p. U-13
IV.M.2. Public Services: Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the proposed facility complies with the Council’s Siting Standards for Public Services.

IV.N Waste Minimization [OAR 345-022-0120]

(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that, to the extent reasonably practicable:

(a) The applicant’s solid waste and wastewater plans are likely to minimize generation of solid waste and wastewater in the construction and operation of the facility, and when solid waste or wastewater is generated, to result in recycling and reuse of such wastes;

(b) The applicant’s plans to manage the accumulation, storage, disposal and transportation of waste generated by the construction and operation of the facility are likely to result in minimal adverse impact on surrounding and adjacent areas.

(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

(3) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

IV.N.1. Waste Minimization: Findings of Fact

Section 1 of the Waste Minimization Standard generally requires the Council to find that the certificate holder will minimize the generation of solid waste and wastewater, and that the waste generated will be managed to result in minimal adverse impacts on surrounding and adjacent areas. OAR 345-022-0120(2) and (3) are not applicable to this facility because the proposed facility would not produce power from wind, solar, or geothermal energy, and the proposed facility is not a special criteria facility as defined in OAR 345-015-0310. Exhibit G of the ASC includes an inventory of the quantities of industrial materials that would be used at the proposed facility during construction and operation, the plans for management of hazardous and non-hazardous substances during construction and operation, and the measures that the applicant proposes to prevent and contain spills. Exhibit V includes the applicant’s plans for
management of solid waste, wastewater, and storm water during construction and operation of
the proposed facility.

A. Solid Waste

Construction

The applicant explains that during construction, approximately 40 tons of non-hazardous solid
waste would be generated per month, for a total of approximately 24 months.\textsuperscript{684} The applicant
expects that during construction, non-hazardous solid waste would primarily consist of wood,
scrap concrete, steel, packaging materials such as wood pallets, and waste paper.\textsuperscript{685} The
applicant does not plan to excavate soils that could adversely impact adjacent and surrounding
areas. Due to the site’s history as an aluminum reduction plant smelter, its subsequent listing as
a Superfund site and the environmental remediation work that has been accomplished\textsuperscript{686}, to
ensure that any potential excavation does not result in adverse impact, the Department
recommends that the Council adopt the following condition:

\textbf{Condition N.1:} In the event that any soil excavation occurs within the site boundary, the
certificate holder shall comply with the requirements and restrictions set forth in the
following:

- September 29, 2006 Record of Decision (ROD) (EPA, 2006);
- Contaminated Media Management Plan (CMMP) for the Former Reynolds Company
  facility in Troutdale, Oregon (CH2M HILL, 2007); and
- Property Development Environmental Management Plan (PDEMP) prepared for the
  Port of Portland for the TRIP (Port of Portland, 2008).\textsuperscript{687}

During construction, the applicant proposes implementing sorting and recycling practices to
minimize solid waste. Wood and steel scraps would be segregated for recycling or to be sold as
scrap. Concrete waste would be used onsite for fill or exported for fill offsite at a licensed
facility.\textsuperscript{688} Solid waste that is not recyclable would be transported to an approved landfill or
transfer station.\textsuperscript{689} To ensure solid waste generated during construction is sufficiently
minimized and that any waste generated is appropriately managed so as to not result in any
adverse impact, the Department recommends the Council adopt the following condition:

\textsuperscript{684} Final ASC, Section V.2.1.2, p. V-2
\textsuperscript{685} Final ASC, Section V.3.1.1, p. V-5.
\textsuperscript{686} Final ASC, Exhibit V, Section 1.2
\textsuperscript{687} Final ASC, Exhibit V, Section 3.1.1, p. V-6.
\textsuperscript{688} Final ASC, Exhibit V, Section V.2.1.1, p. V-1.
\textsuperscript{689} Final ASC, Exhibit V, p. V-3.
**Condition N.2:** The certificate holder shall implement a waste management plan during construction that includes but is not limited to the following measures:

(a) Separate non-hazardous solid waste into recyclable and non-recyclable material, and store materials in the appropriate onsite container or dumpster. These containers and dumpsters shall be routinely picked up by a licensed contractor and disposed of at an appropriate facility.

(b) Recycle steel and other scrap metal.

(c) Recycle wood waste.

(d) Recycle packaging wastes such as paper and cardboard.

(e) Collect non-recyclable waste for transport to a local landfill by a licensed waste hauler or by using facility equipment and personnel to haul the waste. Waste hauling by facility personnel shall be performed in compliance with the Multnomah County Solid Waste Management Ordinance, which requires that all loads be covered and secured.

(f) Segregate all hazardous and universal wastes such as used oil, oily rags and oil-absorbent materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous and universal wastes.

**Operation**

The applicant estimates that operation of the facility would generate approximately five tons of solid waste per year and would consist of waste from office, shop and warehouse activities. The applicant proposes to implement sorting and recycling programs to minimize the amount of solid waste that would need to be disposed off-site. Solid waste that is not recycled would be collected by a licensed waste collector for disposal at a licensed solid waste landfill such as the Hillsboro Landfill, the Columbia Ridge Landfill, the Tualatin Valley Waste Recovery Facility, and the Riverbend Landfill. To ensure that solid waste generated during operation is appropriately minimized and that any waste generated is properly managed, the Department recommends the Council adopt the following condition:

**Condition N.3:** The certificate holder shall implement a waste management plan during facility operation that includes but is not limited to the following measures:

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690 Final ASC, Exhibit V, p. V-3.
691 Final ASC, Section V.3.2.1, p. V-7
692 Final ASC, Section V.7, p. V-11
(a) Train employees to minimize and recycle solid waste.

(b) Recycle paper products, metals, glass, and plastics.

(c) Recycle used oil and hydraulic fluid.

(d) Collect non-recyclable waste for transport to a local landfill by a licensed waste hauler or by using facility equipment and personnel to haul the waste. Waste hauling by facility personnel shall be performed in compliance with the Multnomah County Solid Waste Management Ordinance in effect as of July 23, 2013, which requires that all loads be covered and secured.

(e) Segregate all hazardous and universal wastes such as used oil, oily rags and oil-absorbent materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous and universal wastes.

Based on this analysis and the proposed conditions, the Department recommends that the Council find that the applicant’s plans for minimization, management, and disposal of solid waste will minimize the generation of solid waste during construction and operations and that the applicant’s plans to manage the accumulation, storage and disposal and transportation of waste generated will likely result in minimal adverse impact on surrounding and adjacent areas.

B. Wastewater and Stormwater

During construction, wastewater generated would include water used for tire and vehicle washing, flushing and testing activities, pressure testing process piping, dust suppression, and stormwater runoff. The water would either be discharged offsite through the sanitary sewer system and be treated by the City of Troutdale Water Pollution Control Facility (WPCF), treated onsite in the power generation water treatment facility and recycled for reuse in further testing or other uses, or it would be trucked offsite to an appropriate facility.

The applicant anticipates using up to 5.1 million gallons of water for hydrostatic pressure tests conducted on process piping components as well as for fuel oil tanks during construction. It is possible that some water may be re-used. Wastewater generated through pressure tests will either be discharged to the Sandy River pursuant to an NPDES permit through the Troutdale

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693 Final ASC, Exhibit V, p. V-2.
694 Final ASC, Exhibit V, p. V-2.
695 Final ASC, Section V.2.1.2, p. V-2
WPCF’s existing outfall or it will be trucked offsite and disposed of at an appropriate facility.
The applicant proposes to collect all wastewater resulting from tire and vehicle washing in a
sediment trap and to discharge any washwater that does not infiltrate into the ground pursuant
to the NPDES 1200-C construction stormwater permit. The applicant considers tire and vehicle
washing to be a construction best management practice that helps to reduce the amount of
sediment transport offsite. The applicant proposes to collect all wastewater resulting from tire
and vehicle washing in a sediment trap and to dispose of the wastewater at an approved
facility.696

The quantity of stormwater runoff during construction would be based on local weather
conditions and the stage of construction.697 Approximately 9.6 million gallons of water would
be used for dust suppression during construction of the facility. The quantity of water used for
dust suppression would be highly dependent on site and seasonal conditions. The applicant
estimates that the quantity of water used for dust suppression would be 10,000 to 20,000
gallons per day, when warranted. The applicant expects that water used for dust suppression
would either infiltrate onsite or evaporate, and does not anticipate producing runoff from the
site.698 The applicant proposes to control stormwater quality and quantity using best
management practices to prevent erosion and minimize sedimentation, as established in the
Erosion and Sediment Control Plan (ESCP).699 An Erosion and Sediment Control Plan describes
best management practices for erosion and sediment control, spill prevention and response
procedures, regular maintenance for vehicles and equipment, employee training on spill
prevention and proper disposal procedures.700

The applicant must manage stormwater in compliance with the conditions of an NPDES 1200-C
Construction Stormwater discharge permit, which would include a site-specific ESCP.701 The
NPDES 1200-C permit is a federally-delegated permit issued and enforced by DEQ.702 A
February 14, 2013 letter from DEQ to the Department states that the applicant’s NPDES 1200-C
permit application is complete, and that the ESCP needed minor revisions and a final review.703
In the letter, DEQ noted that the City of Troutdale is DEQ’s agent for processing and reviewing
applications for coverage under the 1200-C within the city. The letter estimates that DEQ could

696 Final ASC, Exhibit V, p. V-2.
697 Final ASC, Exhibit V, p. V-2.
698 Final ASC, Section V.2.1.2, p. V-2
699 Final ASC, Exhibit V, p. V-2. The Erosion and Sediment Control Plan is Attachment I-1 to Exhibit I in the
ASC.
700 Final ASC, Exhibit V, p. V-6.
701 Final ASC, Section V.3.1.2, p. V-6
702 Final ASC, Exhibit I, Attachment I-1. The applicant submitted a construction stormwater permit (NPDES
1200-C) application to the Oregon DEQ and a copy of the NPDES 1200-C permit application and ESCP is
included in Exhibit I of the ASC.
703 Final ASC, Exhibit I, Attachment I-2.
issue the permit in June 2013. Recommended Condition D.2 would require compliance with the NPDES 1200-C permit and its associated ESCP during the facility’s construction.

**Operation:**

**Wastewater**

Operational wastewater would consist of water treatment system wastes and cooling tower blowdown, combustion turbine generator (CTG) water wash wastes, and stormwater. The applicant proposes that water treatment system wastes and cooling tower blowdown would be treated and sent offsite through a new wastewater pipe installed directly adjacent to the new pipeline providing reclaimed water from the WPCF for facility operation. The wastewater would be discharged to the Sandy River through the existing outfall of the WPCF, which requires the applicant to obtain an NPDES permit. The wastewater would have heat, substances in the reclaimed water, concentrated minerals contained in the original well water, and treatment chemicals used to remove these materials from the water. The individual NPDES permit application includes a compliance evaluation of the facility’s discharge of the blended discharge (consisting of effluent from the facility and effluent from Troutdale WPCF) within the existing Troutdale WPCF regulatory mixing zone. The evaluation in Attachment V-1 presents the known discharge limits for all parameters, and demonstrates that the discharge is anticipated to be within these requirements. The analysis was performed to include substances likely to be contained in the discharged wastewater.

The applicant further explains that wastewater would also be generated during periodic washing of the CTG and the wastewater would be collected in a holding tank. The water would contain the detergent used to aid in cleaning any substances washed from the compressor blades. The wash water waste is typically high in metals and would be trucked offsite for processing and disposal in an approved facility.

Stormwater from building roofs and other impervious surfaces would be generated during the facility’s operation. Exhibit V explains that stormwater generated during facility operation would be discharged offsite, under an NPDES 1200-Z permit, which regulates the stormwater discharges associated with industrial activity. This permit would authorize the discharge of

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704 Final ASC, Exhibit I, Attachment I-1.
705 Final ASC, Exhibit V, p. V-3.
706 Final ASC, Exhibit V, Section V.3.2.2, p. V-8.
707 The expected wastewater chemical concentrations for various operating scenarios are included in Final ASC, Attachment G-1. Refer to Final ASC, Exhibit O for a description of each operating scenario.
710 Final ASC, Exhibit V, Section V.3.2.2, p. V-8. The registration application for coverage under the NPDES 1200-Z permit is included in the Final ASC, Exhibit V, Attachment V-2.
stormwater to the Port of Portland’s Troutdale Reynolds Industrial Park stormwater system, which eventually discharges to Salmon Creek. A February 14, 2013 letter from DEQ to the Department notes that the applicant submitted a Storm Water Pollution Control Plan (SWPCP), which is necessary for a General NPDES 1200-Z Stormwater discharge permit. The letter estimates that DEQ may be able to issue the permit in June 2013. Throughout the facility’s operation, the certificate holder would be subject to the NPDES 1200-Z permit and its associated SWPCP. Therefore, the Department recommends the Council adopt the following condition:

**Condition N.5**: The certificate holder shall operate the facility in compliance with a Storm Water Pollution Control Plan satisfactory to the Oregon Department of Environmental Quality and as required under National Pollutant Discharge Elimination System (NPDES) Industrial Stormwater Discharge General Permit No. 1200-Z.

**Sanitary Wastewater**

The applicant estimates 750 gallons of sanitary wastewater would be generated during the anticipated 24 months of facility construction. During construction, the applicant would provide portable sanitation facilities for construction personnel, and sanitary waste would be pumped out and disposed of off-site by a contractor. To ensure that sanitary wastewater is properly collected and contained during construction, the Department recommends that the Council adopt the following condition:

**Condition N.6**: For the duration of the facility’s construction, the certificate holder shall provide portable toilets for onsite sewage and shall ensure that the toilets are pumped and cleaned regularly by a contractor licensed to perform such work.

The applicant estimates that during operation, up to approximately 750 gallons of sanitary wastewater may be generated each day as part of routine office use for approximately 30 permanent employees. The proposed facility would connect to the existing City of Troutdale sanitary sewer line for treatment and disposal of sanitary sewage. To ensure that sanitary wastewater is properly collected and contained during operation, the Department recommends the Council adopt the following condition:

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711 Final ASC, Exhibit I, Attachment I-1. DEQ has made two requests for additional data since the applicant submitted the initial plan on December 20, 2012, prompting the applicant to revise and resubmit the SWPCP to DEQ on February 5, 2013.
712 Final ASC, Exhibit I, Attachment I-1.
713 Final ASC, Exhibit V. V-3.
715 Final ASC, Section V.2.2, p. V-4
716 Final ASC, Section V.3.2.2, p. V-9
**Condition N.7:** During operation of the facility, the certificate holder shall discharge sanitary wastewater generated on-site utilizing the approved City of Troutdale sewer system in compliance with City requirements.

Based on this analysis and the proposed conditions, the Department recommends that the Council find that the applicant’s plans for minimization, management, and disposal of wastewater and stormwater will minimize the generation of wastewater and stormwater during construction and operations and that the applicant’s plans to manage the accumulation, storage and disposal and transportation of waste generated will likely result in minimal adverse impact on surrounding and adjacent areas.

**C. Hazardous Waste**

The applicant describes hazardous materials involved in the facility’s construction and operation in Exhibit G of the ASC. The applicant anticipates that during both construction and operation, less than 220 pounds of hazardous waste would be generated per month. Less than 2,200 pounds of hazardous waste would be stored onsite at one time. The applicant has proposed to develop a Hazardous Materials Management Plan to manage hazardous wastes and hazardous materials generated during the operation of the facility. To ensure that an adequate Hazardous Materials Management Plan is developed, the Department recommends that the Council adopt the following condition:

**Condition N.8:** Prior to beginning facility construction, the certificate holder shall prepare and implement a Department-approved Hazardous Materials Management and Monitoring Plan. The plan shall address the handling of potentially hazardous substances (as defined by ORS 465.200) during construction and operation of the facility, measures to prevent on- and off-site contamination, and documentation of plan implementation.

Hazardous waste would include oily waste, used filters, oily rags or absorbents, used oils, solvents, and cleaning materials. These waste materials would be collected, stored, and disposed of by a licensed contractor, at a licensed facility. During operations, hazardous waste would also include CTG wash water. The water used to wash the CTG compressor would be collected in a holding tank. The wash water would contain detergent and is typically high in metals. As a result, it is unsuitable for treatment in the onsite system, and would be trucked offsite for processing and disposal in an approved facility. To ensure that hazardous

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717 Final ASC, Exhibit V, I-6. Tables 1-1 and 1-2 summarize the estimated industrial materials flowing into and out of the Facility during operation, respectively
718 Final ASC, Exhibit V, p. V-3.
719 Final ASC, Exhibit V, p. V-3.
720 Final ASC, Section V.2.1.1, p. V-2
721 Final ASC, Section V.7, p. V-11
722 Final ASC, Section V.2.2.1, p. V-3
723 Final ASC, Section V.3.2.2, p. V-8
wastes generated during construction and operation are properly collected and stored, the Department recommends that the Council adopt the following conditions:

**Condition N.9:** The certificate holder shall use hazardous materials in a manner that protects public health, safety and the environment and shall comply with all applicable local, state, and federal environmental laws and regulations.

**Condition N.10:** The certificate holder shall collect all hazardous solid waste, including oily waste, used filters, and oily rags or absorbents in sealable drums. The certificate holder shall collect used oils, solvents, and cleaning materials in tanks or barrels supplied by material vendors.

The applicant proposes to develop both a construction and an operational Spill Prevention Control and Countermeasures (SPCC) Plan. The applicant also proposes to use best management practices (BMPs) intended to minimize the chance of a release in the event of a spill or a leak. These BMPs would include permanent oil/water separators, floor trenches with grating covers or floor drain sumps to catch and contain spilled materials. Oil collected in the oil/water separators, trench drains, and floor sumps would be retained, pending removal by portable pump for disposal by an appropriately permitted waste disposal service provider.

The applicant would make spill control and containment kits readily available in areas containing fuel oil, lubricating oil, hydraulic oil, and chemicals, as well as chemical unloading areas. The spill kits would be equipped with sorbent materials, temporary containment booms, drums, and disposal bags. The applicant would incorporate training and education for operational personnel as part of the SPCC Plan and BMPs.

The Department recommends that the Council adopt the following conditions to ensure proper handling of hazardous materials and preparation for, and response to, spill and accidental releases of hazardous materials:

**Condition N.11:** Prior to construction, the certificate holder shall develop a Spill Prevention Control and Countermeasures (SPCC) Plan for implementation during the facility’s construction and operation. The SPCC Plan would include best management practices and hazardous waste training for construction and operation personnel.

**Condition N.12:** The certificate holder shall store hazardous chemicals in aboveground containers or tanks located within secondary containment areas. Other chemicals and lubricants needed for facility maintenance and operation shall be stored in the warehouse building.

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727 Final ASC, Exhibit V, V-8.

Troutdale Energy Center
Proposed Order
December 16, 2013
In addition, recommended Condition D.6 would require the certificate holder to notify the Department of releases of hazardous material within 72 hours, to clean and dispose of contaminated soil or other material according to applicable regulations, and to provide spill control and containment kits in appropriate areas on site.

Based on this analysis and the proposed conditions, the Department recommends that the Council find that the applicant’s plans for minimization, management, and disposal of hazardous waste will minimize the generation of hazardous waste during construction and operations and that the applicant’s plan to manage the accumulation, storage and disposal and transportation of waste generated will likely result in minimal adverse impact on surrounding and adjacent areas.

IV.N.2. Waste Minimization: Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends the Council find that the proposed facility complies with the Waste Minimization Standard.

IV.O. Siting Standards for Transmission Lines [OAR 345-024-0090]

To issue a site certificate for a facility that includes any transmission line under Council jurisdiction, the Council must find that the applicant:

1) Can design, construct and operate the proposed transmission line so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public;

2) Can design, construct and operate the proposed transmission line so that induced currents resulting from the transmission line and related or supporting facilities will be as low as reasonably achievable.


The applicant provides evidence about electric transmission lines proposed as part of the facility in Exhibit AA of the ASC. The proposed facility includes a 230-kV overhead transmission line that would run from the facility switchyard on Lot 3 to one of three proposed points of interconnection. The three routes under consideration range from 0.9 miles to 1.8 miles in length.\(^\text{728}\)

\(^{728}\) Final ASC, Section AA.1, p. AA-1.
Alternating Current Electric Fields

The applicant calculated the electric field that would be produced by the transmission line using a Windows-based software model, “EMF Workstation: ENVIRO (Version 3.52),” developed by the Electric Power Research Institute (EPRI). The proposed lines would each run down the center of an 80-foot right of way, except for road crossings. Where each line would cross NW Sundial Road, the right of way is 60 feet wide. In modeling electromagnetic fields associated with the transmission line, the applicant assumed these right of way widths, as well as identical monopole overhead structural configuration and a peak line load of 1,757 ampere per phase conductor. The applicant explains that the calculated maximum electric field of 3.18 kV/meter would occur at approximately 10 feet to the left of the centerline of the proposed overhead transmission line. Based on this calculation, the expected maximum calculated electric field falls within the 9-kV/meter maximum established in OAR 345-024-0090(1).

Based on a review of the calculations in Exhibit AA, the Department recommends that the Council find that the applicant can design, construct, and operate the proposed transmission line so that alternating current electric fields do not exceed 9.0-kV per meter at one meter above ground surface in areas accessible to the public.

Induced Current

The applicant provides an analysis of the risk of induced voltage and current from the proposed transmission line. The applicant explains that magnetic and electric fields around alternating current transmission lines can induce current or voltage in nearby conductors that run parallel to it. The value of the induced current would depend on magnetic field strength, the size, shape, and location of the conducting object, and object-to-object ground resistance.

Induced currents are not generally hazardous to people because of the very low voltages involved, but can be a concern for railroad communications and pipeline cathodic protection systems that parallel transmission lines. The applicant states that there will be no occupied structures within 200 feet of the centerline of the proposed transmission lines. The applicant also commits to ground any metal fences that run parallel to and close to the proposed transmission lines, as required under the mandatory conditions discussed below.

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729 Final ASC, Section AA.2.1, p. AA-1.
730 Final ASC, Figure AA-1.
731 Final ASC, Section AA.2.3.2, p. AA-3.
732 Final ASC, Section AA.2.3.2, Table AA-1, p. AA-4.
733 Final ASC, Section AA.4.1.2, p. AA-8.
734 Final ASC, Section AA.2.2, p. AA-2.
735 Final ASC, Section AA.4.1.2, p. AA-8.
Under OAR 345-027-0020, the Council must adopt certain conditions in every site certificate. Two of these mandatory conditions implements the requirements in the Siting Standards for Transmission Lines that relate to reducing possible impacts to human or animal contact with induced currents. To ensure compliance with this standard, the applicant must comply with the following mandatory conditions, as required pursuant to OAR 345-027-0023(4)(a) and (b):

**Condition O.1:** The certificate holder shall design, construct, and operate the transmission line in accordance with the requirements of the National Electrical Safety Code (American National Standards Institute, Section C2, 1997 Edition).

**Condition O.2:** 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 line.

Based on the evidence in the record, and subject to compliance with mandatory site certificate conditions, the Department recommends that the Council find that the applicant can design, construct, and operate the proposed transmission line so that induced currents from the transmission line and related or supporting facilities will be as low as reasonably achievable.

**IV.O.2 Siting Standards for Transmission Lines: Conclusions of Law**

Based on the foregoing findings of fact and conclusions, and subject to compliance with the mandatory site certificate conditions, the Department recommends that the Council find that the proposed facility complies with the Council’s Siting Standards for Transmission Lines.

**IV.P. Carbon Dioxide Standard [OAR 345-024-0550 through 0600]**

OAR 345-024-0550 Standard for Base Load Gas Plants

To issue a site certificate for a base load gas plant, the Council must find that the net carbon dioxide emissions rate of the proposed facility does 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. For a base load gas plant designed with power augmentation technology as defined in OAR 345-001-0010, the Council shall apply the standard for a non-base load power plant, as described in OAR 345-024-0590, to the incremental carbon dioxide emissions from the designed operation of the power augmentation technology. The Council shall determine whether the base load carbon dioxide emissions standard is met as follows:

(1) The Council shall determine the gross carbon dioxide emissions that are reasonably likely to result from the operation of the proposed energy facility. The Council shall base
such determination on the proposed design of the energy facility. The Council shall adopt site certificate conditions to ensure that the predicted carbon dioxide emissions are not exceeded on a new and clean basis.

(2) For any remaining emissions reduction necessary to meet the applicable standard, the applicant may elect to use any of the means described in OAR 345-024-0560, or any combination thereof. The Council shall determine the amount of carbon dioxide or other greenhouse gas emissions reduction that is reasonably likely to result from the applicant’s offsets and whether the resulting net carbon dioxide emissions meet the applicable carbon dioxide emissions standard. ***

*** (4) Before beginning construction, the certificate holder shall notify the Department of Energy in writing of its final selection of a gas turbine vendor and shall submit a written design information report to the Department sufficient to verify the facility’s designed new and clean heat rate and its nominal electric generating capacity at average annual site conditions for each fuel type. In the report, the certificate holder shall include the proposed limits on the annual average number of hours of facility operation on distillate fuel oil, if applicable. In the site certificate, the Council may specify other information to be included in the report. The Department shall use the information the certificate holder provides in the report as the basis for calculating, according to the site certificate, the amount of greenhouse gas emissions reductions the certificate holder must provide under OAR 345-024-0560.

OAR 345-024-0560: Means of Compliance for Base Load Gas Plants

The applicant may elect to use any of the following means, or any combination thereof, to comply with the carbon dioxide emissions standard for base load gas plants. For a base load gas plant designed with power augmentation technology, the applicant shall comply with the standard for a non-base load power plant in the manner as described in OAR 345-024-0600 for the incremental carbon dioxide emissions from the designed operation of the power augmentation technology. ***

*** (3) Providing offset funds, directly or through a third party, in an amount deemed sufficient to produce the reduction in greenhouse gas emissions necessary to meet the applicable carbon dioxide emissions standard. The applicant or third party shall use the funds as specified in OAR 345-024-0710. The Council shall deem the payment of the monetary offset rate, pursuant to OAR 345-024-0580, to result in a reduction of one ton of carbon dioxide emissions. The Council shall determine the offset funds using the monetary offset rate and the level of emissions reduction required to meet the applicable standard. If the Council issues a site certificate based on this section, the Council may not adjust the amount of the offset funds based on the actual performance of offsets. ***
OAR 345-024-0590 Standard for Non-Base Load Power Plants

To issue a site certificate for a non-base load power plant, the Council must find that the net carbon dioxide emissions rate of the proposed facility does 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. For a base load gas plant designed with power augmentation technology as defined in OAR 345-001-0010, the Council shall apply this standard to the incremental carbon dioxide emissions from the designed operation of the power augmentation technology. The Council shall determine whether the carbon dioxide emissions standard is met as follows:

(1) The Council shall determine the gross carbon dioxide emissions that are reasonably likely to result from the operation of the proposed energy facility. The Council shall base such determination on the proposed design of the energy facility, the limitation on the hours of generation for each fuel type and the average temperature, barometric pressure and relative humidity at the site during the times of the year when the facility is intended to operate. For a base load gas plant designed with power augmentation technology, the Council shall base its determination of the incremental carbon dioxide emissions on the proposed design of the facility, the proposed limitation on the hours of generation using the power augmentation technology and the average temperature, barometric pressure and relative humidity at the site during the times of the year when the facility is intended to operate with power augmentation technology. The Council shall adopt site certificate conditions to ensure that the predicted carbon dioxide emissions are not exceeded on a new and clean basis; however, the Council may modify the parameters of the new and clean basis to accommodate average conditions at the times when the facility is intended to operate and technical limitations, including operational considerations, of a non-base load power plant or power augmentation technology or for other cause.

(2) For any remaining emissions reduction necessary to meet the applicable standard, the applicant may elect to use any of the means described in OAR 345-024-0600 or any combination thereof. The Council shall determine the amount of carbon dioxide or other greenhouse gas emissions reduction that is reasonably likely to result from the applicant’s offsets and whether the resulting net carbon dioxide emissions meet the applicable carbon dioxide emissions standard. ***

*** (4) Before beginning construction, the certificate holder shall notify the Department of Energy in writing of its final selection of an equipment vendor and shall submit a written design information report to the Department sufficient to verify the facility’s designed new and clean heat rate and its nominal electric generating capacity at average annual site conditions for each fuel type. For a base load gas plant designed
with power augmentation technology, the certificate holder shall include in the report information sufficient to verify the facility’s designed new and clean heat rate, tested under parameters the Council orders pursuant to section (1), and the nominal electric generating capacity at average site conditions during the intended use for each fuel type from the operation of the proposed facility using the power augmentation technology. The certificate holder shall include the proposed limit on the annual average number of hours for each fuel used, if applicable. The certificate holder shall include the proposed total number of hours of operation for all fuels, subject to the limitation that the total annual average number of hours of operation per year is not more than 6,600 hours. In the site certificate, the Council may specify other information to be included in the report. The Department shall use the information the certificate holder provides in the report as the basis for calculating, according to the site certificate, the gross carbon dioxide emissions from the facility and the amount of greenhouse gas emissions reductions the certificate holder must provide under OAR 345-024-0600. ***

***(6) For a base load gas plant designed with power augmentation technology, every five years after commencing commercial operation, the certificate holder shall report to the Council the facility’s actual hours of operation using the power augmentations technology for each fuel type. If the actual gross carbon dioxide emissions, calculated using the new and clean heat rate, tested under parameters the Council orders pursuant to section (1), and the actual hours of operation using the power augmentation technology on each fuel during the five-year period exceed the projected gross carbon dioxide emissions for the five-year period calculated under section (4), the certificate holder shall offset any excess emissions for that period and shall offset estimated future excess carbon dioxide emissions using the monetary path as described in OAR 345-024-0600(3) and (4) or as approved by the Council.

345-024-0600: Means of Compliance for Non-Base Load Power Plants

The applicant may elect to use any of the following means, or any combination thereof, to comply with the carbon dioxide emissions standard for non-base load power plants or for the incremental carbon dioxide emissions from the operation of a base load gas plant with power augmentation technology: ***

*** (3) Providing offset funds, directly or through a third party, in an amount deemed sufficient to produce the reduction in greenhouse gas emissions necessary to meet the applicable carbon dioxide emissions standard. The applicant or third party shall use the funds as specified in OAR 345-024-0710. The Council shall deem the payment of the monetary offset rate, pursuant to OAR 345-024-0580, to result in a reduction of one ton of carbon dioxide emissions. The Council shall determine the offset funds using the monetary offset rate and the level of emissions reduction required to meet the applicable standard. If the Council issues a site certificate based on this section, the
Council may not adjust the amount of the offset funds based on the actual performance of offsets.

(4) Notwithstanding sections (1), (2) or (3), if the certificate holder exceeds the projected gross carbon dioxide emissions calculated under OAR 345-024-0590(4) during any five-year reporting period described in OAR 345-024-0590(5) and (6), the certificate holder shall offset excess emissions for the specific reporting period according to subsection (a) and shall offset the estimated future excess emissions according to subsection (b). The certificate holder shall offset excess emissions using the monetary path as described in subsection (c) and OAR 345-024-0710 or as approved by the Council.

(a) In determining the excess carbon dioxide emissions that the certificate holder must offset for a five-year period, the Council shall credit the certificate holder with offsets equal to the difference between the carbon dioxide emissions allowed by the site certificate in previous periods and actual emissions, if actual emissions were lower than allowed. Once a certificate holder has used a credit, the certificate holder shall not use it again.

(b) The Council shall specify in the site certificate a methodology for estimating future excess carbon dioxide emissions. The Department of Energy shall calculate estimated future excess emissions. To estimate excess emissions for the remaining period of the deemed life of the facility, the Department shall use the annual average number of hours of operation during the five-year period in which the certificate holder exceeded the estimated gross carbon dioxide emissions described in OAR 345-024-0590(5) and the new and clean heat rate and capacity for the facility, adjusted for the average temperature, barometric pressure and relative humidity at the site during the times of the year when the facility is intended to operate. If the annual average hours exceed 6,600, the Department shall estimate emissions at 100 percent capacity for the remaining period of a deemed 30 year life of the facility. At the request of the certificate holder, the Council may, by amendment of the site certificate, use an alternative methodology to estimate future excess carbon dioxide emissions.

(c) The certificate holder shall pay for the net excess carbon dioxide emissions calculated pursuant to subsections (a) and (b) at the monetary path offset rate in real dollars for the quarter and year in which the Council issued the final order that applied the carbon dioxide standard. The Council shall specify in the site certificate the methodology for calculating the real dollar value of the monetary offset rate. The Department shall calculate the net excess carbon dioxide emissions and notify the certificate holder of the amount of the monetary path payment required to offset them. The certificate holder shall pay fully the required amount to the qualified organization within 60 days of notification by the Department of the amount.
Certificate holder shall not be eligible for a refund of any monetary path payments due to the calculations in this rule.***

IV.P.1. Carbon Dioxide Standard: Findings of Fact

The applicant provides information about the compliance of the proposed facility with the Council’s Carbon Dioxide Standard in Exhibit Y of the application.

The applicant explains that the facility may include power enhancement or augmentation to the base load gas plant in the form of duct burning, which would be fueled with natural gas. The applicant does not expect duct burning to exceed 3,000 hours per year.736 The applicant may select a different limit for annual average hours of duct firing before beginning construction, pursuant to OAR 345-024-0590(4). Because the proposed base load gas plant is designed with power augmentation technology, as defined in OAR 345-001-0010(46), the Council shall apply the standard for non-base load power plants to the incremental carbon dioxide (CO₂) emissions from the designed operation of the power augmentation technology.

The applicant explains that the facility may operate using ultra-low sulfur distillate (ULSD) as a backup fuel for the combined-cycle turbines when natural gas is unavailable. The applicant states that this operating scenario would not occur except during times of natural gas curtailment and only for a maximum of 720 hours per year.737 The applicant states that power augmentation by use of duct firing would not occur when ULSD is used in the combined-cycle turbine. The simple-cycle turbines would have the option to operate on ULSD for up to 720 hours per year. Operation of the simple-cycle turbines would not be limited to times of natural gas curtailment.

The proposed facility would be fueled by natural gas with the alternative fuel use amounting to less than 10 percent of the expected fuel use in British thermal units (Btu) on an average annual basis, and the applicant does not request conditions in the site certificate that would limit the hours of operation for the generating facility while combusting natural gas.738 Therefore, the proposed facility meets the definition of a “base load gas plant” at OAR 345-001-0010(7).

IV.P.1.a: Carbon Dioxide Emissions

Under OAR 345-024-0550, the Council applies the carbon dioxide emissions standard for a base load power plant to the net carbon dioxide emission rate of the proposed facility. The Council must find that the base load facility does not exceed 0.675 pound of carbon dioxide per kilowatt-hour (lb. CO₂/kWh) of net electric power output, with carbon dioxide emissions and net electric output measured on a new and clean basis.

736 Final ASC, Section Y.2, p. Y-1.
For a base load power plant with power augmentation technology, under OAR 345-024-0590 the Council applies the carbon dioxide emissions standard for a non-base load power plant to the incremental carbon dioxide emissions from the designed operation of the power augmentation technology. Thus, the Council must find that those incremental emissions do not exceed 0.675 lb. CO₂/kWh of net electric power output, with carbon dioxide emissions and net electric output measured on a new and clean basis. OAR 345-024-0550 requires that the carbon dioxide emissions and net power output be measured on a “new and clean basis.” The Council’s definition of “new and clean basis” specifies average annual site conditions, including temperature, barometric pressure and relative humidity. The applicant does not specify that it intends to use the power augmentation technologies during any particular times of the year, so the Department bases the analysis of the new and clean basis on average annual conditions provided by the applicant.  

IV.P.1.b: Carbon Dioxide Emissions Calculations

The following discussion and table show a sample carbon dioxide emission calculation for the proposed facility. The table is for illustrative purposes and does not necessarily reflect the actual emissions, offsets, or monetary path payments. The conditions relating to the carbon dioxide standard and other conditions in the site certificate allow the applicant flexibility in its choice of equipment vendor and the facility’s design, within the parameters allowed pursuant to OAR 345-027-0050.

Pursuant to OAR 345-024-0550(4) and -0590(4), before beginning construction of the proposed facility, the Applicant must submit to the Department an affidavit with the design parameters necessary to calculate the expected carbon dioxide emissions for the as-built energy facility. These parameters determine the specific amount of the monetary path payment for offset funds, and selection and contracting funds, required, as calculated according to the conditions of the site certificate. In order to ensure compliance with these requirements, the Department recommends that the Council adopt the following conditions:

**Condition P.1:** Before beginning construction of the Facility, the certificate holder shall submit to the Department information identifying its final selection of turbine vendor(s) and heat recovery steam generator vendor(s) along with the following information, as appropriate:

(a) For the base load gas plant, the certificate holder shall submit written design information, based on its contracts with vendors, sufficient to verify the plant’s designed

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739 Final ASC, Section Y.10, p. Y-3. The applicant provides the following average weather conditions, derived from data collected by the National Oceanic and Atmospheric Administration at the Portland-Troutdale Airport: temperature, 53° F, barometric pressure 14.696 pounds per square inch, relative humidity of 75%. 

Troutdale Energy Center
Proposed Order
December 16, 2013
new and clean heat rate (higher heating value) and its net power output at average annual site conditions. The certificate holder shall submit an affidavit certifying the heat rate and capacity.

(b) For the base load gas plant designed with power augmentation technology, the certificate holder shall submit written design information, based on its contracts with vendors, sufficient to verify the plant’s designed and new clean heat rate (higher heating value) and its net power output at the site during the times of year when the Facility is intended to operate with power augmentation. The certificate holder shall submit an affidavit certifying the heat rate and capacity.

The Council must determine the gross carbon dioxide emissions that are reasonably likely to result from the operation of the proposed facility. For a base-load gas plant, OAR 345-001-0010(7) and OAR 345-024-0050(1) require calculations of the annual gross carbon dioxide emissions of the facility and total carbon dioxide emissions for 30 years at 100 percent capacity. The gross carbon dioxide emissions rate is expressed as pounds of carbon dioxide per kilowatt-hour of net electric power output. Since the applicant proposes to operate the facility with power augmentation for part of the time, the gross carbon dioxide emissions are the sum of the emissions when operating at base-load and when operating with power augmentation. The applicant estimates that the proposed facility would use power augmentation no more than 3,000 hours per year.\footnote{Final ASC, Section Y.2, p. Y-1.}

The applicant proposes that the facility use only natural gas as a fuel, except that the facility may use ULSD for the simple-cycle turbines and the combined-cycle turbine for up to 720 hours annually. The combined-cycle turbine may only use ULSD during periods of natural gas curtailment. In order to ensure that the applicant limits use of ULSD to the number of hours described in the application for site certificate, the Department recommends that the Council adopt the following condition:

**Condition P.2:** The certificate holder shall use only pipeline quality natural gas to fuel the base load gas plant and the power augmentation, except that:

(a) The facility’s combined-cycle turbine may operate on ultra-low sulfur distillate for up to 720 hours each calendar year when natural gas is unavailable; and

(b) The facility’s simple-cycle turbines may operate on ultra-lower sulfur distillate for up to 720 hours each calendar year.

The table below breaks the year into three operating scenarios totaling 8,760 hours:
1. 3,000 hours per year when the combined cycle turbine is using power augmentation and all turbines are operating on natural gas.

2. 5,040 hours per year when the combined cycle turbine is not using power augmentation and all turbines are operating on natural gas.

3. 720 hours per year when the combined cycle turbine is not using power augmentation, but is fired on natural gas, and the simple cycle turbines are operating on ULSD.

For the example provided in the table below, the gross carbon dioxide emissions were calculated using the heat rates provided in Table Y-1 of the application. For the gross carbon dioxide emissions rate, the table divides combined carbon dioxide emissions (lb. CO₂) by the combined net electric power output (kWh) to determine the gross carbon dioxide emissions rate (lb. CO₂/kWh).

“Net carbon dioxide emissions” is defined as “gross carbon dioxide emissions of the proposed energy facility, less carbon dioxide or other greenhouse gas emissions avoided, displaced or sequestered by any combination of cogeneration or offsets.” In order to apply the standard, the Council must determine the excess carbon dioxide emissions rate of the energy facility and the excess carbon dioxide emissions for 30 years. Excess carbon dioxide emissions are those in excess of net carbon dioxide emissions allowed under the standard.

The applicant proposes to offset excess carbon dioxide emissions through the monetary path. The table below shows the preliminary calculation of the offsets as “Excess Tons of CO₂.”

Table 11: Carbon Dioxide Standard for Troutdale Energy Center

<table>
<thead>
<tr>
<th>Carbon Dioxide Standard for Troutdale Energy Center</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. CO₂ Standard</strong></td>
</tr>
<tr>
<td>CO₂ Standard for Base-Load Gas Plant (lb. CO₂/kWh)</td>
</tr>
<tr>
<td>CO₂ Standard for Power Augmentation (lb. CO₂/kWh)</td>
</tr>
<tr>
<td><strong>B. Parameters for All Turbines Firing Natural Gas w/ Power Augmentation</strong></td>
</tr>
<tr>
<td>Net Power Output (kW)</td>
</tr>
<tr>
<td>New and Clean Heat Rate (Btu/kWh) HHV</td>
</tr>
</tbody>
</table>

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741 Final ASC, Table Y-1.
742 OAR 345-001-0010(37).
743 OAR 345-0001-0010(36).
### Carbon Dioxide Standard for Troutdale Energy Center

#### C. Parameters for All Turbines Firing Natural Gas w/o Power Augmentation

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Power Output (kW)</td>
<td>594,000</td>
</tr>
<tr>
<td>New and Clean Heat Rate (Btu/kWh) HHV</td>
<td>7,262</td>
</tr>
<tr>
<td>Annual Hours of Operation</td>
<td>5,040</td>
</tr>
</tbody>
</table>

#### D. Parameters for Simple Cycle Firing ULSD and Combined Cycle Firing NG w/o Power Augmentation

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Power Output (kW)</td>
<td>589,000</td>
</tr>
<tr>
<td>New and Clean Heat Rate (Btu/kWh) HHV</td>
<td>7,248</td>
</tr>
<tr>
<td>Annual Hours of Operation</td>
<td>720</td>
</tr>
</tbody>
</table>

#### E. Natural Gas w/Power Augmentation (Combined Cycle and Simple Cycle Turbines)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Power Output (kW)</td>
<td>652,000</td>
</tr>
<tr>
<td>Annual Hours of Operation</td>
<td>3,000</td>
</tr>
<tr>
<td>Annual Generation (million kWh/yr.)</td>
<td>1,956</td>
</tr>
<tr>
<td>Deemed Life of Plant (years) by Statute or Rule</td>
<td>30</td>
</tr>
<tr>
<td>Total Plant Output (million kWh for 30 years)</td>
<td>58,680</td>
</tr>
<tr>
<td>Heat Rate (Btu/kWh) HHV</td>
<td>7,377</td>
</tr>
<tr>
<td>CO₂ Emissions Rate (lb. CO₂/Btu)</td>
<td>0.000119</td>
</tr>
<tr>
<td>Total CO₂ Emissions (million lb. for 30 years)</td>
<td>51,153</td>
</tr>
</tbody>
</table>

#### F. Natural Gas w/o power augmentation (Combined Cycle and Simple Cycle Turbines)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Power Output (kW)</td>
<td>594,000</td>
</tr>
<tr>
<td>Annual Hours of Operation</td>
<td>5,040</td>
</tr>
<tr>
<td>Annual Generation (million kWh/yr.)</td>
<td>2,994</td>
</tr>
<tr>
<td>Deemed Life of Plant (years) by Statute or Rule</td>
<td>30</td>
</tr>
<tr>
<td>Total Plant Output (million kWh for 30 years)</td>
<td>89,820</td>
</tr>
<tr>
<td>Heat Rate (Btu/kWh) HHV</td>
<td>7,262</td>
</tr>
<tr>
<td>CO₂ Emissions Rate (lb. CO₂/Btu)</td>
<td>0.000119</td>
</tr>
<tr>
<td>Total CO₂ Emissions (million lb. for 30 years)</td>
<td>77,620</td>
</tr>
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</table>

#### G. Combined Cycle Turbine w/o Power Augmentation and Simple Cycle Turbines using ULSD

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Power Output (kW)</td>
<td>589,000</td>
</tr>
<tr>
<td>Annual Hours of Operation</td>
<td>720</td>
</tr>
<tr>
<td>Annual Generation (million kWh/yr.)</td>
<td>424</td>
</tr>
<tr>
<td>Deemed Life of Plant (years) by Statute or Rule</td>
<td>30</td>
</tr>
<tr>
<td>Total Plant Output (million kWh for 30 years)</td>
<td>12,720</td>
</tr>
<tr>
<td>Heat Rate (Btu/kWh) HHV</td>
<td>7,248</td>
</tr>
<tr>
<td>CO₂ Emissions Rate (lb. CO₂/Btu)</td>
<td>0.000136</td>
</tr>
<tr>
<td>Total CO₂ Emissions (million lb. for 30 years)</td>
<td>12,538</td>
</tr>
</tbody>
</table>

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744 Weighted average of 119 lbs CO₂/MMBtu for the combined-cycle turbine, which produces 404,650 kW in this operating scenario and 169 lbs CO₂/MMBtu for the simple cycle turbines, which produce a combined 205,538 kW in this operating scenario.
Carbon Dioxide Standard for Troutdale Energy Center

<table>
<thead>
<tr>
<th>H. Total Operations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined Output (million kWh for 30 years)</td>
<td>161,220</td>
</tr>
<tr>
<td>Combined CO2 Emissions (million lb. CO2 for 30 years)</td>
<td>141,671</td>
</tr>
<tr>
<td>Gross CO2 Emissions Rate (lb. CO2/kWh)</td>
<td>0.879</td>
</tr>
<tr>
<td>CO2 Standard (lb. CO2/kWh)</td>
<td>0.675</td>
</tr>
<tr>
<td>Excess CO2 Emissions Rate (lb. CO2/kWh)</td>
<td>0.204</td>
</tr>
<tr>
<td>Excess Tons CO2 (million tons over 30 years)</td>
<td>16.444</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>I. Monetary Path</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Offset Fund Rate ($/ton CO2)</td>
<td>$1.27</td>
</tr>
<tr>
<td>Contracting and Selection Funds ($ million)</td>
<td>$0.92</td>
</tr>
<tr>
<td>Monetary Path Requirement ($ million)</td>
<td>$21.80</td>
</tr>
</tbody>
</table>

IV.P.1.c: Qualified Organization

The applicant has elected to comply with the carbon dioxide emissions standard by providing offset funds to a qualified organization as allowed by OAR 345-024-0560(3) and OAR 345-024-0600(3) and in compliance with the monetary path payment requirement of OAR 345-024-0710.745 The applicant proposes to provide offset funds and funds for the cost of selecting and contracting for offsets to The Climate Trust. The Council has previously found that The Climate Trust is a “qualified organization.” The Department recommends that the Council find that The Climate Trust continues to meet the requirements of a “qualified organization,” defined by ORS 469.503 (2)(e)(N ), for the following reasons:

- The Climate Trust is exempt from federal taxation under section 501(c)(3) of the Internal Revenue Code. By letter dated November 19, 1997, the Internal Revenue Service determined that The Climate Trust (then the Oregon Climate Trust) is exempt from taxation under section 501(c)(3). By letter dated August 3, 2002, the IRS affirmed The Climate Trust’s exempt status.

- The Climate Trust is incorporated in the state of Oregon. Articles of Incorporation are filed with the Oregon Secretary of State.

- The Articles of Incorporation of The Climate Trust require that offset funds received from certificate holders in accordance with ORS 469.503(2) be used for offsets. The Articles of Incorporation of The Climate Trust require that decisions on the use of such funds be made by a body composed of seven voting members of which (1) three are appointed by the Council, (2) three are Oregon residents appointed by an environmental

organization named by the board of directors, and (3) one is appointed by applicants for site certificates that are subject to ORS 469.503(2)(d) and the holders of such site certificates.

- The Climate Trust has made available on an annual basis, beginning after the first year of operation, a signed opinion of an independent certified public accountant stating that the qualified organization’s use of funds pursuant to ORS 469.503 conforms to generally accepted accounting principles.

- The Climate Trust has provided the Council with its 5-year report for the period between 2004 and 2009. The report documents how the Climate Trust has met criteria for investing at least 60 percent of offset funds within 2 years. The report also lists the board of directors, verifying that they meet the selection criteria listed above.

- The Climate Trust has provided to the public annual reports. The most recent report is for calendar year 2011, which outlines the goals and milestones for the reporting year. Additionally, these reports summarize the contracted, available and retired credits in the Climate Trust Portfolio.

**IV.P.1.d: Offset Funds and Monetary Path Payment**

In order to implement the requirements in OAR 345-024-0560 through 345-024-0170 and provide the mechanism for calculating the excess carbon dioxide emissions and the monetary path payment, the Department recommends that the Council adopt the following conditions:

**Condition P.3:** For the purposes of this site certificate, “monetary path payment requirement” means the amount of offset funds determined pursuant to OAR 345-024-0550, -0560, -0590 and -0600 and the amount of the selection and contracting funds that the certificate holder must disburse to The Climate Trust, as the qualified organization, pursuant to OAR 345-024-0710 and the site certificate. The certificate holder shall calculate the monetary path payment requirement using an offset fund rate of $1.27 per ton of carbon dioxide in 2013 dollars.

(a) The certificate holder shall calculate 2013 dollars using the Index described in Condition P.3(c).

(b) The certificate holder shall increase the amount of the bond or letter of credit described in Condition P.8 by the percentage increase in the Index. The certificate holder shall index the funds from the date of the Council’s approval of the site certificate to the date of disbursement of funds to The Climate Trust.
(c) The calculation of 2013 dollars shall be made using the same Index described in Condition G.4(b)(i). The amount of the bond or letter of credit shall increase annually by the percentage increase in the Index and shall be pro-rated within the year to the date of disbursement to The Climate Trust from the date of Council approval of the site certificate. If at any time the Index is no longer published, the Council shall select a comparable calculation of 2013 dollars without an amendment of the site certificate.

**Condition P.4:** Before beginning construction of the facility, the certificate holder shall specify to the Department the annual average hours and the times that it expects to operate with power augmentation.

**Condition P.5:** To calculate the initial monetary path payment requirement, the certificate holder shall use the contracted design parameters for capacities and heat rates submitted under Condition P.1, the annual average hours and times of power with augmentation specified under Condition P.4, and the hours of ultra-low sulfur distillate (ULSD) use by the simple-cycle combustion turbines specified under Condition P.2.

Using the parameters that the applicant provided for a representative plant, the above table calculates the offset funds needed under the monetary path requirement by multiplying the excess tons of carbon dioxide expected to result from operation of the proposed facility by the offset fund rate of $1.27 per ton of carbon dioxide. The calculation results in a monetary path payment requirement of $20.82 million (in 2012 dollars). The table also applies the formula in OAR 345-024-0710(4) to determine funds needed to compensate the qualified organization for its costs of selecting offsets and contracting for the implementation of offsets. Based on the information provided by the applicant, the Department has calculated the selection and contracting funds for the base load plant at $0.92 million.

The initial monetary path payment is the combination of offset funds and the selection and contracting funds. The applicant must pay the selection and contracting funds to the qualifying organization before beginning construction, pursuant to site certificate conditions. The total monetary path payment requirement for the estimated parameters of the proposed facility including use of 3,000 hours per year of power augmentation and ULSD for 720 hours per year for each simple-cycle turbine is $21.74 million.

Pursuant to ORS 469.503(2)(d) and OAR 345-024-0710(1), the applicant will must provide a bond or letter of credit “reasonably acceptable to the Council to ensure the payment of the offset funds” to the qualifying organization before beginning construction. The applicant requests the option to provide either a bond or letter of credit to secure the funds it must

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746 Under OAR 345-024-0710(4), this amount is calculated as 10% of the first $500,000 of the offset fund amount plus 4.286% of any offset fund amount in excess of $500,000.
provide to the qualifying organization.\footnote{Final ASC, Section Y.17, p. Y-8.} In order to ensure compliance with this requirement, the Department recommends that the Council adopt the following condition:

**Condition P.6:** Before beginning construction of the facility, the certificate holder shall enter into a Memorandum of Understanding (MOU) with The Climate Trust that establishes the disbursement mechanism to transfer selection and contracting funds and offset funds to The Climate Trust.

(a) The MOU must be substantially in the form of Exhibit F to the Final Order on the Application. At the request of the certificate holder, the Council may approve a different form of a bond or letter of credit and concurrent MOU without an amendment of the site certificate.

(b) Either the certificate holder or The Climate Trust may submit to the Council for the Council’s resolution any dispute between the certificate holder and The Climate Trust concerning the terms of the bond or letter of credit, the MOU or any other issues related to the monetary path payment requirement. The Council’s decision shall be binding on all parties.

The recommended form of MOU is provided in Exhibit F to this Draft Proposed Order. The MOU allows the parties some flexibility in structuring disbursement, either through direct payment by the certificate holder or through the use of a bond or letter of credit without requiring an amendment of the site certificate. Therefore, Exhibit F contains both forms of financial assurance.

OAR 345-024-0710 (6) provides:

For monetary path payments a certificate holder must make before beginning construction, the certificate holder shall make all offset fund payments and all payments required by section (4) to the qualifying organization in real dollars of the year in which the Council issues a final order applying the carbon dioxide emissions standard to the energy facility. In the site certificate, the Council shall specify an appropriate inflation index for calculating real dollars. * * *

Recommended Condition P.3 would index the monetary path payments to 2013 dollars from the date the Council grants the site certificate to the time the certificate holder disburses funds to the qualifying organization. Because this requirement is similar to the requirement to index the security instrument under the financial assurance standard, recommended Condition P.3 cross-references to the Index used in recommended Condition G.4(b)(i). That Index is based on the U.S. Gross Domestic Product Implicit Price Deflator, Chain-Weight, as published by the Oregon Department of Administrative Services in its series, “Oregon Economic and Revenue
Forecast. In order to ensure that the amount of the monetary path payment complies with the Carbon Dioxide Standard, the Department recommends that the Council adopt the following condition:

**Condition P.7:** The certificate holder shall submit all monetary path payment requirement calculations to the Department for verification in a timely manner before submitting a bond or letter of credit for Council approval, before entering into the Memorandum of Understanding with The Climate Trust as required by Condition P.6, and before making disbursements to The Climate Trust.

In order to implement the requirement of ORS 469.503(2)(d) and 345-027-0710(1) that the certificate holder supply a bond or letter of credit to secure payment of the monetary path payment, the Department recommends that the Council adopt the following condition:

**Condition P.8:** Before beginning construction of the facility, the certificate holder shall submit to The Climate Trust a bond or letter of credit in the amount of the offset funds of the monetary path payment requirement as determined under Condition P.3.

(a) The certificate holder shall use a form of bond or letter of credit that is substantially in the form of Attachment B to the MOU described in Condition P.6. At the request of the certificate holder, the Council may approve a different form of a bond or letter of credit without an amendment of the site certificate.

(b) The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.

(c) The certificate holder shall maintain the bond or letter of credit in effect until the certificate holder has disbursed the full amount of the offset funds to The Climate Trust. The certificate holder may reduce the amount of the bond or letter of credit commensurate with payments it makes to The Climate Trust. The bond or letter of credit must not be subject to revocation before disbursement of the full amount of the offset funds.

The monetary path security requirement would remain in effect in the event of a transfer of the facility approved by the Council under OAR 345-024-0710(3) contains additional requirements for disbursing the monetary path funds: it requires the certificate holder to pay any funds to implement offsets when the qualified organization provides the certificate holder written notice that the organization is contractually obligated to implement offsets. The rule further imposes a restriction on the qualified organization that it cannot request more than the total amount of offset funds for which the certificate holder is obligated. The rule permits the qualified organization to request a partial payment of the total offset funds when it requests offset funds.
OAR 345-024-0710(3) also provides a milestone for the release of offset funds to the qualified organization. When the qualified organization has reached the milestone of being contractually obligated for any amount of money to implement offsets using the offset funds, the qualified organization may, at its discretion, request, and the certificate holder shall disburse, up to the full amount of offset funds available. In order to implement these requirements, the Department recommends that the Council adopt the following condition:

**Condition P.9:** The certificate holder shall disburse to The Climate Trust offset funds and selection and contracting funds when requested by The Climate Trust in accordance with Conditions P.11 and P.12 and the following requirements:

(a) The certificate holder shall disburse selection and contracting funds to The Climate Trust before beginning construction and as appropriate when additional offset funds are required under Conditions P.11 and P.12.

(b) Upon notice pursuant to subsection (c), The Climate Trust may request from the issuer of the bond or letter of credit the full amount of all offset funds available or it may request partial payment of offset funds at its sole discretion. Notwithstanding the specific amount of any contract to implement an offset project, The Climate Trust may request up to the full amount of offset funds the certificate holder is required to provide to meet the monetary path payment requirement.

(c) The Climate Trust may request disbursement of offset funds pursuant to paragraph (b) by providing notice to the issuer of the bond or letter of credit that The Climate Trust has executed a bond or letter of intent to acquire an offset project. The certificate holder shall require that the issuer of the bond or letter of credit disburse offset funds to The Climate Trust within three business days of a request by The Climate Trust for the offset funds in accordance with the terms of the bond or letter of credit.

**IV.P.1.e: Monetary Path Payment Adjustment**

100 Hour Tests True-Up

When construction of the facility is complete, the certificate holder must perform tests (“100-hour tests”) to ensure that the plant complies with the carbon dioxide standard on a new and clean basis, as defined in ORS 469.503(2)(e)(G) and OAR 345-001-0010(38). The 100 hour test may result in a requirement to offset additional carbon dioxide emissions. For a base load facility with power augmentation, the Council may modify the parameters of the new and clean basis to accommodate average conditions at the times when the facility is intended to operate or to accommodate technical limitations, including operational considerations, pursuant to OAR 345-024-0590(1).
If the results of the 100-hour tests after completing construction show that the certificate holder must offset additional carbon dioxide emissions, additional selection and contracting funds would also be required. These amounts would be calculated based on the additional offset funds alone, and would be correspondingly smaller. To ensure adequate selection and contracting funds, the Department recommends that the Council find that if there are excess emissions identified by the 100-hour tests, the payment for selection and contracting funds should be 10 percent of the first $500,000 in offset funds and 4.286 percent of any offset funds over $500,000.

In order to implement provisions allowing for 100-hour test monetary path payment adjustments, the Department recommends that the Council adopt the following conditions:

**Condition P.10:** Within the first 12 months of commercial operation of the facility, the certificate holder shall conduct a 100-hour test at full power without power augmentation (Year One Test 1) and a test at full power with power augmentation (Year One Test-2). Tests performed for purposes of the certificate holder’s commercial acceptance of the facility may suffice to satisfy this condition in lieu of testing after beginning commercial operation.

(a) The certificate holder shall conduct the Year One Test-1 to determine the actual heat rate (Year One Heat Rate-1) and the net electric power output (Year One Capacity-1) on a new and clean basis, without degradation, with the results adjusted for the average annual site condition for temperature, barometric pressure, relative humidity and the limited approved use of ultra-low sulfur distillate (ULSD) to fuel the simple-cycle turbines. The certificate holder shall calculate carbon dioxide emissions using a rate of 117 pounds of carbon dioxide per million Btu of natural gas fuel and a rate of 161 pounds of carbon dioxide per million Btu of ULSD.

(b) The certificate holder shall conduct the Year One Test-2 to determine the actual heat rate (Year One Heat Rate-2) and net electric power output (Year One Capacity-2) for the facility operating with power augmentation, without degradation, with the results adjusted for the site condition for temperature, barometric pressure and relative humidity at the site during the times of year when the power augmentation is intended to operate. The certificate holder shall calculate carbon dioxide emissions using a rate of 117 pounds of carbon dioxide per million Btu of natural gas fuel.

(c) The certificate holder shall notify the Department at least 60 days before conducting the tests required in subsections (a) and (b) unless the certificate holder and the Department have mutually agreed that less notice will suffice.

(d) Before conducting the tests required in subsections (a) and (b), the certificate holder shall, in a timely manner, provide to the Department for its approval a copy of the protocol for conducting the tests. The Department may approve modified parameters.
for testing power augmentation on a new and clean basis and pursuant to OAR 345-024-0590(1) without a site certificate amendment. The certificate holder shall not conduct the tests required in subsections (a) and (b) until the Department has approved the testing protocols.

(e) Within 60 days after completing the Year One Tests, the certificate holder shall provide to the Council reports of the results of the Year One Tests.

**Condition P.11:** Based on the data from the Year One Tests described in Condition P.10, the certificate holder shall calculate an adjusted monetary path payment. The certificate holder shall submit its calculations to the Department for verification. If the adjusted amount exceeds the amount of the bond or letter of credit provided according to Condition P.8 before beginning construction, the certificate holder shall fully disburse the excess amount directly to The Climate Trust within 30 days of the Department’s verification of the calculations.

(a) The certificate holder shall include the appropriate calculations of the adjusted monetary path payment with its reports of the results of the Year One Tests required under Condition P.10.

(b) For calculating the adjusted monetary path payment, the certificate holder shall use an offset fund rate of $1.27 per ton of carbon dioxide (in 2013 dollars) and shall calculate contracting and selecting funds based on 10 percent of the first $500,000 in offset funds and 4.286 percent of any offset funds in excess of $500,000 (in 2013 dollars).

(c) In no case shall the certificate holder diminish the value of the bond or letter of credit it provided before beginning construction or receive a refund from The Climate Trust based on the calculations made using the Year One Capacities and the Year One Heat Rates.

**Condition P.12:** The certificate holder shall use the Year One Capacity-2 and Year One Heat Rate-2 that it reports for the facility, as described in Condition P.10, to calculate whether it owes supplemental monetary path payments due to increased hours that it uses power augmentation.

(a) Each 5 years after beginning commercial operation of the Facility (5-year reporting period), the certificate holder shall report to the Department the annual average hours the facility operated with power augmentation during that 5-year reporting period, as required under OAR 345-024-0590(6). The certificate holder shall submit 5-year reports to the Department within 30 days after the anniversary date of beginning commercial operation of the facility.
(b) If the Department determines that the facility exceeded the projected net total carbon dioxide emissions calculated under Conditions P.4, P.5, and P.10, prorated for 5 years, during any 5-year reporting period described in subsection (a), the certificate holder shall offset excess emissions for the specific reporting period according to paragraph (i) and shall offset the estimated future excess emissions according to paragraph (ii), as follows:

(i) In determining whether there have been excess carbon dioxide emissions that the certificate holder must offset for a 5-year reporting period, the Department shall apply OAR 345-024-0600(4)(a). The certificate holder shall pay for the excess emissions at $1.27 per ton of carbon dioxide emissions (in 2013 dollars). The Department shall notify the certificate holder and The Climate Trust of the amount of supplemental payment required to offset excess emissions.

(ii) The Department shall calculate estimated future excess emissions for the remaining period of the deemed 30-year life of the facility using the parameters specified in OAR 345-024-0600(4)(b). The certificate holder shall pay for the estimated excess emissions at $1.27 per ton of carbon dioxide (in 2013 dollars). The Department shall notify the certificate holder of the amount of supplemental payment required to offset future excess emissions.

(iii) The certificate holder shall offset excess emissions identified in paragraphs (i) and (ii) using the monetary path as described in OAR 345-024-0710. The certificate holder shall pay selection and contracting funds of 10 percent of the first $500,000 in offset funds and 4.286 percent of any offset funds in excess of $500,000 (in 2013 dollars).

(c) The certificate holder shall disburse the supplemental selection and contracting funds and supplemental offset funds to The Climate Trust within 30 days after notification by the Department of the amount that the certificate holder owes.

**Condition P.13:** The certificate holder will report to the Department each 5 years after beginning commercial operation of the facility (5-year reporting period) the facility’s annual hours of operation with ULSD for each combustion turbine and the conditions of ULSD usage in the combined-cycle turbine at the end of each 5-year reporting period. The certificate holder shall submit the 5-year reports to the Department within 30 days after the anniversary date of beginning commercial operation of the facility. If the Department determines, based on these 5-year reports, that the facility exceeded the projected net total carbon dioxide emissions calculated under Conditions P.4, P.5, and P.10, prorated for 5 years, during any 5-year reporting period, the certificate holder shall offset excess emissions.
for the specific reporting period according to Condition P.12 and shall disburse any resulting supplemental offset, selection, and contracting funds according to Condition P.12(c).

Modifications

OAR 345-027-0050 provides:

(2) A site certificate amendment is not required if a proposed change in the design, construction or operation of a facility is in substantial compliance with the terms and conditions of the site certificate and is a change:

(a) To an electrical generation facility that would increase the electrical generating capacity and would not increase the number of electric generators at the site, change fuel type, increase fuel consumption by more than 10 percent, or enlarge the facility site.

Under OAR 345-027-0050(5), the certificate holder may request a determination by the Department that an amendment is not required, based on information provided by the certificate holder about how proposed changes would comply with applicable standards.

Under OAR 345-027-0050(2)(a), a site certificate amendment is not required for incremental increases in generating capacity that “would not increase the number of electric generators at the site, change fuel type, increase fuel consumption by more than 10 percent, or enlarge the facility site.” If a certificate holder had not yet made monetary path requirement funds available to a qualified organization, it might take advantage of the flexibility that OAR 345-027-0050(2)(a) offers when it certifies the capacity and heat rate of the facility. However, an increase in capacity and heat rate after a certificate holder has already complied with the conditions relating to the carbon dioxide standard might require an amendment if the change in capacity and heat rate resulted in an increase in the monetary path payment requirement.

In order to allow for a modification of the monetary path payment requirement without an amendment of the site certificate for incremental increases that otherwise fall within the limits specified in OAR 345-027-0050(2)(a) after a certificate holder has already complied with the conditions relating to the carbon dioxide standard before beginning construction, the Department recommends that the Council adopt the following condition:

Condition P.14: After the certificate holder has complied with the conditions relating to the carbon dioxide standard before beginning construction, incremental increases in capacity and heat rate that otherwise fall within the limits specified in OAR 345-027-0050(2) do not require an amendment of the site certificate if the certificate holder complies substantially with Conditions P.1 through P.13, except as modified below, and if:
(a) The Department or the Council determines, as described in OAR 345-027-0050(5), that the proposed change in the Facility does not otherwise require an amendment; and

(b) The certificate holder complies with the appropriate carbon dioxide emissions standard and monetary offset rate in effect at the time the Department or the Council makes its determination under this condition.

Based on the evidence provided by the applicant and subject to compliance with recommended conditions of approval, the Department recommends that the Council find that the construction and operation of the facility would meet the standards and means of compliance for base load gas plants required in OAR 345-024-0550 and OAR 345-024-0560, the standards and means of compliance for non-base load power plants required in OAR 345-024-0590 and OAR 345-024-0600, and the monetary path payment requirements of OAR 345-024-0710.

IV.P.2 Carbon Dioxide Standard: Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with recommended site certificate conditions, the Department recommends that the Council find that the proposed facility complies with the Council’s Carbon Dioxide Standard.

IV.Q. Noise Control Regulations [OAR 340-035-0035]

(1) Standards and Regulations:

* * * * *

(b) New Noise Sources:

(A) New Sources Located on Previously Used Sites. No person owning or controlling a new industrial or commercial noise source located on a previously used industrial or commercial site shall cause or permit the operation of that noise source if the statistical noise levels generated by that new source and measured at an appropriate measurement point, specified in subsection (3)(b) of this rule, exceed the levels specified in Table 8, except as otherwise provided in these rules. For noise levels generated by a wind energy facility including wind turbines of any size and any associated equipment or machinery, subparagraph (1)(b)(B)(iii) applies.

(B) New Sources Located on Previously Unused Site:

(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall
cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, \(L_{10}\) or \(L_{50}\), by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule, except as specified in subparagraph (1)(b)(B)(iii).

(ii) The ambient statistical noise level of a new industrial or commercial noise source on a previously unused industrial or commercial site shall include all noises generated or indirectly caused by or attributable to that source including all of its related activities. Sources exempted from the requirements of section (1) of this rule, which are identified in subsections (5)(b) - (f), (j), and (k) of this rule, shall not be excluded from this ambient measurement.

* * * * *

IV.Q.1. Noise Control Regulations: Findings of Fact

The applicant provides information about noise generated by construction and operation of the proposed facility in Exhibit X. The Project Order requires the applicant to provide information on all “noise sensitive receptors,” as defined by DEQ, within one-half mile of the site boundary. OAR 340-035-0015(38) defines “noise sensitive property” as “real property normally used for sleeping, or normally used as schools, churches, hospitals, or public libraries.”

The proposed facility would be considered a “new industrial or commercial noise source” under OAR 340-035-0035(1)(b) because construction of the facility would begin after January 1, 1975.\(^{748}\) OAR 340-035-0035(1)(b) applies different standards to new noise sources based on the previous use of industrial sites. A site is defined as a “previously unused industrial or commercial site” and subject to the standards in OAR 340-035-0035(1)(b) if the site has not been in an industrial or commercial use at any time during the 20 years preceding the construction of a new noise source on site.\(^{749}\) Otherwise, the standards of OAR 340-035-0035(1)(a) apply to a “previously used” site. Although the applicant does not provide evidence to establish an industrial or commercial use of the facility within the past 20 years, the Department notes that the Record of Decision issued for the site by the Environmental Protection Agency, and referenced by the applicant in Exhibit X, states that Alcoa operated the Reynolds Metals Company mill on the site until 2000.\(^{750}\) Accordingly, the Department will

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\(^{748}\) OAR 340-035-0015(33) defines a “new industrial or commercial noise source” as any industrial or commercial noise source for which installation or construction was commenced after January 1, 1975 on a site not previously occupied by the industrial or commercial noise source in question.

\(^{749}\) OAR 340-035-0015(47).

\(^{750}\) Record of Decision for Final Remedial Action: Reynolds Metal Company Superfund Site, Troutdale Oregon, issued by the U.S. Environmental Protection Agency, September 29, 2006, Section 2.1, p. 3.
evaluate the proposed facility as a “previously used” site, which is subject to compliance with
the noise limits specified in OAR 340-035-0035(1)(b)(A).

Maximum Allowable Noise Level Rule

OAR 340-035-0035(5)(g) specifically exempts noise caused by construction activities from noise
test regulations in OAR Chapter 340. Therefore, the maximum allowable noise level is
evaluated based only on operation of the proposed facility.

Under the “maximum allowable noise level rule”, the facility-generated noise must not exceed
the noise limits specified in Table 8 of the regulation. Compliance with the maximum allowable
noise limit is based on operational noise and measured “at an appropriate measurement point”
on “noise sensitive property.” The “appropriate measurement point,” as defined by OAR 340-
035-0035(3)(b), is “25 feet (7.6 meters) toward the noise source from that point on the noise
sensitive building nearest the noise source” or “that point on the noise sensitive property line
nearest the noise source,” whichever is farther from the source. Table 8 of the regulation
provides the following limits:

Table 12: Statistical Noise Limits for Industrial and Commercial Noise Sources

<table>
<thead>
<tr>
<th>Statistical Descriptor</th>
<th>Maximum Permissible Hourly Statistical Noise Levels (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Daytime (7:00 AM - 10:00 PM) Nighttime (10:00 PM - 7:00 AM)</td>
</tr>
<tr>
<td>L₅₀</td>
<td>55 50</td>
</tr>
<tr>
<td>L₁₀</td>
<td>60 55</td>
</tr>
<tr>
<td>L₁</td>
<td>75 60</td>
</tr>
</tbody>
</table>

The hourly L₅₀, L₁₀ and L₁ noise levels are defined as the noise levels
equaled or exceeded 50 percent, 10 percent and 1 percent of the hour,
respectively.

The applicant proposes to operate the facility on a 24-hour basis so the noise generated by the
facility must not exceed either the daytime noise limits or the more restrictive maximum
permissible hourly statistical noise level for the nighttime hours of 10:00 pm to 7:00 am. Thus,
to comply with the “maximum allowable noise level rule,” the noise radiating from or
attributable to operation of the proposed facility (including the noise radiating from the
transmission line) must not exceed a maximum hourly L₅₀ noise level of 50 dBA at any noise-
sensitive receptor.

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751 OAR 340-035-0035(1)(b)(B)(i) and Table 8 of OAR 345-0350035
The applicant identified four noise-sensitive receptors located within one-half mile of the site boundary. The nearest noise-sensitive receptor, the Comfort Inn, is located approximately 3,900 feet southeast of the closest combustion turbine, near the Portland-Troutdale Airport and adjacent to I-84. The closest residence identified by the applicant is 6,200 feet from the nearest facility combustion turbine.\footnote{Final ASC, Section X.1.3, p. X-4.}

To quantify the anticipated noise levels resulting from the operating facility, the applicant used equipment source input levels derived from field measurements of similar equipment made at other existing plants, data supplied by manufacturers, and information found in the technical literature. The applicant used these inputs to calculate the sound pressure level that would occur at each receptor from each source after losses from distance, air absorption, blockages, and other factors are considered.

The applicant describes the noise model in Exhibit X as using field measurements of other similar equipment in operation at existing plants, data from manufacturers, and technical literature to represent the anticipated steady-state noise level from the plant with essentially all equipment operating. The applicant uses the noise model CADNA/A by DataKustik GmbH of Munich, Germany to calculate sound pressure levels based on standard acoustical engineering methods. The applicant explains that the model “divides the facility into a list of individual point, line, and area noise sources representing each piece of equipment that makes a significant amount of noise.”\footnote{Final ASC, Section X.2.2.1, p. X-6.} The total plant level at the modeling point is the sum of all individual levels, after factoring in losses from distance, air absorption, blockages, and other factors.\footnote{Final ASC, Section X.2.2.1, p. X-6.}

In Figure X-2, the applicant provides a map showing noise contours based on anticipated steady-state sound levels resulting from the operation of the proposed facility. The applicant explains that the analysis in Figure X-2 assumes a 15-meter-tall barrier standing 10 meters south of the cooling tower for the length of the tower in order to meet the 50 dBA limit at noise receptor R15 (Comfort Inn). The applicant states that this barrier may prove unnecessary as the applicant “intends to work with Oregon DEQ on an exemption from the limits identified in Table X-3” pursuant to OAR 340-035-0035(6)(c) and (e).\footnote{Final ASC, Section X.1.3, p. X-4.} In other locations the applicant describes an intent to “work with the Department to pursue an exemption” from the limit at the Comfort Inn.\footnote{Final ASC, Section X.2.2.1, p. X-6.} The Department understands that Oregon DEQ does not have an active division to review or grant requested exemptions. Because compliance with noise regulations is evaluated in the site certificate, the applicant must demonstrate through the site certificate process that the proposed facility would meet the exemption criteria. Although the applicant asserts that...
existing sound levels at the Comfort Inn “may exceed the applicable limits,” and that it is located on land zoned exclusively for industrial or commercial use, the applicant does not provide evidence that the proposed facility meets either of the criteria for approval of an exemption. The Comfort Inn property is located within the City of Troutdale’s Light Industrial zoning district, which permits non-commercial and non-industrial uses such as public parks and caretaker residences. The applicant does not provide measurements of existing noise levels at the Comfort Inn property.

However, based on the results of the noise modeling as presented in Figure X-2, the applicant does demonstrate compliance with the “maximum allowable noise level rule” with the proposed barrier in place along the south side of the cooling tower. In the Draft Proposed Order, the Department recommended the following Condition Q.1 in order to ensure implementation of the applicant’s proposed mitigation:

Prior to beginning operation of the facility, the certificate holder shall maintain a sound barrier of at least 15 meters tall, standing 10 meters south of the cooling tower for the length of the tower. The barrier must provide sufficient sound mitigation to prevent noise from operation of the facility from exceeding a maximum $L_{50}$ noise level of 50 dBA at any noise sensitive receiver.

Comments by the applicant express concern about the “unusually prescriptive” sound wall requirement. The applicant requests revisions to recommended Condition Q.1 to specify only that the applicant either submit additional evidence to justify an exemption or provide “sufficient sound mitigation” to prevent noise from the facility from exceeding maximum allowable levels at any noise sensitive receptor.

By eliminating reliance on any specific method for complying with the maximum allowable noise level rule, the applicant’s proposed condition would impermissibly defer the applicant’s burden to demonstrate compliance with this regulation until after the issuance of a site certificate. At the same time, the Department recognizes that the specific dimensional requirements listed in the DPO version of Condition Q.1 may restrict the options available to the applicant in engineering an effective sound barrier. Accordingly, in this proposed order, the Department recommends a modified version of Condition Q.1 allows some dimensional flexibility but retains the requirement that the applicant implement the sound barrier proposed as mitigation.

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757 Under OAR 340-035-0035(6)(c), DEQ may authorize an exemption for “[t]hose industrial or commercial noise sources whose statistical noise levels at the appropriate measurement point are exceeded by any noise source external to the industrial or commercial noise source in question.”

758 Under OAR 340-035-0035(6)(e), DEQ may authorize an exemption for “[n]oise sensitive property located on land zoned exclusively for industrial or commercial use.”

759 Troutdale Development Code, Section 3.162.

760 Comment from David Filippi, Stoel Rives, attorney for the applicant, September 25, 2013.
To ensure compliance with the maximum allowable noise level rule during operation of the facility, the Department recommends that the Council adopt the following condition:

**Condition Q.1:** Prior to beginning operation of the facility, the certificate holder shall maintain a sound barrier south of the cooling tower for the length of the tower. The barrier must provide sufficient sound mitigation to prevent noise from operation of the facility from exceeding a maximum L$_{50}$ noise level of 50 dBA at any noise sensitive receiver.

The applicant also proposes to conduct noise monitoring within 120 days of commencing operation of the facility to determine compliance with DEQ noise regulations. In order to verify that the facility as built would comply with the maximum allowable noise rule, the Department recommends that the Council adopt the following condition:

**Condition Q.2:** Within 120 days of commencing operation of the facility, the certificate holder shall monitor and record the actual statistical noise levels during operations to verify that the certificate holder is operating the facility in compliance with noise control regulations. A monitoring plan must be reviewed and approved by the Department prior to implementation. The cost of such monitoring will be borne by the certificate holder. If the monitoring results demonstrate that sound levels attributable to the operation of the facility exceed L$_{50}$ noise level of 50 dBA at any noise sensitive receiver that is in existence as of the issuance date of the site certificate, the certificate holder shall submit a noise mitigation plan for approval by the Department.

Based on the evidence in the record, and subject to compliance with recommended site certificate conditions, the Department recommends that the Council find that the proposed facility would comply with noise control regulations for a new industrial or commercial noise source on a previously used industrial or commercial site.

**IV.Q.2 Noise Control Regulations: Conclusions of Law**

Based on the foregoing findings of fact and conclusions, and subject to compliance with the mandatory site certificate conditions, the Department recommends that the Council find that the proposed facility complies with the Noise Control Regulations in OAR 345-035-0035(1)(b)(B).

**IV.R. Removal-Fill Law**

The Oregon Removal-Fill Law (ORS 196.795 through 196.990) and regulations (OAR 141-085-0500 through 141-085-0785) adopted by the Oregon DSL require a permit if 50 cubic yards or
more of material is proposed to be removed, filled or altered within any “waters of the state.” The Council must determine whether a permit is needed; and if so, whether the applicant has demonstrated that the proposed facility is consistent with the protection, conservation and best use of the water resources of this state and, to the extent the proposed facility is on state-owned lands, would not unreasonably interfere with the paramount policy of the state to preserve the use of its waters for navigation, fishing, and public recreation.

Federal law may require a Nationwide or Individual fill permit for the proposed Facility if waters of the United States are affected. The U.S. Army Corps of Engineers (USACE) administers Section 404 of the Clean Water Act, which regulates the discharge of fill into waters of the United States (including wetlands), and Section 10 of the Rivers and Harbors Appropriation Act of 1899, which regulates placement of fill in navigable waters. A single application form (a Joint Permit Application Form) is used to apply for both the state and federal permits.


The applicant provides information about wetlands and other waters of the state in Exhibit J of the application. The Project Order identifies the analysis area for the Removal-Fill Law as the area within the site boundary and wetland areas hydrologically connected to wetlands within the site boundary.

Delineation of Waters of the State

The applicant provides a delineation report, prepared by the applicant’s contractor CH2M HILL. The applicant explains that before performing field investigations, the contractor reviewed available literature within the analysis area, including U.S. Geological Survey (USGS) topographic maps, the Pacific Northwest Hydrography Framework (PNWHF) 24K Dataset, NWI data, SSURGO digital soils data, the Hydric soils lists for Multnomah County, aerial imagery by Google Earth Pro (2011), and prior delineation reports for the analysis area.

The applicant states that the entire study area had been previously delineated as portions of three separate wetland delineation reports, all of which received concurrence from DSL. Previous delineations are valid for a period of 5 years from the date of concurrence. The applicant explains that one of the delineations received DSL concurrence in 1993 was only used for background information due to subsequent changes in delineation techniques and regulatory requirements. The other two prior delineations received DSL concurrence in 2008 and 2009. Concurrence on the 2008 delineation (WD 07-0454) expired on March 24, 2013.

ORS 196.800(14) defines “Waters of the state.” The term includes wetlands and certain other water bodies.

Final ASC, Attachment J-1.

subsequent to the filing of the Application for Site Certificate. Concurrence on the 2009 delineation (WD 09-0114) will expire in June 2014.\textsuperscript{765}

The applicant describes field work conducted by contractor CH2M HILL on January 5 and 6, 2012. For the portion of the study area that had previously been delineated in 1993, a detailed field survey was completed. The contractor followed procedures for data collection, description, and analysis for wetlands and other jurisdictional waters in the \textit{Corps of Engineers Wetland Delineation Manual} (Environmental Laboratory, 1987) and the \textit{Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys and Coast Region (Version 2.0)} (USACE, 2010).\textsuperscript{766} For the remainder of the site, which is covered by prior delineations that had not yet expired, the contractor used aerial photograph reviews, windshield surveys, and field surveys to identify changes in conditions and to confirm the accuracy of the previously delineated wetland and other waters boundaries. The applicant states that no significant changes in land use or vegetation cover types were observed. The applicant explains that the contractor spot-checked previously delineated wetlands and other waters in the field to confirm the accuracy of the delineated boundaries.\textsuperscript{767}

The applicant identified eight potentially jurisdictional wetlands (totaling approximately 5.27 acres), portions of two potentially jurisdictional streams (Salmon Creek and Arata Creek), and three potentially jurisdictional ditches within the study area. The applicant presumes the wetlands to be jurisdictional because their soils are mapped as hydric (Wetland 1 and Wetland 2), or they were previously determined to be jurisdictional by DSL (Wetlands C, D, I, J, M, and N). The applicant states that conditions of the wetlands previously determined to be jurisdictional have not changed since the determinations were made and therefore they are presumed to remain waters of the state.\textsuperscript{768}

In addition, the applicant identifies portions of stream channels as waters of the state because they are constantly flowing. The applicant states that Ditch 1 was previously determined to be waters of the state and its condition has not changed, therefore it remains waters of the state. The applicant explains that Ditch 1 is referred to as the “Salmon Creek Tributary Middle Reach” in USACE NWP-2007-889 and potentially has a significant nexus to the Columbia River, based on its contributions of water supply, water quality protection, and flood flow attenuation. The applicant presumes that Ditch 1 is a jurisdictional water of the U.S.\textsuperscript{769}

The applicant states that Ditch 2 and the Roadside Ditch are not waters of the state. The applicant explains that Roadside Ditch is less than 10 feet wide at its ordinary high water line, was created from uplands, was not adjacent to wetlands, and does not contain food or game

\textsuperscript{765} Final ASC, Section J.1.3, p. J-2.
\textsuperscript{766} Final ASC, Section J.1.6, p. J-3.
\textsuperscript{767} Final ASC, Section J.1.6, p. J-3.
\textsuperscript{768} Final ASC, Section J.2.3.1, p. J-6.
\textsuperscript{769} Final ASC, Section J.2.3.1, p. J-6.
fish (OAR 141-085-0515[10]). The applicant explains that Ditch 2 was previously determined by DSL to be exempt. Since that determination, an access road crossing was constructed, including a culvert at the ditch, but no changes in condition affecting the previous determination were observed. Although Ditch 2 has been determined not to be waters of the state, the U.S. Army Corps of Engineers determined that it is a water of the U.S.\textsuperscript{770}

The applicant provides a delineation report prepared by CH2M HILL, describing the results of this investigation for the full site boundary, and approved by DSL on October 25, 2012 for the purposes of compliance with state removal-fill requirements.\textsuperscript{771} The applicant also provides DSL’s concurrence letter, which identifies Ditch 2 and Roadside Ditch (NW Sundial Road) as exempt per OAR 141-085-0515(8) and (10) and therefore not subject to state permit requirements. The wetlands and 3 of the 5 waterways are subject to the permit requirements of the state Removal-Fill law.\textsuperscript{772} Additionally, DSL provides approved wetlands maps, which are incorporated here by this reference.\textsuperscript{773}

\textit{Permanent and Temporary Impact Areas}

The applicant states that no state-jurisdictional streams or wetlands would be permanently or temporarily disturbed by the proposed facility. The applicant describes an estimated 59 feet (0.007 acres) of temporary impacts that would occur during installation of a buried process water pipeline to Ditch 2.\textsuperscript{774} Because Ditch 2 is not state-jurisdictional, the applicant would not be required to submit a state application for authorization of removal and fill activities in jurisdictional waters.\textsuperscript{775} Because the USACE has determined that Ditch 2 is a water of the U.S., installation of the buried process water pipeline would be subject to the requirements of Nationwide Permit 12 (Utility Line Crossings). Because the impacts described by the applicant would be below the 0.1-acre impact threshold and other thresholds triggering the notification requirement to USACE, the applicant would not be required to submit notification (submittal of pre-construction notification or application) to USACE.\textsuperscript{776}

The applicant describes measures to avoid disturbances to jurisdictional waters, including implementation of an erosion and sediment control plan, as required by proposed Condition D.2. In addition, the applicant states that all staging areas will be located at least 100 feet from waters of the state and/or U.S. or in areas previously developed for such use.\textsuperscript{777}

\textsuperscript{771} Final ASC, Attachment J-1.
\textsuperscript{772} Final ASC, Attachment J-2.
\textsuperscript{773} Final ASC, Attachment J-2, Figures 5 through 5.4
\textsuperscript{774} Final ASC, Section J.3.1, p. J-7.
\textsuperscript{775} Final ASC, Attachment J-2.
\textsuperscript{776} Final ASC, Section J.7, p. J-8.
Removal-Fill Permit Requirements

Based on the evidence in the record, the Department recommends that, because no material will be removed, filled, or altered within the jurisdictional waters of the state, a Removal-Fill permit is not required.

IV.R.2 Removal-Fill Law: Conclusions of Law

Based on the foregoing findings of fact and conclusions, the Department recommends that the Council find that the proposed facility complies with the Removal-Fill Law.

IV.S. Ground Water Act

Under the Ground Water Act of 1955 and OAR Chapter 690, the Oregon Water Resources Department (OWRD) administers water rights for appropriation and use of the water resources of the state. OAR 345-022-0000(1)(b), the Council must determine whether the proposed facility would comply with these statutes and administrative rules.

IV.S.1. Ground Water Act: Findings of Fact

The applicant provides information about anticipated water use for construction and operation of the proposed facility in Exhibit O of the application.

The applicant estimates water use at 15.2 million gallons over a 24-month construction period. The applicant explains that water would primarily be used for hydrostatic pressure testing (5.1 million gallons); dust suppression (9.6 million gallons); and incorporation into concrete (0.5 million gallons). The applicant proposes to purchase water to be used for construction from the City of Troutdale. The applicant provides a letter from the City of Troutdale confirming availability of sufficient water for construction needs. During operation, the applicant proposes to obtain reclaimed water from the City of Troutdale, and the letter from the City confirms availability of reclaimed water for operations at an average of 1.3 mgd. The facility would also obtain approximately 8,640 gallons per day of potable water from the City of Troutdale. In order to ensure that use of potable water during construction and operation of the proposed facility would not adversely affect the availability of water to other holders of valid water rights that would draw from the same resource, the Department recommends that the Council adopt the following condition:

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778 ORS 537.505 to 537.795 and 537.992.
779 Final ASC, Section O.2.1, p. O-1.
781 Final ASC, Attachment O-2.
782 Final ASC, Attachment O-2.
**Condition S.1:** During construction and operation of the facility, the certificate holder shall obtain potable water from the domestic supply of the City of Troutdale.

The applicant estimates operational water use to range from 3.0 to 5.5 million gallons per day (mgd), primarily for cooling the two separate power blocks (the combined-cycle power plant and the simple-cycle power plant). The facility would also use water to periodically wash the compressor section of the CTG. The applicant explains that process water would consist of reclaimed water from the City of Troutdale WPCF (average of 1.3 mgd) and groundwater from the Port of Portland (up to 4.1 mgd).

The applicant also provides a letter from the Port of Portland describing its water rights and its intent to execute a Water Use Agreement with the applicant for use of up to 8,000 gallons per minute (11.5 mgd). In order to ensure that operation of the proposed facility would not adversely affect the availability of water to other holders of valid water rights that would draw from the same resource, the Department recommends that the Council adopt the following condition:

**Condition S.2:** During construction and operation of the facility, the certificate holder shall limit use of water obtained from the Port of Portland to no more than 8,000 gallons per minute and to amounts found to be within the scope of the water rights held by the Port of Portland.

Based on the evidence in the record, the Department recommends that the Council find that operation of the proposed facility would not adversely affect the availability of water to other holders of valid water rights that would draw from the same resource, as required by the Ground Water Act of 1955.

**IV.S.2 Ground Water Act: Conclusions of Law**

Based on the foregoing findings of fact and conclusions, and subject to compliance with the recommended site certificate conditions, the Department recommends that the Council find that the proposed facility complies with the Ground Water Act of 1955.

**V. PROPOSED CONCLUSIONS AND ORDER**

The applicant has submitted an application to construct a natural gas energy facility with a nominal electric generating capacity of 652 megawatts. The Department recommends that the

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784 Final ASC, Section O.2.2, p. O-1.
786 Final ASC, Section O.3.3, p. O-3.
787 Final ASC, Attachment O-3.
Council include in the site certificate the conditions contained herein, if the Council approves a site certificate for the facility. The Department recommends that the Council find that preponderance of evidence on the record supports the following conclusions:

(1) The proposed Troutdale Energy Center complies with the requirements of the Oregon Energy Facility Siting statutes, ORS 469.300 to 469.520.

(2) The proposed Troutdale Energy Center complies with the standards adopted by the Council pursuant to ORS 469.501.

(3) The proposed Troutdale Energy Center complies with the statewide planning goals adopted by the Land Conservation and Development Commission.

(4) The proposed Troutdale Energy Center complies with all other Oregon statutes and administrative rules identified in the project order as applicable to the issuance of a site certificate for the proposed facility.

Based on the findings of fact, reasoning, recommended conditions and conclusions of law in this Proposed Order, the Department recommends that the Council conclude that the applicant has satisfied the requirements for issuance of a site certificate for the proposed Troutdale Energy Center, subject to the conditions set forth in this Proposed Order.

Issued this 16th day of December, 2013

THE OREGON DEPARTMENT OF ENERGY

By: ________________________________

Todd Cornett
Energy Siting Division Administrator
Oregon Department of Energy