

**ENERGY FACILITY SITING COUNCIL**

**OF THE**

**STATE OF OREGON**

**Site Certificate  
for the  
Carty Generating Station**

**ISSUE DATE**

**June 29, 2012**

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**CARTY GENERATING STATION SITE CERTIFICATE  
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## Acronyms and Abbreviations

ACEC	Area of Critical Environmental Concern
ADA	Americans with Disabilities Act
Btu	British Thermal Unit
Carty	Carty Generating Station
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
Council	Oregon Energy Facility Siting Council
CTG	Combustion Turbine Generator
Department	Oregon Department of Energy
DEQ	Oregon Department of Environmental Quality
DOGAMI	Oregon Department of Geology and Mineral Industries
DPO	Draft Proposed Order
EPCRA	Emergency Planning and Community Right-to-Know Act
ESCP	Erosion and Sediment Control Plan
FAA	Federal Aviation Administration
FERC	Federal Energy Regulatory Commission
GTN	Gas Transmission Northwest Corporation
HMA	Habitat Mitigation Area
HRSG	Heat Recovery Steam Generator
kV	Kilovolt
MCZO	Morrow County Zoning Ordinance
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and Maintenance
OAR	Oregon Administrative Rule
ODFW	Oregon Department of Fish and Wildlife
ORS	Oregon Revised Statutes
OSSC	Oregon Structural Specialty Code
PGE	Portland General Electric Company

SHPO	Oregon State Historic Preservation Office
STG	Steam Turbine Generator
USFWS	United States Fish and Wildlife Service
WGS	Washington Ground Squirrel
WPCF	Water Pollution Control Facilities

## 1.0 INTRODUCTION

The Oregon Energy Facility Siting Council (Council) issues this site certificate for the Carty Generating Station (Carty) in the manner authorized under the Oregon Revised Statutes (ORS) Chapter 469. This site certificate is a binding agreement between the State of Oregon (State), acting through the Council, and Portland General Electric Company (certificate holder) authorizing the certificate holder to construct and operate the facility in Morrow County, Oregon.

The findings of fact, reasoning, and conclusions of law underlying the terms and conditions of this site certificate are set forth in the Council's *Final Order in the Matter of the Application for a Site Certificate for the Carty Generating Station* (Final Order on the Application) issued on June 29, 2012 and incorporated herein by this reference. In interpreting this site certificate, any ambiguity will be clarified by reference to the following, in order of priority: (1) this Site Certificate, (2) the Final Order on the Application and (3) the record of the proceedings that led to the Final Order on the Application.

This site certificate does not address, and is not binding with respect to, matters that were not addressed in the Council's Final Order on the Application. Such matters include, but are not limited to: building code compliance; wage; hour; and other labor regulations; local government fees and charges; other design or operational issues that do not relate to siting the facility [ORS 469.401(4)]; and permits issued under statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council. ORS 469.503(3).

The obligation of the certificate holder to report information to the Department or the Council under the conditions listed in this site certificate is subject to the provisions of ORS 192.502 *et seq.* and ORS 469.560. To the extent permitted by law, the Department and the Council will not publicly disclose information that may be exempt from public disclosure if the certificate holder has clearly labeled such information and stated the basis for the exemption at the time of submitting the information to the Department or the Council. If the Council or the Department receives a request for the disclosure of the information, the Council or the Department, as appropriate, will make a reasonable attempt to notify the certificate holder and will refer the matter to the Attorney General for a determination of whether the exemption is applicable, pursuant to ORS 192.450.

The Council recognizes that many specific tasks related to the design, construction, operation and retirement of the facility will be undertaken by the certificate holder's agents or contractors. Nevertheless, the certificate holder is responsible for ensuring compliance with all provisions of the site certificate. The definitions in ORS 469.300 and Oregon Administrative Rule (OAR) 345-001-0010 apply to terms used in this site certificate, except where otherwise stated, or where the context clearly indicates otherwise.

## **2.0 SITE CERTIFICATION**

- 2.1 To the extent authorized by state law and subject to the conditions set forth herein, the State authorizes the certificate holder to construct, operate, and retire a natural gas-fueled energy generating facility, together with certain related or supporting facilities, at the site in Morrow County, Oregon, as described in Section 3.0 of this site certificate.  
[ORS 469.401(1)]
- 2.2 This site certificate is effective until 1) it is terminated under OAR 345-027-0110 or the rules in effect on the date that termination is sought; or 2) until the site certificate is revoked under ORS 469.440 and OAR 345-029-0100 or the statutes and rules in effect on the date that revocation is ordered.  
[ORS 469.401(1)]
- 2.3 Both the State and the certificate holder shall abide by local ordinances, state law, and the rules of the Council in effect on the date this site certificate is executed. ORS 469.401(2). In addition, upon a clear showing of a significant threat to public health, safety, or the environment that requires application of later-adopted laws or rules, the Council may require compliance with such later-adopted laws or rules.  
[ORS 469.401(2)]
- 2.4 For a permit, license, or other approval addressed in and governed by this site certificate, the certificate holder shall comply with applicable state and federal laws adopted in the future to the extent that such compliance is required under the respective state agency statutes and rules.  
[ORS 469.401(2)]
- 2.5 Subject to the conditions herein, this site certificate binds the State and all counties, cities, and political subdivisions in Oregon as to the approval of the site and the construction, operation, and retirement of the facility as to matters that are addressed in and governed by this site certificate.  
[ORS 469.401(3)]
- 2.6 Each affected state agency, county, city, and political subdivision in Oregon with authority to issue a permit, license, or other approval addressed in or governed by this site certificate shall, upon submission of the proper application and payment of the proper fees, but without hearings or other proceedings, issue such permit, license, or other approval subject only to conditions set forth in this site certificate.  
[ORS 469.401(3)]

- 2.7 After issuance of this site certificate, each state agency or local government agency that issues a permit, license, or other approval for the facility shall continue to exercise enforcement authority over such permit, license, or other approval.  
[ORS 469.401(3)]
- 2.8 After issuance of this site certificate, the Council shall have continuing authority over the site and may inspect, or direct the Oregon Department of Energy (Department) to inspect, or request another state agency or local government to inspect, the site at any time in order to ensure that the facility is being operated consistently with the terms and conditions of this site certificate.  
[ORS 469.430]
- 2.9 The certificate holder shall design, construct, operate and retire the facility:
- a. Substantially as described in the site certificate;
  - b. 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
  - c. In compliance with all applicable permit requirements of other state agencies.  
[Final Order III.D.2] [Mandatory Condition OAR 345-027-0020(3)]
- 2.10 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.  
[Final Order IV.B.2.8] [Mandatory Condition OAR 345-027-0020(15)]
- 2.11 Any matter of non-compliance under the site certificate shall be the responsibility of the certificate holder. Any notice of violation issued under the site certificate shall be issued to the certificate holder. Any civil penalties assessed under the site certificate shall be levied on the certificate holder.  
[Final Order IV.B.2.5]
- 2.12 Within 72 hours after discovery of conditions or circumstances that may violate the terms or conditions of the site certificate, the certificate holder shall report the conditions or circumstances to the Department.  
[Final Order IV.B.2.7]
- 2.13 The Council shall not change the conditions of this site certificate except as provided for in OAR Chapter 345, Division 27.  
[Final Order VI.1] [Mandatory Condition OAR 345-027-0020(1)]



### **3.0 DESCRIPTION OF FACILITY**

#### **LOCATION AND SITE BOUNDARY**

The Carty Generating Station is located in Morrow County, Oregon, southwest of the City of Boardman and north of the Carty Reservoir. This location is also adjacent to the existing Boardman Coal Plant. The transmission line associated with the Carty Generating Station is located partially within an existing transmission right-of-way, and extends across the western portion of Morrow County and into eastern Gilliam County to connect to the existing Bonneville Power Administration Slatt substation.

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 Carty Generating Station encompasses approximately 2,400 acres; the transmission line right-of-way corridor comprises approximately 1,400 acres of this total area.

#### **THE ENERGY FACILITY**

The Carty Generating Station is a natural gas-fueled combined-cycle electric power generating plant. The Carty facility consists of two generator blocks capable of generating up to 900 MW of electrical power.

The Carty Generating Station has up to two generating blocks, each consisting of one or more high efficiency combustion turbine generators (CTGs), heat recovery steam generators (HRSGs), and a steam turbine generator (STG). Within the blocks, natural gas CTG(s) produce electricity, with the exhaust gases from the CTG(s) supplying heat to the HRSG(s). Steam produced in the HRSG(s) is used to power the STG to produce additional electricity. Duct burners fueled by natural gas in the HRSG(s) allow for production of additional steam and additional electricity from the STG. Steam exhausted from the STG is condensed in a water-cooled condenser, with the resultant condensate returned to the HRSG(s) to produce additional steam. Water used for cooling in the water-cooled condenser is routed to a cooling tower, where the water is cooled and then pumped back through the condenser. Each block has a separate cooling tower. If required for starting the CTG(s) or to maintain the plant in a ready-to-start condition, a natural gas-fueled auxiliary boiler will be used to supply steam when none is available from the HRSG(s).

In each block, the CTG(s) and STG(s) are located within a generation building to control noise during operation and to allow a controlled atmosphere for maintenance activities. A separate control and administrative building provides space for plant controls and offices for plant personnel for both blocks. A separate water treatment building houses the equipment necessary to purify raw water, producing de-mineralized water for use in the steam cycle of both blocks.

Generator transformers step up the voltage produced by both blocks to 500 kilovolts (kV). A 500-kV transmission line connects the generator transformers to a 500-kV switchyard, the Grassland Switchyard. From the switchyard, PGE utilizes the 500-kV Boardman to Slatt transmission line, an additional 500-kV single circuit or double circuit transmission line, or both lines, to connect to the Slatt Substation. The additional transmission line is approximately 18 miles long.

The proposed facility consumes about 150 million cubic feet of natural gas per day during operation of both blocks. Natural gas will be supplied to the facility through a lateral pipeline that will be connected to an existing pipeline operated by the Gas Transmission Northwest Corporation (GTN). This lateral pipeline is owned and operated by GTN and is outside the jurisdiction of the Council. This natural gas pipeline was permitted by the Federal Energy Regulatory Commission (FERC).

Carty is interconnected with the Boardman Coal Plant to obtain potable water and to utilize the existing sanitary waste infrastructure. The Carty facility is also connected to the Carty Reservoir for water withdrawal and water discharge purposes. Under the Agreement for Construction, Ownership, and Operation of the Number One Boardman Station on Carty Reservoir dated as of October 15, 1976, between PGE, Idaho Power Company, and Pacific Northwest Generating Company, PGE has the right to construct and operate additional generating units on Carty Reservoir and to utilize facilities of the Boardman plant that may be used in common with such new generating units, including, but not limited to, the reservoir, pumping facilities, pipelines from the Columbia river, roads, railroad spurs, docks, parking lots, fencing and transmission facilities.

The Carty Generating Station includes the following related or supporting facilities:

- On-site 500-kV transmission line
- 18-mile 500-kV transmission line from the Grassland Switchyard to the Slatt Substation
- Grassland Switchyard
- Interconnecting water pipelines
- Evaporation ponds
- Cooling towers
- Liquid storage facilities
- Accessory buildings
- Utility lines
- Roads
- Additional temporary construction areas

## **500-kV Transmission Lines**

### *On-Site*

A 500-kV transmission line connects the step-up transformers located at each generating block to the Grassland Switchyard. One transmission line serves each block, and each transmission line is approximately 0.75 miles long and requires approximately four transmission support towers. These towers are between 100 and 150 feet tall and are spaced approximately 1,000 feet apart.

### *Connecting*

To access the grid, PGE utilizes the 500-kV Boardman to Slatt transmission line, a 500-kV single circuit or double circuit transmission line, or both, to connect the Grassland Switchyard to the existing Slatt Substation. The single or double circuit transmission line is approximately 18 miles long.

## **Grassland Switchyard**

A 500-kV, alternating current, open-air switchyard is located west of the Carty Generating Station. The switchyard consists of a leveled and graveled area approximately 15 acres in size, surrounded by a security fence. The switchyard includes 500-kV circuit breakers and disconnect switches to allow for clearing faults on the connected transmission lines and for maintenance of the circuit breakers and transmission lines. Steel take-off towers terminate 500-kV overhead transmission lines that connect the switchyard with the plant generator step-up transformers and outgoing transmission lines. An additional small building provides a controlled environment for the protective relaying and communication equipment.

## **Interconnecting Water Pipelines**

Water pipelines connect the Carty Generating Station with the Boardman Coal Plant to access the raw Carty Reservoir water intake structure, wastewater discharge structure for discharge to Carty Reservoir, potable water system, sanitary sewer, demineralized water supply, and fire water supply lines. The pipes are installed either below grade, or above grade with trenches under road and railroad crossings. These interconnecting pipelines are located in areas that have already been disturbed by the existing Boardman Coal Plant during construction of the Carty Generating Station.

Water from the Carty Reservoir passes into the existing intake structure and enters one of two separate water systems serving the Boardman Plant; a circulation water system and a service water system. This circulating water system is a 180,000-gpm withdrawal, supplied from a 96-inch pipe. The Boardman Plant service water system is a 14,000-gpm withdrawal supplied from a 48-inch pipe. The service water connection for the Carty Generating Station is connected to the intake structure at this 48-inch pipe. No changes were made to the in-water portion of the intake structure, but the equipment layout within the associated building was changed and the

building was expanded. A monorail system allows pumps to be extracted for maintenance. From the intake structure, water passes through a 14 to 16-inch pipe approximately 5,000 feet to the Carty facility.

### **Evaporation Ponds**

Process wastewater from the Carty facility is discharged either to the Carty Reservoir or to evaporation ponds, or both. Evaporation ponds are lined and receive wastewater including cooling tower blowdown, water wash wastes, filtration wastewater, and water demineralization wastewater. Evaporation ponds are sized to accommodate 390 acre-feet per year and are be 10 to 15 acres in area and eight feet deep. The Carty Generating Station includes up to four evaporation ponds, occupying up to 58 acres of the site area.

### **Cooling Towers**

Cooling towers at the Carty Generating Station exhaust excess heat from the power generation process. Each cooling tower consists of a structure to contain a water-cooling medium, with exhaust fans located within an open-top, bell-shaped housing which pulls air under and through the water-cooling medium. The cooling towers are approximately 50 feet in height. One mechanical-draft wet cooling tower serves each block of the Carty facility.

### **Liquid Storage Facilities**

Liquid fuel would is not stored on the Carty facility site. Chemicals used for emissions control are stored in steel horizontal sealed storage tanks with secondary containment. Other chemicals such as anhydrous ammonia, sulfuric acid (used for pH control) and sodium hypochlorite and sodium bromide (used as biocides in cooling tower water) are stored in tanks or totes with secondary containment. Small-quantity chemicals such as cleaners and lubricants are stored within on-site accessory buildings.

### **Accessory Buildings**

Accessory buildings on the Carty site house boiler feed pumps, chemical feed equipment, and other equipment requiring protection from weather or noise containment. Accessory buildings common to the two proposed generating blocks include buildings housing water treatment equipment as well as warehouse and administration areas.

### **Utility Lines**

A below-grade electrical raceway connects the Carty facility to the Boardman Plant. The raceway contains communication cables to connect the Carty phone and data highway systems into the Boardman Plant communication and data highway systems. In addition, electric power cables allow for transmission of auxiliary power from the existing Boardman Plant to the Carty Generating Station in emergency operating conditions. Utility lines are installed in areas already disturbed by the Boardman Plant or areas within the Carty site.

## **Roads**

A paved loop road, approximately 24 feet wide and 2,500 feet long, connects with Tower Road at both ends of the loop to serve normal truck and operator vehicle traffic. This loop road has spur roads leading to individual buildings and areas that require access.

## **Additional Temporary Construction Areas**

Additional areas in the vicinity of the proposed Carty Generating Station are provided for construction offices, construction parking, construction staging, and temporary storage of soil displaced during the construction process. Similar temporary construction areas are provided in the vicinity of the Grassland Switchyard.

### **4.0 GENERAL ADMINISTRATIVE CONDITIONS**

- 4.1. The certificate holder shall begin construction of the facility within three years after the effective date of the site certificate. Under OAR 345-015-0085(9), a site certificate is effective upon execution by the Council Chair and the applicant. The Council may grant an extension of the deadline to begin construction in accordance with OAR 345-027-0030 or any successor rule in effect at the time the request for extension is submitted.  
[Final Order III.D.3] [Mandatory Condition OAR 345-027-0020(4)]
- 4.2. The certificate holder must complete construction of Block 1 of the facility within three years of beginning construction of Block 1. 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 Department of the date of completion of construction of Block 1. The Council may grant an extension of the deadline for completing construction in accordance with OAR 345-027-0030 or any successor rule in effect at the time the request for extension is submitted.  
[Final Order III.D.4] [Mandatory Condition OAR 345-027-0020(4)]
- 4.3. The certificate holder must begin construction of Block 2 of the facility no later than five years after the effective date of the site certificate. The certificate holder shall complete construction of the facility within three years of beginning construction of Block 2. Construction is complete when: 1) Block 2 is substantially complete as defined by the certificate holder's construction contract documents; 2) acceptance testing has been satisfactorily completed; and 3) Block 2 is ready to begin continuous operation consistent with the site certificate. The certificate holder shall notify the Department when the construction of Block 2 begins, and notify the Department of the date of completion of Block 2 construction. The Council may grant an extension of

the deadline for completing construction in accordance with OAR 345-027-0030 or any successor rule in effect at the time the request for extension is submitted.

[Final Order III.D.5] [Mandatory Condition OAR 345-027-0020(4)]

- 4.4. 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 identifies the outer boundaries that contain all parts of the facility.  
[Final Order III.D.1] [Mandatory Condition OAR 345-027-0020(2)]
- 4.5. The certificate holder shall obtain all necessary federal, state, and local permits or approvals required for construction, operation, and retirement of the facility or ensure that its contractors obtain the necessary federal, state, and local permits or approvals.  
[Final Order IV.B.2.4]
- 4.6. The certificate holder must obtain, as required by ORS 469.401(3), all local permits, to include a Conditional Use Permit for the portion of the Carty facility located on land zoned Exclusive Farm Use and a Zoning Permit for the entire facility located within Morrow County.  
[Final Order IV.E.4.6]

## **5.0 PRE-CONSTRUCTION REQUIREMENTS**

In addition to pre-construction requirements contained elsewhere in this site certificate, the certificate holder must meet the following requirements:

- 5.1. Before beginning construction, the certificate holder must notify the Department of the identity and qualifications of the major design, engineering, and construction contractor(s) for the facility. The certificate holder must select contractors that have substantial experience in the design, engineering, and construction of similar facilities. The certificate holder must report to the Department any change of major contractors.  
[Final Order IV.B.2.1]
- 5.2. The certificate holder must contractually require all construction contractors and subcontractors involved in the construction of the facility to comply with all applicable laws and regulations and with the terms and conditions of the site certificate. Such contractual provisions do not relieve the certificate holder of responsibility under the site certificate.  
[Final Order IV.B.2.3]
- 5.3. Before beginning construction of the energy facility, the certificate holder shall submit a final parking lot plan to Morrow County for approval as part of the certificate holder's building permit application for the energy facility. This parking lot plan shall comply

with Section 4.040 and 4.060 of the Morrow County Zoning Ordinance and with Americans with Disabilities Act (ADA) requirements. This plan shall provide a minimum of 22 parking spaces and one ADA-accessible space, or the minimum number of parking spaces required by MCZO Section 4.040 based on the number of employees on the largest shift, whichever is greater. The certificate holder shall construct on-site parking in conformance with the approved parking lot plan.

[Final Order IV.E.4.2] [MCZO Section 4.040-4.060]

5.4. Before beginning construction, the certificate holder must complete an investigation of subsurface soil and geologic conditions to identify geological or geotechnical hazards per Condition 5.4.a and obtain Department approval of the investigation report per Condition 5.4.b.

a. The investigation must include at least the following activities:

1. Drilling of six to eight exploratory borings up to a depth of 75 feet under proposed critical structure locations, including the gas turbine units, cooling tower, transmission structures, and switchyard. Standard penetration tests should be conducted at 2.5-foot and 5-foot intervals. Drilling of exploratory borings along transmission line corridor is not necessary if such information is available from the construction of the existing transmission line.
2. Digging of test pits to assess the extent and thickness of any loose, surficial soil layers at the site. Key focus areas should include planned locations of critical structures, roadways, and landscaped areas where irrigation would occur.
3. Performing laboratory testing to evaluate the engineering properties of soils, including natural water contents on all samples collected, mechanical and hydrometer gradations, Atterberg limits, and collapsibility and consolidation tests on selected samples.

b. The certificate holder must prepare a geotechnical report with final facility design recommendations based on the investigation conducted per the requirements of Condition 5.4.a. The geotechnical report must be submitted to the Oregon Department of Geology & Mineral Industries (DOGAMI) and the Department. The certificate holder may not commence construction of the facility prior to Department approval of this report.

[Final Order IV.C.2.1]

5.5. During construction and operation of the facility, the certificate holder must implement a revegetation and weed control plan. The certificate holder must comply with the applicable provisions of the Morrow County and Gilliam County Weed Control

Ordinances, as determined by the Morrow County Weed Control Supervisor, and Gilliam County Weed Officer, respectively. Prior to beginning construction the certificate holder must consult with the Morrow County Weed Control Supervisor and the Gilliam County Weed Control Officer and obtain approval of a Revegetation and Noxious Weed Control Plan. The final Revegetation and Noxious Weed Control Plan must be submitted to the Department of Energy for approval prior to the start of construction.

[Final Order IV.D.2.6]

- 5.6. Before beginning construction, the certificate holder must submit a Notice of Proposed Construction or Alteration to the Federal Aviation Administration (FAA) and the Oregon Department of Aviation identifying the final location of the facility exhaust stack. The certificate holder must promptly notify the Department of the responses from the FAA and the Oregon Department of Aviation.

[Final Order V.D.2.5]

- 5.7. Except as necessary for the initial survey or as otherwise allowed for wind energy facilities, transmission lines or pipelines under OAR 345-027-0020, 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 rule, "construction rights" means the legal right to engage in construction activities.

[Final Order III.D.6] [Mandatory Condition OAR 345-027-0020(5)]

- 5.8. Before beginning construction, the certificate holder must notify the Department in advance of any work on the site that does not meet the definition of "construction" in ORS 469.300 (excluding surveying, exploration, or other activities to define or characterize the site) and must provide to the Department a description of the work and evidence that its value is less than \$250,000.

[Final Order IV.B.2.6]

- 5.9. The certificate holder shall develop and implement a Spill Prevention, Control and Countermeasure (SPCC) Plan in accordance with 40 CFR 112. A copy of this plan shall be provided to the Department prior to the commencement of construction of the Carty Generating Station.

[Final Order IV.G.2.1]



## **6.0 DESIGN, CONSTRUCTION AND OPERATIONS**

- 6.1. During construction, the certificate holder must have a full-time, on-site manager who is qualified in environmental compliance to ensure compliance with all site certificate conditions. The certificate holder must notify the Department of the name, telephone number, and e-mail address of this person prior to the start of construction and immediately upon any change in the contact information.  
[Final Order IV.B.2.2]
- 6.2. The certificate holder shall provide portable toilets for on-site sewage handling during construction and shall ensure that they are pumped and cleaned regularly by a licensed contractor who is qualified to pump and clean portable toilet facilities.  
[Final Order IV.N.2.3]
- 6.3. The certificate holder shall implement a waste management plan during construction that includes but is not limited to the following measures:
- a. Recycling steel and other metal scrap.
  - b. Recycling wood waste.
  - c. Recycling packaging wastes such as paper and cardboard.
  - d. Collecting non-recyclable waste for transport to a local landfill by a licensed waste hauler.
  - e. Segregating all hazardous 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 wastes.
  - f. Confining concrete delivery truck rinse-out to a designated wash-out area and burying other concrete waste as part of backfilling.
- [Final Order IV.N.2.1]
- 6.4. In advance of, and during, preparation of detailed design drawings and specifications for the 500-kV transmission line, the certificate holder shall consult with the Utility Safety and Reliability Section of the Oregon Public Utility Commission to ensure that the designs and specifications are consistent with applicable codes and standards.  
[Final Order V.D.2.3]
- 6.5. The certificate holder must 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, or its successor document).  
[Final Order IV.O.2.1] [Mandatory Condition OAR 345-027-0023(4)]

- 6.6. The certificate holder must design and construct the facility in accordance with requirements of the Oregon Structural Specialty Code (OSSC 2007) and the 2010 International Building Code.  
[Final Order IV.C.2.4]
- 6.7. 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. “Seismic hazard” includes ground shaking, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement and subsidence.  
[Final Order IV.C.2.5] [Mandatory Condition OAR 345-027-0020(12)]
- 6.8. The certificate holder must design, engineer and construct the facility to avoid dangers to human safety presented by non-seismic hazards. As used in this condition, “non-seismic hazards” include settlement, landslides, flooding and erosion.  
[Final Order IV.C.2.6]
- 6.9. The certificate holder shall design and construct the facility using the minimum land area necessary for safe construction and operation. The certificate holder shall locate access roads and temporary construction laydown and staging areas to minimize disturbance of farming practices.  
[Final Order IV.E.4.1] [MCZO Section 3.010.D]
- 6.10. The certificate holder must 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 DOGAMI and the Building Codes Division and to propose mitigation actions.  
[Final Order IV.C.2.2] [Mandatory Condition OAR 345-027-0020(13)]
- 6.11. The certificate holder must 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.  
[Final Order IV.C.2.3] [Mandatory Condition OAR 345-027-0020(14)]

- 6.12. During construction of the facility, the certificate holder shall ensure that contractors move equipment out of the construction area when it is no longer expected to be used. To the extent practical, contractors shall lower equipment with long arms, such as cranes, bucket trucks, and backhoes when not in use, in order to minimize visibility.  
[Final Order IV.J.2.1]
- 6.13. To reduce the visual impact of the facility, the certificate holder shall paint the buildings and structures in low-reflectivity neutral colors to blend with the surrounding landscape.  
[Final Order IV.J.2.2]
- 6.14. The certificate holder shall not use exterior nighttime lighting except:
- a. The minimum exhaust stack lighting required or recommended by the Federal Aviation Administration.
  - b. Safety and security lighting at the Carty Generating Station, provided that such lighting is shielded or downward-directed to reduce offsite glare.
  - c. Minimum lighting necessary for repairs or emergencies.  
[Final Order IV.J.2.3]
- 6.17. During construction of the facility, the certificate holder shall implement measures to reduce traffic impacts, as follows:
- a. The certificate holder shall reduce peak hour volumes during construction by staggering shift start times or implementing other measures that would significantly reduce the total number of construction worker vehicle trips through the westbound I-84/Tower Road ramp terminal; or
  - b. The certificate holder shall install temporary traffic controls during peak construction to prioritize westbound left-turning vehicles at the westbound Tower Road ramp terminal during the weekday a.m. peak hour.  
[Final Order IV.M.2.9]
- 6.18. Unless legally permissible, the certificate holder shall ensure that no equipment or machinery associated with the construction is parked or stored on any public road within Morrow or Gilliam counties. The certificate holder may temporarily park equipment off the road but within County rights-of-way with the approval of the County Roadmaster.  
[Final Order IV.M.2.10]

- 6.19. The certificate holder shall cooperate with the Morrow County Public Works Department and the Gilliam County Road Department to ensure that any unusual damage or wear to county roads that is caused by construction of the facility is repaired by the certificate holder. Upon completion of construction, the certificate holder shall restore public roads to pre-construction condition or better to the satisfaction of applicable county departments.  
[Final Order IV.M.2.11]
- 6.20. If improvements are needed to the I-84/Tower Road interchange to safely accommodate turning movements by a WB-67 design vehicle, the certificate holder shall work with The Oregon Department of Transportation and Morrow County to identify needed improvements and shall construct or install needed improvements prior to commencement of construction of the Carty facility.  
[Final Order IV.M.2.12]
- 6.21. Oversize and overweight deliveries shall be made by rail and barge when feasible, to limit impacts to the I-84/Tower Road interchange.  
[Final Order IV.M.2.13]
- 6.22. The certificate holder shall construct all facility components in compliance with the following setback requirements. The transmission lines, connecting the Carty Generating Station, the Grassland Switchyard and the Slatt Substation are exempt from this condition.
- a. For portions of the facility located in the Morrow County General Industrial Zoning District:
    - i. The minimum setback between a structure and the right-of-way of an arterial street shall be 50 feet. The minimum setback of a structure from the right-of-way of a collector shall be 30 feet, and from all lower class streets the minimum setback shall be 20 feet.
    - ii. Any sewage disposal installations such as outhouses, septic tank and drainfield systems shall be set back from the high-water line or mark along all streams and lakes a minimum of 100 feet, measured at right angles to the high-water line or mark. All structures, buildings, or similar permanent fixtures shall be set back from the high-water line or mark along all streams or lakes a minimum of 100 feet measured at right angles to the high-water line or mark.

b. For portions of the facility located in the Morrow County Exclusive Farm Use Zoning District:

- i. The front yard setback from the property line shall be a minimum of 100 feet if the property line is adjacent to an intensive agricultural use; otherwise, front yards shall be 20 feet for property fronting on a local minor collector or marginal access street right-of-way, 30 feet from a property line fronting on a major collector right-of-way, and 80 feet from an arterial right-of-way.
- ii. Each side yard shall be a minimum of 20 feet except that for parcels or lots with side yards adjacent to an intensive agricultural use the adjacent side yard shall be a minimum of 100 feet.
- iii. Rear yards shall be a minimum of 25 feet, except for parcels or lots with rear yards adjacent to an intensive agricultural use, where rear yards shall be a minimum of 100 feet.
- iv. Any sewage disposal installations such as outhouses, septic tank and drainfield systems shall be set back from the high-water line or mark along all streams and lakes a minimum of 100 feet, measured at right angles to the high-water line or mark. All structures, buildings, or similar permanent fixtures shall be set back from the high-water line or mark along all streams or lakes a minimum of 100 feet measured at right angles to the high-water line or mark.

[Final Order IV.E.4.3] [MCZO Section 3.010(H)]

6.23. The certificate holder must limit signage to directional signs necessary for deliveries and general site circulation. No sign may be placed so as to interfere with visibility or effectiveness of any permanent traffic control device. No sign may be placed so as to impede the sight distance triangle at any access point or intersection as specified in Section 4.020 of the Morrow County Zoning Code. No sign shall cause glare, distraction or other driving hazards within a street or road right-of-way.

[Final Order IV.E.4.5] [MCZO Sections 4.020 and 4.070]

6.24. The certificate holder shall comply with Section 5, Public Responsibilities, of the Morrow County Solid Waste Management Ordinance. Any hauling of solid waste from the Carty facility during construction, operation, or retirement shall be performed by a franchised solid waste hauler or otherwise comply with the Morrow County Solid Waste Management Ordinance.

[Final Order IV.E.4.7] [Morrow County Waste Management Ordinance Section 5.000]

- 6.25. Recycling by the certificate holder and certificate holder's contractors during construction, operation, and retirement of the Carty facility shall be done in accordance with Oregon Department of Environmental Quality regulations and shall be reported as part of the Morrow County wasteshed.

[Final Order IV.E.4.7]

## **7.0 PUBLIC HEALTH AND SAFETY**

- 7.1 The certificate holder shall take the following steps to reduce or manage human exposure to electromagnetic fields:

(a) Constructing all aboveground transmission lines at least 200 feet from any residence or other occupied structure, measured from the centerline of the transmission line.

(b) Providing to landowners a map of underground and overhead transmission lines on their property and advising landowners of possible health risks from electric and magnetic fields.

(c) Designing and maintaining all transmission lines 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.

(d) Designing and maintaining all transmission lines so that induced voltages during operation are as low as reasonably achievable

[Final Order V.D.2.1]

- 7.2 To protect the public from electrical hazards, the certificate holder must enclose the facility switchyard with appropriate fencing and locked gates.

[Final Order V.D.2.2]

- 7.3 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 reasonable safety measures, such as posting warning signs on affected roads. Cooperation may include, but is not necessarily limited to, the reimbursement of expenses for posting warning signs and implementing other safety measures.

[Final Order V.D.2.4]

- 7.4 The certificate holder must comply with all emergency planning and notification requirements of Emergency Planning and Community Right-to-Know Act (EPCRA) Section 302.

[Final Order V.D.2.6]

- 7.5 The certificate holder must comply with all reporting requirements of the Emergency Planning and Community Right-to-Know Act (EPCRA) Section 304, including reporting of any chemical release in an amount equal to or greater than the EPCRA reportable quantity for that chemical.  
[Final Order V.D.2.7]
- 7.6 The certificate holder must report emissions, transfer, and waste management data for hydrazine and sodium nitrite as required by Section 313 of the Emergency Planning and Community Right-to-know Act (EPCRA) and Section 6607 of the Pollution Prevention Act.  
[Final Order V.D.2.8]
- 7.7 The certificate holder must comply with all reporting requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), including reporting of any chemical release in an amount equal to or greater than the CERCLA reportable quantity for that chemical.  
[Final Order V.D.2.9]
- 7.8 The certificate holder shall notify the Department of Energy and Morrow and Gilliam Counties within 72 hours of any occurrence involving the facility if:
- a. There is an attempt by anyone to interfere with its safe operation;
  - b. A natural event such as an earthquake, flood, tsunami or tornado, or a human-caused event such as a fire or explosion affects or threatens to affect the public health and safety or the environment; or
  - c. There is any fatal injury at the facility.
- [Final Order V.D.2.10] [Mandatory Condition OAR 345-026-0170]
- 7.9 The certificate holder must 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. A current copy of the electrical protection plan must be available at the O&M building and provided upon request by ODOE staff.  
[Final Order IV.O.2.2] [Mandatory Condition OAR 345-027-0023(4)]

## **8.0 ON-SITE SAFETY AND SECURITY**

8.1 During construction and operation of the facility, the certificate holder shall provide for on-site security and shall establish good communications between on-site security personnel and the Morrow County Sheriff's Office. During operation, the certificate holder shall ensure that appropriate law enforcement agency personnel have an up-to-date list of the names and telephone numbers of facility personnel available to respond on a 24-hour basis in case of an emergency on the facility site.

[Final Order IV.M.2.1]

8.2 During construction, the certificate holder shall require that all on-site construction contractors develop and implement a site health and safety plan that informs workers and others on-site about first aid techniques and what to do in case of an emergency. The plan shall also include important telephone numbers and the locations of on-site fire extinguishers and nearby hospitals. The certificate holder shall ensure that construction contractors have personnel on-site who are first aid and CPR certified.

[Final Order IV.M.2.2]

8.3 During operation, the certificate holder shall develop and implement a site health and safety plan that informs employees and others on-site about first aid techniques and what to do in case of an emergency. The plan shall also include important telephone numbers and the locations of on-site fire extinguishers and nearby hospitals.

[Final Order IV.M.2.3]

8.4 During construction, the certificate holder shall ensure that construction vehicles and equipment are operated on graveled areas to the extent possible and that open flames, such as cutting torches, are kept away from dry grass areas.

[Final Order IV.M.2.4]

8.5 During operation, the certificate holder shall ensure that all on-site employees receive annual fire prevention and response training by qualified instructors or members of the local fire districts. The certificate holder shall ensure that all employees are instructed to keep vehicles on roads and off dry grassland, except when off-road operation is required for emergency purposes.

[Final Order IV.M.2.5]

8.6 During construction and operation of the facility, the certificate holder shall ensure that all service vehicles are equipped with shovels and portable fire extinguishers of a 4500BC or equivalent rating.

[Final Order IV.M.2.6]



8.7 During construction and operation of the facility, the certificate holder shall develop and implement fire safety plans in consultation with the Boardman Rural Fire Protection District to minimize the risk of fire and to respond appropriately to any fires that occur on the facility site. In developing the fire safety plans, the certificate holder shall take into account the dry nature of the region and shall address risks on a seasonal basis. The certificate holder shall meet annually with local fire protection agency personnel to discuss emergency planning and shall invite local fire protection agency personnel to observe any emergency drill conducted at the facility.

[Final Order IV.M.2.7]

8.8 Upon the beginning of operation of the facility, the certificate holder shall provide a site plan to the Boardman Rural Fire Protection District. The certificate holder shall indicate the actual location of all facility structures on the site plan. The certificate holder shall provide an updated site plan if additional structures are later added to the facility. During operation, the certificate holder shall ensure that appropriate fire protection agency personnel have an up-to-date list of the names and telephone numbers of facility personnel available to respond on a 24-hour basis in case of an emergency on the facility site.

[Final Order IV.M.2.8]

## **9.0 PROTECTION OF SOIL**

9.1 The certificate holder must conduct all construction work in compliance with an Erosion and Sediment Control Plan (ESCP) satisfactory to the Oregon Department of Environmental Quality and as required under the NPDES Storm Water Discharge General Permit #1200-C. The certificate holder must include in the ESCP any procedures necessary to meet local erosion and sediment control requirements or storm water management requirements.

[Final Order IV.D.2.1]

9.2 During construction, the certificate holder, to the extent practicable, must limit truck traffic to improved road surfaces to avoid soil compaction.

[Final Order IV.D.2.2]

9.3 During construction, the certificate holder must implement best management practices to control any dust generated by construction activities, such as applying water to roads and disturbed soil areas.

[Final Order IV.D.2.3]

- 9.4 During construction of the facility, the certificate holder must complete the following monitoring to ensure that there are no significant potential adverse impacts to soils:
- a. During construction, monitor disturbed area erosion and sediment control measures at the active construction site on a weekly basis and every two weeks on inactive sites. Inspection of both active and inactive sites must occur at least daily during periods when 0.5 inches or more rain has fallen in a 24-hour period.
  - b. The certificate holder must remove trapped sediment when storage capacity has been reduced by 50 percent. Sediments will be placed in an upland area certified by a qualified wetlands specialist.
  - c. Observe and record color and turbidity within 35 feet upstream and downstream of locations where surface waters from the construction site(s) enter a receiving stream. Observations shall note whether sheen and floating matter is present or absent. Any apparent color and turbidity of the discharge, as well as any observable difference in comparison with the receiving stream shall be described. If there are observable differences, or any sheen or floating matter is present, the certificate holder must take immediate steps to identify and rectify the cause of the run-off to the stream.
  - d. If the erosion and sediment control measures are deemed ineffective, different strategies and/or measures shall be implemented, maintained and monitored.
  - e. After completing construction in an area, the certificate holder must monitor the area until soils are stabilized and evaluate whether construction-related impacts to soils are being adequately addressed by the mitigation procedures described in the Erosion and Sediment Control Plan and the approved Revegetation and Noxious Weed Control Plan. As necessary, the certificate holder must implement follow-up restoration measures such as scarification and reseeded to address those remaining impacts.

[Final Order IV.D.2.4]

- 9.5 During facility operation, the certificate holder shall routinely inspect and maintain all transmission line corridors, roads, pads and trenched areas and, as necessary, maintain or repair erosion and sediment control measures and control the introduction and spread of noxious weeds.

[Final Order IV.D.2.5]

- 9.6 Upon completion of construction, the certificate holder must restore vegetation to the extent practicable and shall landscape all areas disturbed by construction in a manner compatible with the surroundings and proposed use and in compliance with the

Revegetation and Noxious Weed Control Plan. Upon completion of construction, the certificate holder must remove all temporary structures not required for facility operation and dispose of all timber, brush, refuse and flammable or combustible material resulting from clearing of land and construction of the facility.

[Final Order IV.D.2.7] [Mandatory Condition OAR 345-027-0020(11)]

- 9.7 During operation of the facility, the certificate holder shall restore areas that are temporarily disturbed during facility maintenance or repair activities using the same methods and monitoring procedures described in the Revegetation and Noxious Weed Control Plan.  
[Final Order IV.D.2.8]
- 9.8 The certificate holder must dispose of all accumulated evaporation pond solids, when removed, in a landfill approved for such waste material. All residual solids deposited in evaporation ponds must be removed to an appropriate disposal facility upon closure of the facility. The certificate holder shall include protocols for solids removal and soil restoration at the location of the evaporation ponds in the retirement plan.  
[Final Order IV.D.2.9]
- 9.9 During operation, the certificate holder must minimize drift from the cooling towers through the use of high efficiency drift eliminators that allow no more than a 0.001% drift rate.  
[Final Order IV.D.2.10]
- 9.10 The certificate holder must handle hazardous materials used on the site 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. During operation, the certificate holder may not store gasoline that is intended for fueling vehicles on the facility site.  
[Final Order IV.D.2.11]
- 9.11 If a reportable release of hazardous substance occurs during construction or operation of the facility, the certificate holder must notify the Department within 72 hours and must clean up the spill or release and dispose of any contaminated soil or other materials according to applicable regulations. The certificate holder must make sure that spill kits containing items such as absorbent pads are located on equipment, near storage areas, and in the administrative or maintenance areas of the facility. The certificate holder must instruct employees about proper handling, storage and cleanup of hazardous materials.  
[Final Order IV.D.2.12]

## **10.0 PROTECTION OF NATURAL RESOURCES**

10.1. Prior to construction, the certificate holder must consult with the Oregon Department of Fish and Wildlife and prepare a final Wildlife and Habitat Monitoring Mitigation Plan and submit the plan to the Department for review and approval. The certificate holder must conduct all wildlife and habitat monitoring as described in the approved Wildlife and Habitat Monitoring and Mitigation Plan, as amended from time to time.

[Final Order IV.H.2.1] [Mandatory Condition OAR 345-027-0020(6)]

10.2. The certificate holder shall acquire the legal right to create, enhance, maintain and protect a habitat mitigation area as long as the site certificate is in effect by means of an outright purchase, conservation easement or similar conveyance and shall provide a copy of the documentation to the Department. Within the habitat mitigation area (HMA), the certificate holder shall improve and monitor the habitat quality in accordance with the Wildlife and Habitat Monitoring and Mitigation Plan approved by the Department per Condition 10.1.

[Final Order IV.H.2.2]

10.3. The certificate holder shall consult with the Oregon Department of Fish and Wildlife prior to commencement of construction to determine the final acreage of habitat mitigation required. Mitigation shall be provided in accordance with this final acreage determination.

[Final Order IV.H.2.3]

10.4. The certificate holder shall conduct noxious weed inventories within the HMA to identify patches of weed infestation during year one, year three and year five after construction, and then continue once every 5 years for the life of the project. Weeds shall be controlled as needed to maintain and enhance habitat quality within the mitigation area, with the goal of working toward eradication of targeted noxious weeds or, if eradication is not practical, decreasing their abundance to minimize impacts to native plant communities. Weed management practices shall be consistent with the Revegetation and Noxious Weed Control Plan and shall include an integrated weed management approach, using an appropriate combination of prevention and control methods. The certificate holder shall obtain ODFW approval prior to the use of pesticides. If a substantial area of soil is left bare from weed control activities, the area shall be seeded using the appropriate methods as described in the Revegetation and Noxious Weed Control Plan. Weed inventories and control measures and revegetation activities should not occur during Washington ground squirrel breeding periods.

[Final Order IV.H.2.5]

10.5. The certificate holder shall implement a fire control plan for wildfire suppression within the HMA in accordance with the existing Boardman Wildfire Control Plan. A copy of the fire control plan shall be provided to the Department upon request. If vegetation in the HMA is damaged from fire or from fire suppression efforts (e.g., vehicular disturbance), the area shall be seeded as necessary with the appropriate seed mix using the appropriate methods for the site, as described in the *Revegetation and Noxious Weed Control Plan*.

[Final Order IV.H.2.6]

10.6. The certificate holder shall monitor and control access to the HMA and shall post signs for the life of the facility designating the area as “protected” and including natural resources information. Access to the proposed area shall be limited to Boardman Plant operational needs, conservation area monitoring, and noxious weed control efforts. Any fences within or bordering the HMA shall be modified to wildlife-friendly specifications. Livestock grazing shall not be permitted within the HMA. Periodic monitoring (at least annually) shall be conducted to evaluate effectiveness of access control measures and signage maintenance needs.

[Final Order IV.H.2.7]

10.7. The certificate holder must implement measures to avoid or minimize temporary and permanent impacts to high quality native habitat and to retain habitat cover in the general landscape, where practicable.

- a. The certificate holder shall not construct any facility components within areas of Category 1 habitat and shall avoid temporary disturbance of Category 1 habitat.
- b. Before beginning construction, the certificate holder shall provide to the Department a map showing the final design locations of all components of the facility and the areas that would be disturbed during construction and identifying the survey areas for all plant and wildlife surveys conducted in 2010 or earlier as described in the *Final Order on the Application*. The certificate holder shall use a qualified professional biologist to conduct a pre-construction plant and wildlife investigation of all areas that would be disturbed during construction that lie outside of the previously surveyed areas. The certificate holder shall provide a written report of the investigation to the Department and to the Oregon Department of Fish and Wildlife. Based on consultation with the Department and ODFW, the certificate holder shall implement appropriate measures to avoid impacts to any Category 1, 2, or 3 habitat, to any State-listed threatened or endangered plant or wildlife species, and to any State Candidate plant species. If any Category 2 or 3 habitat is identified and will be impacted, the certificate

holder shall work with the Department and ODFW to identify appropriate mitigation measures for such impacts.

- c. Before beginning construction, the certificate holder’s qualified professional biologist shall survey the previously-identified Category 1 Washington ground squirrel habitat to ensure that the sensitive use area is correctly marked with exclusion flagging and avoided during construction. The certificate holder shall maintain the exclusion markings until construction has been completed.
- d. Before beginning construction, certificate holder’s qualified professional biologist shall complete aerial raptor nest surveys within the raptor nest survey area as described in the *Final Order on the Application*. The purposes of the survey are to identify any sensitive raptor nests near construction areas and to provide baseline information on raptor nest use for analysis as described in the *Wildlife and Habitat Monitoring and Mitigation Plan* referenced in Condition 10.1. The certificate holder shall provide a written report on the raptor nest surveys to the Department and to ODFW.

[Final Order IV.H.2.9]

- 10.8. During construction, the certificate holder shall avoid all construction activities within one mile of golden eagle nests, 0.5 miles of the Horn Butte Area of Critical Environmental Concern (ACEC), and 0.6 miles of ferruginous hawk nests, and 1,300 feet of other potentially active sensitive raptor species nest sites for the following species during the sensitive period, as provided in this condition:

<u>Species</u>	<u>Sensitive Period</u>	<u>Early Release Date</u>
Swainson’s hawk	April 1 to August 15	May 31
Ferruginous hawk	March 15 to July 15	May 31
Golden eagle	January 1 to July 15	May 31
Burrowing owl	April 1 to August 15	July 15
Long-billed curlew	March 8 to June 15	May 31

During all years in which construction occurs, the certificate holder shall use a protocol approved by the Oregon Department of Fish and Wildlife (ODFW) to determine whether there are any active nests of these species within 1,300 feet (or 0.5 miles for the Horn Butte ACEC) of any areas that would be disturbed during construction. Surveys shall be extended to one mile for golden eagle nests and 0.6 miles for ferruginous hawk nests. This construction buffer distance may be decreased

with approval by ODFW and USFWS depending on the intensity of construction activity and whether there is an adequate physical barrier (i.e., vegetation, topography, etc.) between the nest site and the construction impacts or if consultation determines a lesser distance is feasible and appropriate. The certificate holder shall begin monitoring potential nest sites by the beginning of the sensitive period, as listed above, and shall continue monitoring until at least May 31 (July 15 for golden eagle nests) to determine whether any potentially-active nest sites become active during the sensitive period.

If any nest site is determined to be unoccupied by the early release date, then unrestricted construction activities may occur within 0.6 miles (0.5 miles for the Horn Butte ACEC and one mile for golden eagle nests) of the nest site after that date. If a nest is occupied by any of these species after the beginning of the sensitive period, the certificate holder will flag the boundaries of a 1,300 foot (or 0.6 miles for ferruginous hawk nests, 0.5 miles for the Horn Butte ACEC, or one mile for golden eagle nests) buffer area around the nest site and shall instruct construction personnel to avoid disturbance of the buffer area. During the sensitive period, the certificate holder shall not engage in high-impact construction activities (activities that involve blasting, grading or other major ground disturbance) within the buffer area. The certificate holder shall restrict construction traffic within the buffer, except on public roads, to vehicles essential to the limited construction activities allowed within the buffer. If a golden eagle nest is identified, construction and maintenance activities between February 1 and July 15 (courtship and nesting period) will be avoided within one mile of the active nest (or 0.5 miles if the active nest is not in line-of-sight of activities).

The certificate holder must use a qualified independent professional biologist to observe the active nest sites during the sensitive period for signs of disturbance and to notify the Department of any non-compliance with this condition. If the biologist observes nest site abandonment or other adverse impact to nesting activity, the certificate holder shall implement appropriate mitigation, in consultation with ODFW and subject to the approval of the Department, unless the adverse impact is clearly shown to have a cause other than construction activity.

The certificate holder may begin or resume construction activities within the buffer area before the ending day of the sensitive period with the approval of ODFW, after the young are fledged. The certificate holder shall use a protocol approved by ODFW to determine when the young are fledged (the young are independent of the core nest site).

[Final Order IV.H.2.10]

- 10.9. The certificate holder shall implement the following measures to avoid or mitigate impacts to sensitive wildlife habitat during construction:
- a. Preparing maps to show exclusion areas that are off-limits to construction personnel, such as nesting or denning areas for sensitive wildlife species.
  - b. Avoiding unnecessary road construction, temporary disturbance, and vehicle use.
  - c. Limiting construction work to approved and surveyed areas shown on facility constraints maps.
  - d. Ensuring that all construction personnel are instructed to avoid driving cross-country or taking short-cuts within the site boundary or otherwise disturbing areas outside of the approved and surveyed construction areas.

[Final Order IV.H.2.11]

- 10.10. The certificate holder shall reduce the risk of injuries to avian species by designing and installing all aboveground transmission line support structures following the most current suggested practices for avian protection on power lines published by the Avian Power Line Interaction Committee.

[Final Order IV.H.2.12]

- 10.11. Sensitive raptor nest monitoring shall be conducted by qualified biologists in year one, year three, and year five after operations have begun and then at least every five years after that for the life of the project. Results of the monitoring shall be included in an annual sensitive raptor nest monitoring report provided to the Oregon Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, and the Department. This report shall document the nest productivity of sensitive raptor species, including golden eagle (*Aquila chrysaetos*), occurring within one mile of the Carty facility, the Ferruginous Hawk occurring within 0.6 miles, and other sensitive raptor species nests occurring within 1,300 feet of the facility site.

[Final Order IV.H.2.13]

- 10.12. The certificate holder shall use a qualified environmental professional to provide environmental training during construction and operation. Environmental training includes information on the sensitive species present onsite, precautions to avoid injuring or destroying wildlife or sensitive wildlife habitat, exclusion areas, permit requirements, and other environmental issues. The certificate holder shall instruct construction and operations personnel to report any injured or dead wildlife detected while on the site to the appropriate onsite environmental manager.

[Final Order IV.H.2.14]



10.13. The certificate holder shall not place any structures in Sixmile Canyon and shall avoid new impacts to Sixmile Canyon during construction by using the existing access road for vehicle crossing only during the dry season. Impacts to both the Eightmile Canyon and Sixmile Canyon drainages shall be avoided.

[Final Order IV.H.2.15]

10.14. The certificate holder shall determine the boundaries of Category 1 Washington ground squirrel (WGS) habitat based on the locations where the squirrels were found to be active in the most recent WGS surveys prior to the beginning of construction in habitat suitable for WGS foraging or burrow establishment ("suitable habitat"). The certificate holder shall use a qualified professional biologist who has experience in detection of WGS to conduct surveys within the site boundary using appropriate search protocols. Except as provided in (a), the biologist shall conduct surveys in the active squirrel season (February 1 to June 30) in 2012 and in the active squirrel seasons at least once every three years until the beginning of construction in suitable habitat. The biologist shall survey all areas of suitable habitat where permanent facility components would be located or where construction disturbance could occur. The certificate holder shall provide written reports of the surveys to the Department and to the Oregon Department of Fish and Wildlife (ODFW) and shall identify the boundaries of Category 1 WGS habitat. During each year in which construction will occur, the boundaries of Category 1 WGS habitat shall be marked by the biologist with high-visibility flagging or markers. The certificate holder shall not begin construction until the identified boundaries of Category 1 WGS habitat have been approved by the Department. Category 1 WGS habitat includes the areas described in (b) and (c) below.

- a. The certificate holder may omit the WGS survey in any year if the certificate holder avoids all permanent and temporary disturbance within suitable habitat until a WGS survey has been completed in the following year and the boundaries of Category 1 habitat have been determined and approved based on that survey.
- b. Category 1 WGS habitat includes the area within the perimeter of multiple active WGS burrows plus a 785-foot buffer, excluding areas of habitat types not suitable for WGS foraging or burrow establishment. If the multiple-burrow area was active in a prior survey year, and active burrows are still present, then Category 1 habitat includes the largest extent of the active burrow area ever recorded (in the current or any prior-year survey), plus a 785-foot buffer. If no active burrows are still present, then it is no longer Category 1 habitat for WGS.

- c. Category 1 WGS habitat includes the area containing single active burrow detections plus a 785-foot buffer, excluding areas of habitat types not suitable for WGS foraging or burrow establishment. Category 1 habitat does not include single-burrow areas that were found active in a prior survey year but that are not active in the current survey year.

[Final Order IV.I.2.1]

- 10.15. The certificate holder shall impose and enforce a construction and operation speed limit of 20 miles per hour throughout the facility site and, during the active squirrel season (February 1 to June 30), a speed limit of 10 miles per hour from one hour before sunset to one hour after sunrise on private roads near known Washington ground squirrel (WGS) colonies. The certificate holder shall ensure that all construction and operations personnel are instructed to watch out for and avoid WGS and other wildlife while driving through the facility site.

[Final Order IV.I.2.2]

- 10.16. The certificate holder shall use perch-preventing structures on Carty Generating Station components in areas identified as Category 1 habitat for Washington ground squirrels.

[Final Order IV.I.2.3]

- 10.17. The certificate holder shall provide environmental awareness training for all project personnel and construction contractors before such contractors or personnel enter the site to perform construction-related activities. The training program shall discuss Washington ground squirrel issues as well as other environmental issues related to the project, and include handouts with identification information and reporting procedures. Additional training sessions shall be conducted as needed for personnel that start after the beginning of construction.

[Final Order IV.I.2.4]

- 10.18. The certificate holder shall disc or till a minimum of an 800-ft. buffer within the perimeter of the site boundary in closest proximity to squirrel activity areas. Areas to be tilled shall be reviewed by ODFW and USFWS and shall be informed by the most recent Washington ground squirrel survey data. Tilled areas shall be tilled annually to maintain a soil disturbance regime that is unsuitable for use by Washington ground squirrels.

[Final Order IV.I.2.5]

- 10.19. The certificate holder shall plant dryland wheat or another cover crop in tilled areas within the site boundary. Crops to be planted shall be selected by the certificate holder in coordination with ODFW and USFWS.

[Final Order IV.I.2.6]

- 10.20. Should new Washington ground squirrel burrows become established within 785 feet of the site boundary, the certificate holder shall immediately report to ODFW and USFWS. The certificate holder shall coordinate with ODFW and USFWS to establish additional mitigation measures or to obtain an Incidental Take Permit, as appropriate.  
[Final Order IV.I.2.8]
- 10.21. The certificate holder shall conduct post-construction surveys on known Washington ground squirrel colonies in the Carty facility area, on land owned by the certificate holder, both within the HMA and in areas where known active burrows were recorded during preconstruction field surveys (2009-2012). The Washington ground squirrel surveys shall be conducted by qualified biologists in year one, year three, and year five after operations have begun, and then at least every five years after that for the life of the project. Surveyors shall record evidence of Washington ground squirrel activity, current land use, and evidence of conditions caused by the project that might increase erosion or result in a decline in vegetation quality and adversely affect a Washington ground squirrel colony.  
[Final Order IV.I.2.9]
- 10.22. The certificate holder shall implement a waste management plan during operation that includes but is not limited to the following measures:
- a. Training employees to minimize and recycle solid waste.
  - b. Recycling paper products, metals, glass and plastics.
  - c. Recycling used oil and hydraulic fluid.
  - d. Collecting non-recyclable waste for transport to a local landfill by a licensed waste hauler.
  - e. Segregating all hazardous 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 wastes.  
[Final Order IV.N.2.2]
- 10.23. During construction and operation of the Carty Generating Station, the certificate holder shall obtain potable water from the existing well located approximately 750 feet northwest of the Boardman Plant. Water for construction and process water shall be obtained from Carty Reservoir. The certificate holder may use other sources of water for on-site uses subject to prior approval by the Department.  
[Final Order V.C.2.1]

10.24. During operation, the certificate holder shall discharge sanitary wastewater generated at the facility to the Boardman Plant sanitary waste facility in compliance with DEQ permit requirements.

[Final Order IV.N.2.4]

10.25. Before beginning construction, the certificate holder shall receive approval of the wetlands delineation report by the Department of State Lands and provide an approval letter to the Department.

[Final Order V.B.2.1]

10.26. The certificate holder shall avoid impacts to waters of the state in the following manner:

(a) The certificate holder shall avoid any disturbance to delineated wetlands.

(b) The certificate holder shall construct stream crossings for transmission lines substantially as described in the *Final Order on the Application*. In particular, the certificate holder shall not remove material from waters of the State or add new fill material to waters of the State such that the total volume of removal and fill exceeds 50 cubic yards for the project as a whole.

(c) The certificate holder shall construct support structures for aboveground lines outside of delineated stream channels and shall avoid in-channel impacts.

[Final Order V.B.2.2]

10.27. Before beginning construction, the certificate holder shall provide to the Department a map showing the final design locations of all components of the facility and the areas that would be disturbed during construction and showing the wetlands and stream channels previously surveyed by Ecology and Environment, Inc. as described in the *Final Order on the Application*. For areas to be disturbed during construction that lie outside of the previously-surveyed areas, the certificate holder shall hire qualified personnel to conduct a pre-construction investigation to determine whether any jurisdictional waters of the State exist in those locations. The certificate holder shall provide a written report on the pre-construction investigation to the Department and the Department of State Lands for approval before beginning construction. The certificate holder shall ensure that construction and operation of the facility will not impact any jurisdictional water identified in the pre-construction investigation in a manner that would require a Removal-Fill Permit.

[Final Order V.B.2.3]

- 10.28. Before beginning operation of the facility, the certificate holder shall demonstrate that the Oregon Department of Environmental Quality has issued to the certificate holder a Water Pollution Control Facilities Permit substantially in the form of Exhibit 4 of the *Final Order on the Application*, allowing for wastewater discharge from the Carty Generating Station.  
[Final Order V.E.2.1]
- 10.29. The certificate holder shall comply with state laws and rules applicable to Water Pollution Control Facilities Permits that are adopted in the future to the extent that such compliance is required under the respective statutes and rules.  
[Final Order V.E.2.2]
- 10.30. The certificate holder may not dispose of wastewater into the Boardman settling ponds, vehicle wash water pond or coal yard ponds unless the site certificate and the WPCF are amended to permit such use.  
[Final Order V.E.2.3]
- 10.31. The site certificate holder must meet the compliance dates set out in the WPCF unless alternative compliance dates have been approved in advance in writing by DEQ. Either prior to or not later than 14 calendar days following any lapsed compliance date, the site certificate holder must submit a notice of noncompliance with the established schedule to the Department of Energy and DEQ. Any report of noncompliance must include the cause of noncompliance.  
[Final Order V.E.2.4]
- 10.32. Prior to constructing or modifying wastewater management treatment and disposal facilities, detailed plans must be submitted to and approved by the Department of Environmental Quality  
[Final Order V.E.2.5]
- 10.33. Prior to discharge of wastewater treatment system wastewater to lined evaporation ponds for the Carty Generating Station, the certificate holder shall submit a wastewater characterization to the Department of Environmental Quality for review and approval.  
[Final Order V.E.2.6]

10.34. Unless otherwise approved in writing by the Department of Environmental Quality, the site certificate holder is permitted to manage and dispose only of the following wastes from operation of the Carty Generating Station in lined ponds construction in accordance with the plans that are approved by the Department of Environmental Quality:

- a. Water treatment wastewater
- b. Facility sumps and drains wastewater
- c. Laboratory and sampling wastewater
- d. Evaporative cooling wastewater
- e. Equipment cleaning wastewater
- f. Storm water

[Final Order V.E.2.7]

10.35. Prior to discharge of Carty Generating Station sewage to the lagoons, the certificate holder must:

- a. Submit a work plan to remove vegetation from the Clay-lined cells and either leak test the cells or recondition them; and
- b. Submit a long-term plan to ensure the integrity of the clay lined cells. The plan may include evaluating system capacity requirements and modifying system capacity accordingly prior to discharge of Carty Generating Station sewage to lagoons.

[Final Order V.E.2.8]

10.36. The certificate holder must prepare and implement a Hazardous Materials Management and Monitoring plan approved by the Department. The plan must 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. The certificate holder must use hazardous materials in a manner that protects public health, safety and the environment and must comply with all applicable local, state and federal environmental laws and regulations.

The Hazardous Materials Management and Monitoring Plan shall contain the same information required for a Spill Prevention, Control and Countermeasure Plan (40 CFR 112). Whereas the SPCC Plan addresses spill prevention for oil products, the

materials management and monitoring plan shall address hazardous substances. The Plan shall include operating procedures to prevent hazardous substances releases, control measures to contain hazardous substance releases, countermeasures to contain, cleanup, and mitigate hazardous substance releases, and procedures for required inspections and testing. This Plan must be submitted to the Department for review and approval prior to commencement of construction of the Carty Generating Facility.

[Final Order IV.G.2.2]

- 10.37. If any inspection performed in accordance with the Hazardous Materials Management and Monitoring Plan identifies improper handling or storage of hazardous substances (as defined by ORS 465.200) or improper record keeping procedures, the certificate holder must correct such deficiencies promptly and must report the corrective actions to the Department. If the certificate holder has not corrected such deficiencies within six months after the date of the inspection report, the certificate holder shall submit to the Council an independently prepared estimate of cost of correction. Upon approval of the estimate by the Council, the certificate holder shall increase the amount of the bond or letter of credit required under Condition IV.G.2.9 by the approved amount of the estimate. In no event, however, shall the certificate holder be relieved of its obligation to exercise all due diligence in correcting deficiencies identified in the course of a site inspection.

[Final Order IV.G.2.3]

- 10.38. The certificate holder shall report any release (as defined by ORS 465.200) of hazardous substances to the Department within 72 hours after the discovery of such release, in addition to any other reporting requirements under applicable law. If the certificate holder has not remedied a release consistent with applicable Oregon Department of Environmental Quality standards within six months after the date of the release, the certificate holder shall submit to the Council an independently prepared estimate of the cost to complete necessary remediation. Upon approval of the estimate by the Council, the certificate holder shall increase the amount of its bond or letter of credit by the approved amount of the estimate. In no event, however, shall the certificate holder be relieved of its obligation to exercise all due diligence in remedying a release of hazardous substances.

[Final Order IV.G.2.4]

## **11.0 PROTECTION OF HISTORIC, CULTURAL AND ARCHAEOLOGICAL RESOURCES**

- 11.1. Before beginning construction, the certificate holder shall label Oregon State Historic Preservation Office (SHPO) archaeological resource site 35MW19 and a 100-foot buffer around site 35MW19 on construction maps and drawings as a “no entry” area. Site 35MW19 and its 100-foot buffer shall be marked with temporary fencing or stakes with rope and/or flagging to prevent inadvertent entry.  
[Final Order IV.K.2.1]
- 11.2. Before beginning construction, the certificate holder shall provide to the Department a map showing the final design locations of all components of the facility, the areas that would be temporarily disturbed during construction, the areas that were surveyed in 2009 as described in the Draft Proposed Order, and the location of archaeological resource site 35MW19 and its 100-foot buffer.  
[Final Order IV.K.2.2]
- 11.3. The certificate holder shall use qualified personnel to conduct field investigation of all areas to be disturbed during construction that lie outside the previously-surveyed areas. The certificate holder shall provide a written report of the field investigation to the Department and to the Oregon State Historic Preservation Office (SHPO). If any potentially significant historic, cultural, or archaeological resource sites are found during the field investigation, the certificate holder shall instruct all construction personnel to avoid the identified sites and shall implement appropriate measures to protect the sites, including the measures described in Condition 11.5.  
[Final Order IV.K.2.3]
- 11.4. The certificate holder shall ensure that a qualified archaeologist, as defined in OAR 736-051-0070, instructs construction personnel in the identification of cultural materials and avoidance of accidental damage to identified resource sites. Records of such training shall be maintained at the administration/control building and made available to authorized representatives of the Department upon request.  
[Final Order IV.K.2.4]
- 11.5. The certificate holder shall ensure that construction personnel cease all ground-disturbing activities in the immediate area if any archaeological or cultural resources are found during construction of the facility until a qualified archeologist can evaluate the significance of the find. The certificate holder shall notify the Department and the SHPO of the find. If the 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 appropriate parties. The certificate holder shall not restart work in the affected area until the certificate holder has



demonstrated to the Department and the SHPO that it has complied with archaeological resource protection regulations.

[Final Order IV.K.2.5]

- 11.6. The certificate holder shall prepare and implement an Archaeological Monitoring Plan for construction activities to address and mitigate impacts from exposure of unanticipated or previously unidentified cultural resources that may be exposed during construction of the facility. A current copy of the plan must be maintained at the administration/control building and made available to authorized representatives of the Department upon request. The Archaeological Monitoring Plan, as proposed by the certificate holder, shall include the following requirements:
- a. The certificate holder will be responsible for providing a qualified archaeological monitor for any ground-disturbing project construction activity that occurs within the area between the shovel tests excavated in 2009 and the delineated 100-foot buffer around 35MW19. No ground-disturbance is permitting within the site boundaries or the 100-foot buffer around the archaeological site.
  - b. A qualified archaeological monitor is a person who meets the “qualified archaeologist” standards defined by ORS 390.235(6)(b) or who is supervised by a “qualified archaeologist.” If the latter applies, the supervising qualified archaeologist must vouch for the work of the archaeological monitor and author or co-author the archaeological monitoring report provided at the end of construction monitoring.
  - c. The archaeological monitor will keep a daily log of construction and monitoring activities. If intact archaeological materials are encountered during the monitoring, the archaeological monitor will initiate procedures for inadvertent discovery of archaeological resources, as specified in ORS 358.920.
  - d. Artifacts will be examined and documented in the field and will not be collected unless authorized under the provisions of a SHPO permit, if one is obtained in the inadvertent discovery of archaeological resources process.
  - e. If human remains are identified during the course of construction monitoring, the monitor will initiate the procedures for Inadvertent Discovery of Human Remains, as specified in ORS 97.740-97.760.
  - f. The certificate holder is responsible for providing an archaeological monitoring report to the Department and SHPO after construction work is completed. The report must detail the activities of the archaeological monitor and any inadvertent discoveries encountered, along with actions taken to address them.

[Final Order IV.K.2.6]

## **12.0 CARBON DIOXIDE EMISSIONS**

- 12.1. The net carbon dioxide emissions rate for the base load gas plant must not exceed 0.675 pounds of carbon dioxide per kilowatt-hour of net electric power output, with carbon dioxide emissions and net electric power output measured on a new and clean basis, as defined in OAR 345-001-0010.  
[Final Order IV.P.2.1]
- 12.2. The net carbon dioxide emissions rate for incremental emissions for the facility operating with power augmentation must not exceed 0.675 pounds of carbon dioxide per kilowatt-hour of net electric power output, with carbon dioxide emissions and net electric power output measured on a new and clean basis at the site during the times of year when the facility is intended to operate with power augmentation, subject to modification under Condition 12.12.  
[Final Order IV.P.2.2]
- 12.3. For the purposes of the 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 disperse 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 2011 dollars.
- a. The certificate holder shall calculate 2011 dollars using the Index described in Condition 15.1.b.
  - b. The certificate holder shall increase the amount of the letter of credit described in Condition 12.9 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.  
[Final Order IV.P.2.3]
- 12.4. Before beginning construction of the facility, the certificate holder shall submit to the Department information identifying its final selection of a gas turbine vendor and heat recovery steam generator vendor 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 new and clean heat rate (higher heating value) and its net power output at the average annual site condition. The certificate holder shall submit an affidavit certifying the heat rate and capacity.

- b. For the base load gas plant designed with power augmentation, the certificate holder shall submit written design information, based on its contracts with vendors, sufficient to verify the facility's designed new and clean heat rate (higher heating value) and its net power output at the site during the times of year when its facility is intended to operate with power augmentation. The certificate holder shall submit an affidavit certifying the heat rate and capacity.

[Final Order IV.P.2.4]

- 12.5. 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.

[Final Order IV.P.2.5]

- 12.6. 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 12.4 and the annual average hours and times of operation with power augmentation specified under Condition 12.5.

[Final Order IV.P.2.6]

- 12.7. 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 3 to the *Final Order on the Application*. At the request of the certificate holder, the Council may approve a different form of a 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 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.

[Final Order IV.P.2.7]

- 12.8. The certificate holder shall submit all monetary path payment requirement calculations to the Department for verification in a timely manner before submitting a letter of credit for Council approval, before entering into the MOU with The Climate Trust as required by Condition 12.7, and before making disbursements to The Climate Trust.

[Final Order IV.P.2.8]

- 12.9. Before beginning construction of the facility, the certificate holder shall submit to The Climate Trust a letter of credit in the amount of the offset funds of the monetary path payment requirement as determined under Condition 12.3.
- a. The certificate holder shall use a form of letter of credit that is substantially in the form of Appendix B to the MOU described in Condition 12.7. At the request of the certificate holder, the Council may approve a different form of a letter of credit without an amendment of the site certificate.
  - b. The certificate holder shall use an issuer of the letter of credit approved by the Council.
  - c. The certificate holder shall maintain the 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 letter of credit commensurate with payments it makes to The Climate Trust. The letter of credit must not be subject to revocation before disbursement of the full amount of the offset funds.

[Final Order IV.P.2.9]

- 12.10. For any transfer of the site certificate approved under OAR 345-027-0100:
- a. If The Climate Trust has not yet fully withdrawn the amount of the letter of credit of the current certificate holder at the time of the transfer, the new certificate holder shall submit to The Climate Trust a pro-rated letter of credit, subject to the requirements of Condition 12.9. The new certificate holder shall submit to Council for the Council's approval the identity of the issuer of the letter of credit. The Council may approve a new letter of credit without a site certificate amendment.
  - b. The new certificate holder shall enter into an MOU with The Climate Trust as described in Condition 12.7 unless the new certificate holder demonstrates to the satisfaction of the Department that there has been a valid assignment of the current certificate holder's MOU to the new certificate holder. The Council may approve a new MOU without a site certificate amendment.
  - c. For resolution of any dispute between the new certificate holder and The Climate Trust concerning the disbursement mechanism for monetary path payments or any other issues related to the monetary path payment requirement, either party may submit the dispute to the Council as provided in Condition 12.7.b.

[Final Order IV.P.2.10]

- 12.11. 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 12.13 and 12.14 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 12.13 and 12.14.
  - b. Upon notice pursuant to subsection (c), The Climate Trust may request from the issuer of the 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 letter of credit that The Climate Trust has executed a letter of intent to acquire an offset project. The certificate holder shall require that the issuer of the 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 letter of credit.

[Final Order IV.P.2.11]

- 12.12. 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 and relative humidity. The certificate holder shall calculate carbon dioxide emissions using a rate of 117 pounds of carbon dioxide per million Btu of natural gas fuel.
  - 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 until the Department has approved the testing protocols.
- e. Within two months after completing the Year One Tests, the certificate holder shall provide to the Council reports of the results of the Year One Tests.

[Final Order IV.P.2.12]

- 12.13. Based on the data from the Year One Tests described in Condition 12.12, 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 letter of credit provided according to Condition 12.9 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 12.12.
  - 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 2011 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 2011 dollars).
  - c. In no case shall the certificate holder diminish the value of the 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.

[Final Order IV.P.2.13]

- 12.14. 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 12.12.b, to calculate whether it owes supplemental monetary path payments due to increased hours that it uses power augmentation.
- a. Each five years after beginning commercial operation of the facility (five-year reporting period), the certificate holder shall report to the Department the annual average hours the facility operated with power augmentation during that five-year reporting period, as required under OAR 345-024-0590(6). The certificate holder shall submit five-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 12.4, 12.5 and 12.12, prorated for five years, during any five-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 five-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 2011 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 2011 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 2010 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.

[Final Order IV.P.2.14]

- 12.15. The certificate holder shall use only pipeline quality natural gas or shall use synthetic gas with a carbon content per million Btu no greater than pipeline-quality natural gas to fuel the combustion turbines for the base-load gas plant and the power augmentation.

[Final Order IV.P.2.15]

- 12.16. 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 12.1 through 12.15, 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.

[Final Order IV.P.2.16]

- 12.17. If the certificate holder begins construction of the first generator block but not the second block, the certificate holder shall comply with Conditions 12.1 through 12.15 for the first block. If the certificate holder later begins construction of the second generator block, the certificate holder shall comply with Conditions 12.1 through 12.15 for the second block.

[Final Order IV.P.2.17]



### **13.0 NOISE CONTROL AND NOISE COMPLAINT RESPONSE**

- 13.1. To reduce construction noise impacts at nearby residences, the certificate holder shall:
- a. Confine the noisiest operation of heavy construction equipment to the daylight hours.
  - b. Require contractors to install and maintain exhaust mufflers on all combustion engine-powered equipment; and
  - c. Establish a complaint response system at the construction manager's office to address noise complaints. Records of noise complaints during construction must be made available to authorized representatives of the Department of Energy upon request.

[Final Order V.A.2.1]

- 13.2. During operation, the certificate holder shall maintain a complaint response system to address noise complaints. The certificate holder shall notify the Department within 15 days of receiving a complaint about noise from the facility. The notification should include the date the complaint was received, the nature of the complaint, the complainant's contact information, the location of the affected property, and any actions taken, or planned to be taken, by the certificate holder to address the complaint.

[Final Order V.A.2.2]

- 13.3. Upon written notification from the Department, the certificate holder will monitor and record the actual statistical noise levels during operations to verify that the certificate holder is operating the facility in compliance with the noise control regulations. The monitoring plan must be reviewed and approved by the Department prior to implementation. The cost of such monitoring, if required, will be borne by the certificate holder.

[Final Order V.A.2.3]

### **14.0 MONITORING AND REPORTING REQUIREMENTS - GENERAL**

- 14.1. The following general monitoring conditions apply:
- a. The certificate holder shall consult with affected state agencies, local governments and tribes and shall develop specific monitoring programs for impacts to resources protected by the standards of divisions 22 and 24 of OAR Chapter 345 and resources addressed by applicable statutes, administrative rules and local ordinances. The certificate holder must submit the monitoring programs to the Department of Energy and receive Department approval before beginning construction or, as appropriate, operation of the facility.

- b. The certificate holder shall implement the approved monitoring programs described in OAR 345-027-0028(1) and monitoring programs required by permitting agencies and local governments.
- c. For each monitoring program described in OAR 345-027-0028(1) and (2), the certificate holder shall have quality assurance measures approved by the Department before beginning construction or, as appropriate, before beginning commercial operation.
- d. 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.

[Final Order VI.2] [Mandatory Condition OAR 345-027-0028]

- 14.2. The certificate holder shall report according to the following requirements:
- a. General reporting obligation for energy facilities under construction or operating:
    - i. Within six months after beginning construction, and every six months thereafter during construction of the energy facility and related or supporting facilities, the certificate holder shall submit a semiannual construction progress report to the Department of Energy. In each construction progress report, the certificate holder shall describe any significant changes to major milestones for construction. The certificate holder shall include such information related to construction as specified in the site certificate. When the reporting date coincides, the certificate holder may include the construction progress report within the annual report described in OAR 345-026-0080.
    - ii. By April 30 of each year after beginning construction, the certificate holder shall submit an annual report to the Department addressing the subjects listed in OAR 345-026-0080. The Council Secretary and the certificate holder may, by mutual agreement, change the reporting date.
    - iii. To the extent that information required by OAR 345-026-0080 is contained in reports the certificate holder submits to other state, federal or local agencies, the certificate holder may submit excerpts from such other reports to satisfy this rule. The Council reserves the right to request full copies of such excerpted reports.
  - b. In the annual report, the certificate holder shall include the following information for the calendar year preceding the date of the report:
    - i. Facility Status: An overview of site conditions, the status of facilities under construction, and a summary of the operating experience of facilities that are in operation. In this section of the annual report, the certificate holder shall

describe any unusual events, such as earthquakes, extraordinary windstorms, major accidents or the like that occurred during the year and that had a significant adverse impact on the facility.

- ii. Reliability and Efficiency of Power Production: For electric power plants, the plant availability and capacity factors for the reporting year. The certificate holder shall describe any equipment failures or plant breakdowns that had a significant impact on those factors and shall describe any actions taken to prevent the recurrence of such problems.
- iii. Fuel Use: For thermal power plants:
  1. The efficiency with which the power plant converts fuel into electric energy. If the fuel chargeable to power heat rate was evaluated when the facility was sited, the certificate holder shall calculate efficiency using the same formula and assumptions, but using actual data; and
  2. The facility's annual hours of operation by fuel type and, every five years after beginning operation, a summary of the annual hours of operation by fuel type as described in OAR 345-024-0590(5).
- iv. Status of Surety Information: Documentation demonstrating that bonds or letters of credit as described in the site certificate are in full force and effect and will remain in full force and effect for the term of the next reporting period.
- v. Monitoring Report: A list and description of all significant monitoring and mitigation activities performed during the previous year in accordance with site certificate terms and conditions, a summary of the results of those activities and a discussion of any significant changes to any monitoring or mitigation program, including the reason for any such changes.
- vi. Compliance Report: A description of all instances of noncompliance with a site certificate condition. For ease of review, the certificate holder shall, in this section of the report, use numbered subparagraphs corresponding to the applicable sections of the site certificate.
- vii. Facility Modification Report: A summary of changes to the facility that the certificate holder has determined do not require a site certificate amendment in accordance with OAR 345-027-0050.
- viii. Nongenerating Facility Carbon Dioxide Emissions: For nongenerating facilities that emit carbon dioxide, a report of the annual fuel use by fuel type and annual hours of operation of the carbon dioxide emitting equipment as described in OAR 345-024-0630(4).

[Final Order VI.4] [Mandatory Condition OAR 345-026-0080]

- 14.3. The certificate holder and the Department of Energy shall exchange copies of all correspondence or summaries of correspondence related to compliance with statutes, rules and local ordinances on which the Council determined compliance, except for material withheld from public disclosure under state or federal law or under Council rules. The certificate holder may submit abstracts of reports in place of full reports; however, the certificate holder shall provide full copies of abstracted reports and any summarized correspondence at the request of the Department.
- [Final Order VI.5] [Mandatory Condition OAR 345-026-0105]

## **15.0 RETIREMENT AND FINANCIAL ASSURANCE**

- 15.1. Before beginning construction of each generating block, the certificate holder shall submit to the State of Oregon through the Council a bond or letter of credit naming the State of Oregon, acting by and through the Council, as beneficiary or payee. The initial bond or letter of credit amount for Block 1 is \$7.884 million (in 3rd Quarter 2011 dollars), to be adjusted to the date of issuance, and adjusted on an annual basis thereafter, as described in sub-paragraph (a) of this condition. The initial bond or letter of credit amount for Block 2 is \$6.670 million (in 3rd Quarter 2011 dollars), to be adjusted to the date of issuance, and adjusted on an annual basis thereafter, as described in sub-paragraph (a) of this condition.
- a. The certificate holder may adjust the amount of the bond or letter of credit based on the final design configuration of the facility and turbine types selected. 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 3<sup>rd</sup> Quarter 2011 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 3<sup>rd</sup> Quarter 2011 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 3<sup>rd</sup> Quarter 2011 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 Condition VI.4.
- f. The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.

[Final Order IV.G.2.9] [Mandatory Condition OAR 345-027-0020(8)]

- 15.2. If the certificate holder elects to use a bond to meet the requirements of Condition 15.1, the certificate holder shall 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.

[Final Order IV.G.2.10]

- 15.3. 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.

[Final Order IV.G.2.5] [Mandatory Condition OAR 345-027-0020(7)]

- 15.4. The certificate holder must retire the facility in accordance with a retirement plan approved by the Council if the certificate holder permanently ceases construction or operation of the facility. The retirement plan must describe the activities necessary to restore the site to a useful, non-hazardous condition, as described in OAR 345-027-0110(5). After Council approval of the plan, the certificate holder must obtain the necessary authorization from the appropriate regulatory agencies to proceed with restoration of the site.

[Final Order IV.G.2.6] [Mandatory Condition OAR 345-027-0020(9)]

- 15.5. 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 the Department 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 the Department to prepare a proposed final retirement plan for the Council's approval. [Final Order IV.G.2.7] [Mandatory Condition OAR 345-027-0020(16)]
- 15.6. Upon the Council's approval of a final retirement plan prepared per Condition 15.5, the Council may draw on the bond or letter of credit submitted per the requirements of Condition 15.1 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 certificate if the Council finds that the facility has been retired according to the approved final retirement plan. [Final Order IV.G.2.8] [Mandatory Condition OAR 345-027-0020(16)]
- 15.7. Following receipt of the site certificate or an amended site certificate, the certificate holder shall implement a plan that verifies compliance with all site certificate terms and conditions and applicable statutes and rules. As a part of the compliance plan, to verify compliance with the requirement to begin construction by the date specified in the site certificate, the certificate holder shall report promptly to the Department of Energy when construction begins. Construction is defined in OAR 345-001-0010. In reporting the beginning of construction, the certificate holder shall describe all work on the site performed before beginning construction, including work performed before the Council issued the site certificate, and shall state the cost of that work. For the purpose of this exhibit, "work on the site" means any work within a site or corridor, other than surveying, exploration or other activities to define or characterize the site or corridor. The certificate holder shall document the compliance plan and maintain it for inspection by the Department or the Council. [Final Order VI.3] [Mandatory Condition OAR 345-026-0048]

**16.0 SUCCESSORS AND ASSIGNS**

To transfer this site certificate or any portion thereof or to assign or dispose of it in any other manner, directly or indirectly, the certificate holder shall comply with OAR 345-027-0100.

**17.0 SEVERABILITY AND CONSTRUCTION**

If any provision of this agreement and certificate is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and conditions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the agreement and certificate did not contain the particular provision held to be invalid.

**18.0 GOVERNING LAW AND FORUM**

This site certificate shall be governed by the laws of the State of Oregon. Any litigation or arbitration arising out of this agreement shall be conducted in an appropriate forum in Oregon.

**19.0 EXECUTION**

This site certificate may be executed in counterparts and will become effective upon signature by the Chair of the Energy Facility Siting Council and the authorized representative of the certificate holder.

**IN WITNESS THEREOF**, this site certificate has been executed by the State of Oregon, acting by and through its Energy Facility Siting Council, and by Portland General Electric Company.

**ENERGY FACILITY SITING COUNCIL**

**PORTLAND GENERAL ELECTRIC COMPANY**

By: W. Bryan Wolfe

By: Stephen M. Quennoz (LM)

W. Bryan Wolfe, Chair  
Oregon Energy Facility Siting Council

Print: STEPHEN M. QUENNOZ

Date: 6-29-12

Date: 07/02/12