Port Westward Generating Project Request for Amendment 11: Draft Proposed Order

To:	Oregon Energy Facility Siting Council
From:	Christopher Clark, Siting Policy Analyst
Date:	August 29, 2019
Re:	Draft Proposed Order on Request for Amendment 11 (Battery Energy Storage Systems)

Certificate Holder:	Portland General Electric Company
Approved Facility:	The Port Westward Generating Project is a natural gas power plant in Columbia County, Oregon, northeast of the City of Clatskanie. The facility consists of two generating units and related and supporting facilities. Unit 1 is a 411 megawatt (MW) base load natural gas combined cycle combustion turbine plant that went into commercial operation in June 2007. Unit 2 is a 220 MW non-base load, natural gas-fired power plant comprised of 12 reciprocating internal combustion engines. Unit 2 went into commercial operation in December 2014.
Proposed Amendments:	Certificate holder proposes to construct a 4 to 6 megawatt battery energy storage system and interconnection facilities within the existing fence line of the facility. The certificate holder also proposes several modifications to the site certificate that are not specific to the BESS.
Proposed Location:	The proposed BESS would be located adjacent to the existing switchyard within the site boundary of the approved facility in Columbia County.
Staff Recommendation:	Approval of Request for Amendment 11 of site certificate.

To issue an amended site certificate, the Energy Facility Siting Council (Council) must find that a request for amendment to the site certificate demonstrates that the facility, with proposed changes, satisfies, or with conditions can satisfy, each of the applicable Siting Standards set forth in OAR 345, Divisions 22 through 24 as well as all other Oregon statutes and administrative rules applicable to the facility, with proposed changes.

As staff to the Council, the Oregon Department of Energy (Department) reviewed *Request for Amendment 11* to the Port Westward Generating Project Site Certificate (Request) in consultation with state and local reviewing agencies. Based upon its review of the amendment request, the Department recommends the Council issue an amended site certificate for the facility, with proposed changes, subject to the existing and recommended new and amended site certificate conditions. The draft proposed order contains the Department's analysis of the amendment request and includes recommended new and amended site certificate conditions.

The analysis and recommendations contained in this draft proposed order are not a final determination.

A public comment period is now open on the draft proposed order and complete amendment request. In addition, the Council will hold a public hearing on this draft proposed order on September 26, 2019, at 5:00 pm, at the Clatskanie River Inn; 600 E Columbia River Hwy, Clatskanie, OR 97016. Please note, interested persons must raise issues on the record of the public hearing, either orally at the public hearing or in writing during the comment period, in order to preserve their right to participate further in the process. The public comment period extends through the close of the public hearing on September 26, 2019. Written or oral comments must be received by the Department by September 26, 2019. Section II.B. *Amendment Review Process*, of the draft proposed order contains additional information regarding the site certificate amendment review process. The public notice associated with the release of this draft proposed order contains additional information regarding the comment period and public hearing.

BEFORE THE
ENERGY FACILITY SITING COUNCIL
OF THE STATE OF OREGON

In the Matter of Request for Amendment 11 to the Port Westward Generating Project Site Certificate	))))	DRAFT PROPOSED ORDER ON REQUEST FOR AMENDMENT 11 TO THE SITE CERTIFICATE

August 29, 2019

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ATTACHMENTS

I. INTRODUCTION

The Oregon Department of Energy (Department) issues this draft proposed order, in accordance with ORS 469.405(1) and OAR 345-027-0365, based on its review of *Request for Amendment 11* to the site certificate for the Port Westward Generating Project (Request), as well as comments and recommendations received by specific state agencies and local governments. The certificate holder is Portland General Electric Company (certificate holder).

Certificate holder requests that the Energy Facility Siting Council (Council) approve changes to the site certificate to allow construction and operation of a proposed 4 to 6 megawatt battery energy storage system (BESS) as a related or supporting facility within the existing site boundary of the Port Westward Generating Project (Facility).

Certificate holder also proposes several primarily administrative amendments to the site certificate that are not specific to the BESS. These requested amendments are further described in Section II.A. *Requested Amendment.*

Based upon review of this request, in conjunction with comments and recommendations received by state agencies and local government entities, the Department recommends that the Council approve and grant an amendment to the site certificate for the facility subject to the existing, new, and recommended amended conditions set forth in this draft proposed order.

I.A. Name and Address of Certificate Holder

Portland General Electric Company
121 SW Salmon Street, 3WTC0403
Portland, OR 97204

Certificate Holder Contact

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I.B. Description of the Approved Facility

The Port Westward Generating Project (facility) is a 650-megawatt natural gas-fired electric generating plant consisting of two units.

Unit 1 is a 411 MW base-load power plant consisting of a Mitsubishi G Class combustion turbine generator, one heat recovery steam generator, and one steam turbine. Unit 1 began commercial operation in June 2007.

Unit 2 is a 220 MW non-base-load power plant consisting of 12 Wärtsilä 50SG reciprocating internal combustion engines. Unit 2 went into commercial operation in December 2014.

I.C. Description of Approved Facility Site Location

The facility is located within the Port Westward Industrial Park in Columbia County, Oregon, approximately seven miles by road northeast of the city of Clatskanie. Bradbury Slough of the Columbia River lies to the northeast of the facility. Access to the facility is about 1.5 miles north on Kallunki Road from its intersection with Alston-Mayger Road.

The facility is located on an approximately 852-acre parcel leased to the certificate holder by the Port of St. Helens located in Section 15, Township 8 North, Range 4 West, Willamette Meridian. The site boundary occupies approximately 26 acres of the larger parcel.

The proposed BESS would be located on approximately 0.2 acres adjacent to the exiting switchyard within the approved site boundary. A previously approved temporary disturbance area for spoils disposal is located on the parcel, approximately 0.6 miles southwest of the facility. The spoils area is anticipated to be used during construction of the BESS.

I.D. Procedural History

On November 8, 2002, the Council issued its *Final Order on the Application for Site Certificate for Port Westward Generating Project* (Final Order on the Application), authorizing the certificate holder to build up to 650 megawatts of generating capacity at the site. Council has approved ten amendments to the site certificate.

On December 5, 2003, the Council issued its *Final Order in the Matter of the Site Certificate for the Port Westward Generating Project Request for Amendment No. One* (Final Order on Request for Amendment 1), approving the addition and reconfiguration of several facility components, and authorizing the certificate holder to develop only one of the two proposed generating units, or to develop both units of the energy facility in two distinct phases.

On September 24, 2004, the Council issued its *Final Order in the Matter of the Site Certificate for the Port Westward Generating Project Request for Amendment No. Two* (Final Order on Request for Amendment 2), approving extension of the deadlines for beginning and completing construction of the facility, inclusion of an alternative site layout excluding an existing roadway from the facility site as an option in the site certificate, and imposing new conditions relating to the Council's Fish and Wildlife Habitat Standard to ensure that the facility met the new requirements in Columbia County's Zoning Ordinance relating to the Riparian Corridors, Wetlands, Water Quality, and Fish and Wildlife Habitat Overlay Zone.

On January 28, 2005, the Council issued its *Final Order in the Matter of the Site Certificate for the Port Westward Generating Project Request for Amendment No. Three* (Final Order on Request for Amendment 3), approving modifications including changes to the electrical transmission line alignment; addition of construction staging and laydown areas near the energy facility site; addition of the spoils disposal site; addition of an auxiliary boiler within the

energy facility site; inclusion of the proposed switchyard as part of Phase 1 rather than Phase 2; addition of new buildings for electrical controls and chlorination at the existing PGE intake structure on Bradbury slough, reduction in required retirement funds; and imposing new conditions and modification of other conditions regarding habitat protection for osprey, peregrine falcons, and bald eagles.

On May 19, 2006, the Council issued its *Final Order in the Matter of the Fourth Request to Amend the Site Certificate for the Port Westward Generating Project* (Final Order on Request for Amendment 4), approving temporary use of 6.08 acres of land adjacent to the site boundary for construction laydown and staging.

On September 29, 2006, the Council issued its *Final Order in the Matter of the Fifth Request to Amend the Site Certificate for the Port Westward Generating Project* (Final Order on Request for Amendment 5), approving construction of a secondary natural gas pipeline connecting the Facility to the existing NW Natural Beaver Lateral Pipeline.

On March 27, 2009, the Council issued its *Final Order in the Matter of the Sixth Request to Amend the Site Certificate for the Port Westward Generating Project* (Final Order on Request for Amendment 6), granting a 24-month extension of the deadline for completion of construction of Unit 1.

On March 12, 2010, the Council issued its *Final Order in the Matter of the Seventh Request to Amend the Site Certificate for the Port Westward Generating Project* (Final Order on Request for Amendment 7), approving construction of Unit 2 as reciprocating engine generator sets to produce a non-base-load power and expanding the site boundary to include 8.5 acres of land that was temporarily disturbed during construction of Unit 1. Final Order on Request for Amendment 7 also approved a transfer of water from the certificate holder's water right for the Trojan plant to the Port Westward intake.

On August 19, 2011, the Council issued its *Final Order in the Matter of the Eighth Request to Amend the Site Certificate for the Port Westward Generating Project* (Final Order on Request for Amendment 8), granting a 24-month extension of the deadline for completion of construction of Unit 2.

On March 15, 2013, the Council issued its *Final Order in the Matter of the Ninth Request to Amend the Site Certificate for the Port Westward Generating Project* (Final Order on Request for Amendment 9), approving extensions of the deadlines to complete construction of Unit 2 and to complete changes and make full beneficial use of water under the water rights transfer approved in Final Order on Request for Amendment 7. Final Order on Request for Amendment 9 also approved changes to Site Certificate Condition D.8(8) to include procedures for wildlife surveys and rescue and relocation of nongame wildlife during construction of Unit 2.

On August 23, 2013, the Council issued its *Final Order in the Matter of the Tenth Request to Amend the Site Certificate* (Final Order on Request for Amendment 10), expanding the site boundary to include three temporary laydown areas for use in construction of Unit 2.
In 2015, the Legislative Assembly enacted HB 2193, directing electric companies to submit proposals to the Oregon Public Utility Commission for energy storage systems that have the capacity to store at least five megawatt hours of energy. The bill requires electric companies to procure systems authorized by the PUC on or before January 1, 2020. In November 2017, certificate holder filed a project proposal with the PUC for five energy storage projects, including the project that is the subject of this request.

Certificate holder submitted its preliminary *Request for Amendment 11* on April 23, 2019. The Department received the complete Request on July 12, 2019. On July 18, 2019, the Department posted the complete Request on its website and posted an announcement on the project website informing the public that the complete Request had been received and is available for viewing.

The Department received comments on the Request from Columbia County (Special Advisory Group) on July 11, 2019; and from ODFW on July 26, 2019. These comments are incorporated into the Department's analysis of Council standards in Section III. *REVIEW OF THE REQUESTED AMENDMENT*, and are provided in Attachment B: Reviewing Agency Comments on Request for Amendment 11.

II. AMENDMENT PROCESS

II.A. Requested Amendment

Certificate holder requests that Council amend the site certificate to allow construction and operation of a 4 to 6 MW battery energy storage system (BESS) as a related or supporting facility within the existing facility site boundary. If approved, certificate holder expects construction of the BESS to begin no later than the third quarter of 2020 and to be completed within one year of its start.

Certificate holder requests approval to construct the facility using either lithium-ion or flow battery technology. The certificate holder explains the two technologies in Section 4 of *Request for Amendment 11*:

> "Lithium-ion batteries are rechargeable, solid-state batteries that stores energy in a solid electrode material, such as metal. Each battery cell has a cathode (a positive electrode), an anode (a negative electrode), and an electrolyte as the conductor. The anode material is typically graphite. The cathode material varies, and it defines the battery. Common cathode materials for a utility-scale battery storage system include Li cobalt oxide (lithium cobaltate), Li manganese oxide (Li manganate), Li iron phosphate, Li nickel manganese Cobalt (NMC), and Li nickel cobalt aluminum oxide (NCA). The electrolyte is the transport medium that allows lithium ions carrying the battery's charge to flow freely between the cathode and anode. The electrolyte is an organic

> solvent with dissolved lithium salt. Its composition depends on the selected cathode and anode combination. It is also what makes the battery flammable."
>
> "Flow Batteries are rechargeable batteries that store energy in electrolyte liquids. The battery uses two liquids, one with a negatively charged cathode and one with a positively charged anode. These electrodes are separated by a membrane. When charging, the electrons are pulled from the positive solution and pushed into the negative solution. When the battery turns on, the electron flow reverses. Flow batteries come in a variety of chemistries: vanadium, iron chromium, zinc bromine, zinc iron and the batteries can be redox, hybrid, and membraneless."[1]

Certificate holder explains under either option, the BESS would be a factory-built system consisting of batteries, battery enclosures, inverters, an interconnection system, step-up transformers, battery management system, energy management system, fire detection and suppression, and all required programming for integration. The battery enclosures would consist of modular containers that are approximately 44 feet by 10 feet by 10 feet. In a flow battery system, two battery containers could be stacked increasing the height to approximately 20 feet. Each modular container would include an HVAC system and a fire detection and suppression system. All wiring connecting the modular containers with other system components would be in underground conduit. Certificate holder notes that the number and layout of modular containers, inverters, and transformers may depend on technology and will be determined in pre-construction.

Certificate holder proposes the switchgear in the existing switchyard as the point of interconnect between the BESS and the certificate holder's general transmission grid. The transmission grid would recharge the BESS, and the BESS would discharge back to the grid when it is not used as spinning reserve for Unit 2 of the facility. The certificate holder has identified a 90 foot by 100 foot paved area adjacent to the switchyard as the likely location of the proposed BESS. The certificate holder has proposed new switchyard dimensions in Section C.1.a of the site certificate to reflect the potential fence realignment if the facility is located adjacent to the existing switchyard.

The certificate holder proposes to limit access to the BESS with multiple layers of security. To enter the facility site, all vehicles must pass through a guard station or badge-access crossing gate at the entrance to the Port Westward Industrial Park, and a security gate at the entrance to the facility itself. The certificate holder proposes to locate the BESS within an additional layer of fencing to allow only personnel who have received appropriate training and approved maintenance contractors to enter. The proposed BESS would be designed to be completely automated, and to be remotely monitored by the certificate holder through supervisory control and data acquisition technology (SCADA).

[1] Request for Amendment 11, pp. 7-8.

The certificate holder proposes to use previously approved laydown and parking areas during construction. The certificate holder also proposes to use existing access roads during construction and operation of the facility, and states that no additional temporary or permanent roads will be required. The certificate holder proposes to use a previously-approved temporary disturbance area for spoils disposal. The Council previously approved this area for use during construction of Units 1 and 2 in its *Final Order on Request for Amendment 3*.

Certificate holder proposes several additional modifications to the site certificate that are not specific to the BESS:

1. Administrative corrections to Section C.1(a) and C.1(b) of the site certificate:
    a. Clarifying that non-base load generation is a separate use from power augmentation.
    b. Providing a missing dimension for the Unit 1 turbine building.
    c. Correcting the number, size, and types of water storage tanks to include a 400,000 fire water/service tank for Unit 1, a 400,000 fire water storage tank for Unit 2, and a 40,000 demineralized water storage tank.
    d. Correcting the capacity of the Kelso-Beaver Pipeline from 193,000 decatherms per day to 200,913 decatherms per day.
2. Modification of Condition D.6(7) to allow use of secondary containment options that do not require installation of permanent pavement.
3. Modification of Conditions D.6(26) to remove the revegetation success criteria to a Revegetation and Noxious Weed Control Plan controlled by proposed Condition D.6(28).
4. Modification of Condition D.8(11) pertaining to wetland buffers.
5. Removal of Condition D.9(9) related to bald eagles.

II.B. Amendment Review Process

On August 22, 2019, the Council adopted temporary rules governing the process for amending site certificates. The temporary rules are in effect until February 17, 2020. Amongst other changes, the temporary rules replaced the amendment processing rules contained in OAR 345, Division 27. The temporary rules also include renumbering the Division 27 ruleset to govern site certificate amendment processing. The temporary rules include rules numbered in the Division 27, "-0300" series. References in this DPO reflect the temporary rule numbering. However, rule references in the preliminary and complete requests for amendment, submitted by PGE prior to the August 22, 2019 adoption of temporary rules, include reference to the prior Division 27 ruleset.

As stated in OAR 345-027-0311(1), "The rules in this division apply to all requests for amendment to a site certificate and amendment determination requests for facilities under the Council's jurisdiction that are submitted to, or were already under review by, the Council on or after the effective date of the rules. The Department and Council will continue to process all requests for amendment and amendment determination requests submitted on or after October 24, 2017 for which Council has not made a final decision prior to the effective date of these rules, without requiring the certificate holder to resubmit the request or to repeat any

steps taken as part of the request prior to the effective date of these rules." This reference includes the review at hand, the Port Westward Generating Project Request for Amendment 11.

A site certificate amendment is necessary under OAR 345-027-0350(4) because the certificate holder requests to design, construct, and operate the facility in a manner different from the description in the site certificate, and the proposed changes: (a) could result in a significant adverse impact to a resource or interest protected by a Council standard that the Council has not addressed in an earlier order; (b) could impair the certificate holder's ability to comply with a site certificate condition; or (c) could require new conditions or modification to existing conditions in the site certificate, or could meet more than one of these criteria.

OAR 345-027-03351 describes the processes for review of a request for amendment. Under OAR 345-027-0351(2), the Type A review process is the default review process for a request for an amendment required under OAR 345-027-0350(4). Because the certificate holder did not request a Type B review process, the Department is reviewing the Request under the default Type A review process.

Under OAR 345-027-0360(3), the analysis area for any Council standard that requires evaluation of impacts within an analysis area is the larger of either the study areas as defined in OAR 345-001-0000(59) or the analysis areas described in the project order for the facility, unless otherwise approved in writing by the Department following a pre-amendment conference. On March 29, 2019, and April 4, 2019, the Department approved, in writing, use of analysis areas based on the existing site boundary for the energy facility and spoils disposal area only, because other related and supporting facilities described in Section C.2.b of the site certificate would not be impacted by the changes proposed in *Request for Amendment 11*. On August 29, 2019 the Department issued a Second Amended Project Order, which specifies that Exhibit F must list property owners within 250 feet of the proposed facility, which is the site boundary for the energy facility (the generating plant), but excluding the transmission line that is considered a related or supporting facility component.

II.C. Council Review Process

Under the Type A process, the issuance of this Draft Proposed Order (DPO) initiates a comment period on the record of the proposed amendment. The comment period extends through the close of the public hearing scheduled to occur on September 26, 2019 at 5:00 pm in Clatskanie, Oregon. In addition to accepting written comments during the comment period, the Council will also accept oral testimony at the public hearing. The record of the draft proposed order will close at the conclusion of the public hearing on September 26, 2019, as described in the Notice.

Following the close of the record of the public hearing and Council's review of the draft proposed order, the Department will issue a proposed order, taking into consideration Council comments, any comments received "on the record of the public hearing" (i.e., oral testimony provided at the public hearing and written comments received by the Department after the date of the notice of the public hearing and before the close of the public hearing comment

period), including any comments from reviewing agencies, special advisory groups, and Tribal Governments. Concurrent with the issuance of the proposed order, the Department will issue a notice of contested case and a public notice of the proposed order.[2] Only those persons who comment in person or in writing on the record of the public hearing may request a contested case proceeding. Additionally, to raise an issue in a contested case proceeding, the issue must be within Council jurisdiction, and the person must have raised the issue on the record of the public hearing with "sufficient specificity to afford the Council, the Department, and the certificate holder an adequate opportunity to respond to the issue."[3]

In making a decision to grant or deny issuance of an amended site certificate, the Council shall apply the applicable laws and Council standards required under OAR 345-027-0375(2) and in effect on the dates described in OAR 345-027-0375(3).

The Council's final order approving or rejecting a request for an amended site certificate is subject to judicial review by the Oregon Supreme Court. A petition for judicial review of the Council's approval or rejection of an application for an amended site certificate must be filed with the Supreme Court within 60 days after the date of service of the Council's final order or within 30 days after the date of a petition for rehearing is denied or deemed denied.[4]

III. REVIEW OF THE REQUESTED AMENDMENT

The Council has adopted the standards contained in OAR chapter 345 to ensure the siting, construction, operation and retirement of energy facilities is accomplished in a manner consistent with protection of public health and safety and in compliance with the energy policy and air, water, solid waste, land use and other environmental protection policies of this state.[5] The Council will include conditions in the amended site certificate to ensure compliance with applicable standards, statutes, and rules.[6] This Draft Proposed Order recommends findings of fact, conclusions of law, and conditions of approval concerning the amended facility's compliance with the standards, statutes and rules, based on the information in the record.

Following the written comment period and hearing on the draft proposed order, the Department will issue its proposed order, which will include the Department's consideration of the comments and any additional evidence received on the record of the draft proposed order.

III.A. General Standard of Review: OAR 345-022-0000

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

[2] See OAR 345-027-0371.
[3] OAR 345-027-0371(7).
[4] ORS 469.403 and OAR 345-027-0371(12).
[5] See ORS 460.310, 469.470.
[6] ORS 469.401(2).

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

(b) Except as provided in OAR 345-022-0030 for land use compliance and except for those statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council, the facility complies with all other Oregon statutes and administrative rules identified in the project order, as amended, as applicable to the issuance of a site certificate for the proposed facility. If the Council finds that applicable Oregon statutes and rules, other than those involving federally delegated programs, would impose conflicting requirements, the Council shall resolve the conflict consistent with the public interest. In resolving the conflict, the Council cannot waive any applicable state statute.

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

Findings of Fact

OAR 345-022-0000(1) requires the Council to find that a preponderance of evidence on the record supports the conclusion that the facility, with proposed changes, would comply with the requirements of ORS 469.300 to ORS 469.570 and 469.590 to 469.619, and the standards adopted by the Council pursuant to ORS 469.501 and that the facility, with proposed changes, would comply with all other Oregon statutes and administrative rules applicable to the issuance of an amended site certificate for the facility.[7]

The requirements of OAR 345-022-0000(1)(a) are discussed in sections III.B. *Organizational Expertise*: OAR 345-022-0010 through III.P. *Division 24 Standards*. In these sections, the Department recommends that Council finds the facility, with the proposed changes would

[7] OAR 345-022-0000(2) and (3) apply to RFAs where a certificate holder has shown that the proposed amendments cannot meet Council standards or has shown that there is no reasonable way to meet the Council standards through mitigation or avoidance of adverse effects to protected resources; and, for those instances, establish criteria for the Council to evaluate in making a balancing determination. The certificate holder does not assert that the proposed amendments cannot meet an applicable Council standard. Therefore, OAR 345-022-0000(2) and (3) do not apply to this review.

continue to comply with the requirements of ORS 469.300 to ORS 469.570 and 469.590 to 469.619, and the standards adopted by the Council under ORS 469.501.

Section III.Q. *Other Applicable Regulatory Requirements Under Council Jurisdiction,* discusses the requirements of OAR 345-022-0000(1)(b). In this section, the Department recommends the Council find the facility, with the proposed changes would continue to comply with the requirements of with statutes, rules and ordinances otherwise administered by other agencies.

The Department consulted with the Oregon Department of Fish and Wildlife and the Columbia County Board of Commissioners during review of the Request to aid in the evaluation of whether the facility, with the proposed changes, would maintain compliance with statutes, rules and ordinances otherwise administered by other agencies. Additionally, in many circumstances the Department relies upon these reviewing agencies' special expertise in evaluating compliance with the requirements of Council standards.

<u>Certificate Expiration (OAR 345-027-0013)</u>
A site certificate, or amended site certificate, becomes effective upon execution by the Council Chair and the certificate holder. A site certificate, or amended site certificate, expires if construction has not commenced on or before the construction commencement deadline, as established in the site certificate and statutorily required under ORS 469.401(2).

In Section 4 of the *Request for Amendment 11*, the certificate holder states that it anticipates construction of the BESS to begin no later than the third quarter of 2020 and to end within one year of its start. While the Deapartment agrees that these are reasonable timeframes considering the size of the proposed changes and the past experience of the certificate holder; the Department recommends Council grant construction commencement and completion deadlines based upon three and six years following the date of Council approval. This timeframe would be consistent with historic Council decisions and represents a reasonable timeframe while allowing for delays resulting from unforeseen factors, such as financial, economic, or technological changes. To ensure compliance with this recommended timeline, the Department recommends Council adopt the following new Site Certificate Conditions:

> <u>(7) The Certificate Holder shall begin construction of the BESS by [Insert Date 3 years from Effective Date].</u>
>
> <u>(8) The Certificate Holder shall compete construction of the BESS by [Insert Date 6 years from Effective Date].</u>

<u>Conclusions of Law</u>
Based on the foregoing findings of fact and conclusions of law, and subject to compliance with the existing and recommended new and amended site certificate conditions the Department recommends that the Council find that the facility, with proposed changes, would continue to satisfy the requirements of OAR 345-022-0000.

III.B. Organizational Expertise: OAR 345-022-0010

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

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

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

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

<u>Findings of Fact</u>

Under OAR 345-022-0010(1), to conclude that the applicant meets the Organizational Expertise Standard, the Council must find "that the applicant has demonstrated the ability to design, construct and operate the proposed facility in compliance with site certificate conditions and in a manner that protects public health and safety and has demonstrated the ability to restore the site to a useful, non-hazardous condition."

The certificate holder is an investor owned utility that has been operating in Oregon for 129 years. The certificate holder owns and operates multiple generating and non-generating facilities in Oregon, including several energy facilities subject to Council jurisdiction.

In the *Final Order on the Application* for the original Port Westward power plant, the Council found that the certificate holder has the organizational expertise to construct, operate and retire the facility in compliance with the Council standards and the conditions of the site certificate. The Council adopted conditions in section D.2 of the site certificate to ensure compliance with the Organizational Expertise standard.[8]

Since 2013, the certificate holder has operated and maintained the Salem Smart Power Center (SSPC), a 5-MW lithium-ion battery system in Salem, Oregon. The SSPC is used both as a research and development facility and as an operating grid asset. Certificate holder attests that it has operated the center for five years with no fires and no regulatory citations or complaints or concerns from neighbors.[9]

Certificate holder also relies upon access to additional expertise from the use of third-party contractors. The certificate holder explains that it will use an engineering, procurement and construction (EPC) contractor to construct and maintain the proposed BESS. A third-party contractor would also provide maintenance for the BESS.[10]

The Department recommends that several existing site certificate conditions apply to the construction and operation of the BESS. Site Certificate Condition D.2(2) requires the certificate holder to identify the EPC contractor it has chosen for specific portions of the work. Under Site Certificate Condition D.2(3), certificate holder must submit to the Council the identity of the contractor so that Council may review the qualifications and capability of the contractor to meet the standards of OAR 345-0022-0010.

Under Site Certificate Condition D.2(5), the certificate holder must contractually require all contractors involved in the construction and operation 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 for compliance with the site certificate, and the certificate holder would remain liable for any violation or penalty as provided under Site Certificate Condition D.2(4).

In *Request for Amendment 11*, *t*he certificate holder states that the contractor will provide classroom and hands-on training covering the operation and maintenance of the BESS to certificate holder's Staff.[11] Consistent with this certificate holder representation, the Department recommends the Council include the following new Condition:

[8] Final Order on the Application, p. 43.
[9] Request for Amendment 11, p. 18.
[10] Request for Amendment 11, p. 19.
[11] Request for Amendment 11, p. 19.

> D.2(10) Before beginning operation of the BESS, the certificate holder shall submit to the Department, the plan or curriculum covering operation and maintenance of the BESS that demonstrates certificate holder's staff will receive adequate training to operate and maintain the BESS in a manner that protects public health and safety.

Transportation and handling of hazardous materials

In Sections 5.1 and 8.12.7 of *Request for Amendment 11*, the certificate holder explains that transportation and handling of lithium-ion batteries is subject to 49 CFR 173.185 and ORS 453.825.[12] The regulations include requirements for the prevention of a dangerous evolution of heat, short circuits, and damage to the terminals, and require that no battery come in contact with other batteries or conductive materials.

The certificate holder proposes to rely upon the expertise of third-party contractors to handle and transport batteries and battery waste and to minimize impacts of the BESS on the certificate holder's ability to construct and operate the facility in a manner that protects public health and safety. The Council adopted conditions in section D.2 of the site certificate to ensure the certificate holder requires contractors to comply with applicable laws and regulations.

Under existing Site Certificate Condition D.2(5), the certificate holder must ensure contractors involved with construction and operation of the facility, including the BESS, comply with 49 CFR 173.185 and ORS 453.825. The Department recommends Council amend the condition as follows to clarify its applicability to contractors involved in the transportation and disposal of batteries:

> D.2(5) The Certificate Holder shall contractually require ~~the~~ any EPC contractor(s), ~~and all~~ independent contractors, and subcontractors involved in the construction, ~~and~~ operation, or retirement of the facility, including contractors involved in the transportation and disposal of batteries and battery wastes, to comply with all applicable laws and regulations and with the terms and conditions of the Site Certificate. Such contractual provision shall not operate to relieve the Certificate Holder of responsibility under the Site Certificate."

Certificate holder explains that adherence to the requirements and regulations, personnel training, safe interim storage, and segregation from other potential waste streams will minimize any public hazard related to transport, use, or disposal of the batteries. Under existing site certificate conditions D.3(7) and D.3(8), the certificate holder must prepare construction and operational material management and monitoring plans and submit the plans to the Council for approval. The certificate holder has proposed to amend these conditions to address the BESS. The Department recommends incorporating these amendments and the following changes:

[12] Request for Amendment 11, pp. 12, .

D.3(7) Before beginning construction of the energy facility or BESS, the Certificate Holder shall prepare and submit to the Department a materials management and monitoring plan that addresses handling and transportation of hazardous substances, the measures it will implement to prevent site contamination, and how it will document implementation of the plan during construction. The materials management and monitoring plan shall be subject to approval by the Department. For the purpose of this condition and Conditions D.3(8), D.3(10), D.3(11), and D.3(12) below, the terms "release" and "hazardous substances" shall have the meanings set forth at ORS 465.200.

D.3(8) Before beginning operation of the energy facility or BESS, the Certificate Holder shall prepare and submit to the Department a materials management and monitoring plan that addresses the handling and transportation of hazardous substances, the measures it will implement to prevent site contamination, and how it will document implementation of the plan during operation. The materials management and monitoring plan shall be subject to approval by the Department.

Ability to Restore the Site to a Useful, Non-Hazardous Condition

The certificate holder's ability to restore the facility site to a useful, non-hazardous condition is evaluated in Section III.G. *Retirement and Financial Assurance*: OAR 345-022-0050, in which the Department recommends that Council find that the certificate holder would continue to be able to comply with the Retirement and Financial Assurance standard.

ISO 900 or ISO 14000 Certified Program

OAR 345-022-0010(2) is not applicable because the certificate holder has not proposed to design, construct or operate the facility, with proposed changes, according to an ISO 9000 or ISO 14000 certified program.

Third-Party Permits

OAR 345-022-0010(3) addresses the requirements for potential third-party contractors. In Section 5.1 of *Request for Amendment 11*, certificate holder proposes that the addition of the BESS does not require any different permits from those previously identified in the Final Order on the Application for site certificate and subsequent amendments.[13]

Conclusions of Law

Based on the evidence in the record, and subject to compliance with the existing, recommended new and amended conditions, the Department recommends that the Council find that the certificate holder would continue to satisfy the requirements of the Council's Organizational Expertise standard.

[13] Request for Amendment 11, p. 12.

III.C. Structural Standard: OAR 345-022-0020

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

(a) The applicant, through appropriate site-specific study, has adequately characterized the seismic hazard risk of the site;

(b) The applicant can design, engineer, and construct the facility to avoid dangers to human safety and the environment presented by seismic hazards affecting the site, as identified in subsection (1)(a);

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

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

(2) The Council may not impose the Structural Standard in section (1) to approve or deny an application for an energy facility that would produce power from wind, solar or geothermal energy. However, the Council may, to the extent it determines appropriate, apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

(3) The Council may not impose the Structural Standard in section (1) to deny an application for a special criteria facility under OAR 345-015-0310. However, the Council may, to the extent it determines appropriate, apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.

<u>Findings of Fact</u>

Under OAR 345-022-0020(1), the Council must evaluate whether the certificate holder has adequately characterized the potential seismic, geological and soil hazards of the site, and whether the certificate can design, engineer and construct the facility to avoid dangers to human safety and the environment from these hazards. The analysis area for the Structural Standard is the area within the site boundary.

In the *Final Order on the Application,* the Council found that the design, construction and operation of PWGP would meet the Council's Structural Standard. The Council adopted conditions in section D.5 of the site certificate to ensure compliance with the Structural Standard.[14]

[14] Final Order on the Application, pp. 56-64.

In the *Final Order on Amendment 7,* the Council found that the design, construction, and operation of the reconfigured Unit 2 would meet the Council's Structural Standard, taking into account the conditions adopted in section D.5 of the site certificate.[15]

Section 8.2 of *Request for Amendment 11* includes an analysis to establish that the facility, with the proposed changes, would comply with the Structural standard. As discussed in that section, the proposed amendment would not modify previously-approved structures as part of the facility; however, it would result in new structures being constructed within the site boundary. Accordingly, the analysis in this section is limited to the potential seismic, geological, and soil hazards associated with these new structures and supporting foundations.

Potential Seismic, Geological and Soil Hazards

On behalf of the certificate holder, Cornforth Consultants Inc. (CCI) conducted a geotechnical study for Unit 1 in 2002. In 2013, prior to construction of Unit 2, Black & Veatch reviewed the CCI study, then conducted a seismic study evaluation, and performed additional borings.[16] The studies describe the potential seismic, geological, and soil hazards at the site. Of note, the study finds that the site has high potential for liquefaction and some susceptibility to lateral spreading. Ground improvement consisting of 40-foot stone columns were used to address these hazards for Unit 1 and Unit 2.

Dangers to Human Safety from Seismic and Non-Seismic Hazards

During its consultation with DOGAMI, the certificate holder confirmed that the geotechnical data and borings provided in these studies are still valid; however, DOGAMI noted that the design requirements have changed and requested that the contractor's engineer of record address the liquefaction potential and seismic hazards relevant to a magnitude 9 earthquake using current and updated information. In Section 8.2 of *Request for Amendment 11,* the certificate holder states in that the BESS will be designed to current codes and the seismic design data will be based on current code values as required by existing site certificate Condition D.5(1). The certificate holder states that it will not require its contractor to conduct or obtain additional geotechnical studies, however, if the contractor determines that additional studies are needed it will provide the information to the Department and DOGAMI for the record.

The Department agrees that additional geotechnical studies are not specifically necessary for the BESS, considering that the design and construction of the Port Westward power plant was based on geotechnical data collected recently and that potential risks to the environment or human safety from the proposed BESS are likely to be small. However, in the event that the certificate holder's contractor conducts additional geotechnical investigations in support of the BESS, the certificate holder proposes a new site certificate condition to requires that the results of that study be provided to the Department and DOGAMI, and that the study conform with

[15] Final Order on Request for Amendment 7, pp. 11-12.
[16] Request for Amendment 11, Att. 1, p. 1.

DOGAMI guidelines for conducting such studies. The Department recommends Council include this condition in the amended site certificate:

> D.5(10) If additional geotechnical investigations are performed for the design of the BESS, the certificate holder shall provide the Department and DOGAMI with a report containing the results of the investigation. The report shall conform to Oregon State Board of Geologist Examiners Guideline for Preparing Engineering Geologic Reports.

Conclusions of Law

Based on the foregoing analysis, and subject to existing and recommended amended conditions, the Department recommends the Council find that the facility, as modified by *Request for Amendment 11*, would continue to comply with the Structural Standard.

III.D. Soil Protection: OAR 345-022-0022

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

Findings of Fact

The Soil Protection standard requires the Council to find that, taking into account mitigation, the design, construction and operation of a facility, with proposed changes, are not likely to result in a significant adverse impact to soils.

In the *Final Order on the Application,* the Council found that the design, construction and operation of the facility would not result in a significant adverse impact to soils. The Council adopted conditions in section D.6 of the site certificate to ensure compliance with the Soil Protection standard.[17]

Potential Significant Adverse Impacts to Soils

The analysis area for potential impacts to soils is the area within the site boundary and the existing spoils disposal area. Potential impacts to soils within the analysis area (site boundary) include erosion during ground disturbance during construction and operation of the proposed battery energy storage system, and chemical spills from batteries, transformers, or other system components.

The proposed location of the BESS is currently paved. In Section 8.3 of *Request for Amendment 11*, certificate holder explains that existing pavement may be replaced during ground improvements to improve foundation support and seismic resistance. Clean soils removed during excavation may be disposed of at the spoils disposal area.[18]

[17] *Final Order on the Application,* pp. 64-70.
[18] Request for Amendment 11, p. 23.

Certificate holder states that it will comply site certificate conditions related to Soil Protection applicable to *Request for Amendment 11*. The certificate holder suggests, and the Department confirms, that these include Conditions D.6(1) through (9).

Site certificate condition D.6(2)(a) requires the certificate to avoid excavation and other soil disturbances beyond that necessary for construction of the facility or confine equipment use to specific areas. Certificate holder estimates that replacement of the existing pavement would result in disturbance of less than one acre of soil at the proposed BESS location, the spoils disposal area, and areas needed to maneuver equipment. In addition, certificate holder would confine equipment use to previously disturbed areas at the BESS site, and would access the spoils disposal area from existing paved and gravel roads limiting the amount of soil compaction that will need to be addressed during revegetation.[19]

In the *Final Order on the Application,* the Council adopted conditions in section D.6 of the site certificate to ensure compliance with the Soil Protection standard.[20] Existing Site Certificate Conditions D.6(1) through D.6(6) impose measures to control soil erosion and sediment runoff during construction, and to revegetate and monitor disturbed sites post-construction. These conditions apply to all soil disturbing activities at the facility and would apply to construction and operation of the BESS.

While it is possible that some adverse impacts to soils could occur during construction, operation, or decommissioning of the proposed battery energy storage system from leakage or spills of battery cell electrolyte fluid, oil, or other contaminants, the risks may be minimized by proper handling of equipment and materials, and locating the BESS within a paved area that is graded to divert runoff to on-site retention ponds.

In Section 8.3 of *Request for Amendment 11*, the certificate holder explains that the battery modules will be factory built and fully enclosed when they arrive at the facility. Certificate holder also states that the modular containers would act as secondary containment if a battery leaks or spills fluid during a potential equipment malfunction or improper handling. Additionally, the certificate holder states that if oil-filled transformers that trigger EPA's Spill Prevention, Control, and Countermeasure (SPCC) requirements for containment, they will be kept in secondary containment.[21]

Certificate holder explains that in the event that a fluid did escape secondary containment, the proposed location of the BESS is paved asphalt and graded, so that all storm water remains on-site and flows to one of four on-site storm water retention ponds, where it is contained and can be cleaned up.

[19] Ibid.
[20] Final Order on the Application, pp. 64-70.
[21] Request for Amendment 11, p. 24.

The certificate holder has proposed a modification to Site Certificate Condition D.6(7) to allow for the use of secondary containment options that do not require installation of permanent pavement. The proposed change to the condition is as follows:

> D.6(7) The certificate holder shall contain all fuel and chemical storage in paved spill containment areas with a curb, <u>or appropriately sized and compatible secondary containment.</u>

In its response to the Request for Additional Information issued by the Department on May 28, 2019, the certificate holder explained that the modification "was not intended to be specific to just the addition of battery storage" adding that the condition does not allow for other common methods of secondary containment such as spill containment pallets, collapsible berms or oil/water separators.

The Department agrees that this proposed change may allow the certificate holder greater flexibility for the storage of fuel and chemicals at the facility without substantially increasing the risk of contaminants being released into the environment; however, the proposed modification relies on secondary containment being "appropriately sized and compatible." While certificate holder in RFA11 does not explain what the terms "appropriately sized" or "compatible" mean or how existing site certificate conditions related to spill containment areas would apply to the proposed secondary containment, existing Site Certificate Conditions D.6(8) and (9) do specify the appropriate sizes for spill containment areas, and the Department recommends that these conditions also apply to any secondary containment deployed by the certificate holder outside of curbed-containment areas. Existing Site Certificate Conditions D.3(8) requires the certificate holder to prepare and submit a *Hazardous Materials Management and Monitoring Plan* which addresses the handling of hazardous wastes, including fuels and chemicals, and the measures the certificate holder will implement to prevent site contamination. The Department recommends the following edits to the certificate holder's proposed change to clarify the applicability of these provisions to secondary containment:

> D.6(7) The certificate holder shall contain all fuel and chemical storage in paved spill containment areas with a curb, <u>or appropriately sized and compatible secondary containment, in a manner consistent with the Hazardous Materials Management and Monitoring Plan for the facility.</u>
>
> D.6(8) The Certificate Holder shall design all ~~inside~~ <u>indoor</u> spill containment areas <u>or secondary containment</u> to hold at least 110 percent of the volume of liquids stored within them.
>
> D.6(9) The Certificate Holder shall design all <u>outdoor</u> spill containment areas ~~located outdoors~~ <u>or secondary containment</u> to hold at least 110 percent of the volume of liquids stored within them, together with the volume of precipitation that might accumulate during the 100-year return frequency storm.

Based on the analysis above, the Department recommends that Council find that compliance with existing, recommended new and recommended amended conditions would minimize the potential for accidental chemical spills or leaks and soil erosion to cause a significant adverse impact to soils during construction and operation of the facility, with proposed changes.

Conclusions of Law

Based on the foregoing recommended findings of fact and conclusions of law, and subject to compliance with existing, recommended new and amended site certificate conditions, the Department recommends that the Council find that the facility, with proposed changes, would continue to comply with the Council's Soil Protection standard.

III.E. Land Use: OAR 345-022-0030

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

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

(a) The applicant elects to obtain local land use approvals under ORS 469.504(1)(a) and the Council finds that the facility has received local land use approval under the acknowledged comprehensive plan and land use regulations of the affected local government; or

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

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

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

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

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

Findings of Fact

The Land Use standard requires the Council to find that the facility, with proposed changes, would continue to comply with local applicable substantive criteria, as well as with any Land Conservation and Development Commission administrative rules and goals and any land use statutes directly applicable to the facility under ORS 197.646(3). The analysis area for potential land use impacts, as defined in the project order, is the area within and extending ½-mile from the site boundary.

Local Applicable Substantive Criteria

In its consideration of a site certificate amendment request, the Council applies the "applicable substantive criteria," as described in the rule above, that are in effect on the date the certificate holder submitted the amendment request.

In the *Final Order on the Application,* the Council found that facility was located entirely within the Rural Industrial (RIPD) zone in Columbia County, and that the facility complied with Columbia County's applicable substantive criteria for that zone.[22] The Council adopted conditions in section D.4 of the site certificate to ensure compliance with the applicable substantive criteria.

In the *Final Order on Amendment 7* and *Final Order on Amendment 10*, the Council found that no applicable changes to Columbia County's substantive land use criteria had affected the design, construction and operation of the reconfigured Unit 2 as proposed by the certificate holder.[23]

In Attachment 2 to *Request for Amendment 11*, the certificate holder provides and analysis of applicable substantive criteria for the BESS. The list of applicable substantive criteria, shown in Table 1. Columbia County Applicable Substantive CriteriaTable 1, was developed by the certificate holder with input from the County. Additionally, after reviewing the pRFA, the Columbia County Planning Director provided a comment letter on the pRFA on July 11, 2019, stating "The Columbia County Planning Department has reviewed the above-mentioned application and finds that it includes accurate findings of fact to all relevant sections of the

[22] *Final Order on the Application,* pp. 53-56.
[23] *Final Order on Amendment #7,* pp. 13-14.

Columbia County Zoning Ordinance and Columbia County Comprehensive Plan and we find no additional local criteria, state statute, or state planning goals that need to be addressed."

Table 1. Columbia County Applicable Substantive Criteria

Columbia County Zoning Ordinance (CCZO)
CCZO § 680 Resource Industrial – Planned Development
CCZO § 683 Uses Permitted Under Prescribed Conditions
CCZO § 685 Standards
CCZO § 1503 Conditional Uses
CCZO § 1100 Flood Hazard Overlay
CCZO § 1170 Riparian Corridors, Wetlands, Water Quality and Fish and Wildlife Habitat Overlay Zone
CCZO § 1173 Activities Prohibited within the Riparian Corridor Boundary
CCZO § 1175 Permitted Uses and Activities
CCZO § 1177 Permitted Uses and Activities
CCZO § 1180 Wetland Area Overlay
CCZO § 1190 Big Game Habitat Overlay
CCZO § 1400 Off-Street Parking and Loading
CCZO§ 1450 Transportation Impact Analysis
CCZO § 1550 Site Design Review
CCZO § 1562 Landscaping: Buffering, Screening and Fencing
Columbia County Comprehensive Plan

Columbia County Zoning Ordinance (CCZO)

CCZO § 680 Resource Industrial – Planned Development

CCZO § 681 Purpose:

The purpose of this district is to implement the policies of the Comprehensive Plan for Rural Industrial Areas. These provisions are intended to accommodate rural and natural resource related industries which:

.1 Are not generally labor intensive;

In the *Final Order on the Application*, the Council found that the facility was not a labor-intensive operation.[24] In Section 3.1 of Attachment 2 to *Request for Amendment 11,* certificate holder proposes that the proposed BESS would not alter the basis for this finding because it would not increase the number of employees at the proposed facility. Based on this representation, the Department agrees with the certificate holder and recommends Council find that the changes proposed in *Request for Amendment 11* are consistent with this criterion.

[24] Final Order on the Application, Attachment D, p. 4

.2 Are land extensive;

In the *Final Order on the ASC*, the Council found that the facility was a land-extensive use.[25] In Section 3.1 of Attachment 2 to *Request for Amendment 11,* certificate holder proposes that the proposed BESS would not alter the basis for this finding because it would be located within the existing site boundary and would not remove land from the existing site. Because the proposed BESS would be located inside the existing site boundary, the Department agrees with the certificate holder and recommends Council find that the changes proposed in *Request for Amendment 11* are consistent with this criterion.

.3 Require a rural location in order to take advantage of adequate rail and/or vehicle and/or deep water port and/or airstrip access;

In the *Final Order on the ASC*, the Council found that the facility requires a rural location to take advantage of rail and vehicle access, and to use the Columbia River and Bradbury Slough as a water source.[26] In Section 3.1 of Attachment 2 to *Request for Amendment 11,* certificate holder proposes that these findings apply to the proposed BESS because they are accessory and supportive of the facility. In its letter dated July 11, 2019, the Columbia County Planning department confirmed that Columbia County would treat the battery storage as a component of the previously approved primary use.[27] Based on these comments, the Department agrees with the certificate holder and County, and recommends Council find that the changes proposed in *Request for Amendment 11* are consistent with this criterion.

.4 Complement the character and development of the surrounding rural area;

In the *Final Order on the Application*, the Council found that the facility compliments the existing character and development of the Port Westward Industrial Park.[28] In Section 3.1 of Attachment 2 to *Request for Amendment 11,* certificate holder explains that the proposed BESS would not alter the basis for this finding because there will be no perceptible change to the character and development of the surrounding area from the addition of the proposed BESS. Because the components of the proposed BESS will be of a similar nature to the other components of the Port Westward Generating Project, the Department agrees with the certificate holder and County, and recommends Council find that the changes proposed in *Request for Amendment 11* are consistent with this criterion.

.5 Are consistent with the rural facilities and services existing and/or planned for the area; and,

[25] Ibid.
[26] Ibid.
[27] Columbia County Planning Department, Comment Letter, July 11, 2019. See Attachment B.
[28] Ibid.

In the *Final Order on the Application*, the Council found that the facility use is consistent with existing or planned facilities and services.[29] In Section 3.1 of Attachment 2 to *Request for Amendment 11,* certificate holder proposes that these findings apply to the proposed BESS because BESS would be an accessory use to the Facility. Certificate holder further explains that the BESS will include file alarms and suppression systems that will comply with applicable standards specified by the Columbia County building department through the permitting process, that the facility will not increase the need for public facilities or services in the area. Staff agrees with the certificate holder and, as discussed in section III.M. *Public Services*: OAR 345-022-0110, expects no significant impacts on public services as a result of the construction and operation of the proposed BESS. Based on this analysis, the Department recommends Council find that the changes proposed in *Request for Amendment 11* are consistent with this criterion.

.6 Will not require facility and/or service improvements at significant public expense.

In the *Final Order on the Application*, the Council found that the facility would rely upon existing or new on-site facilities and services and would not impose significant expense on the public.[30] In Section 3.1 of Attachment 2 to *Request for Amendment 11,* certificate holder proposes that these findings apply to the proposed BESS because BESS would be an accessory use to the Facility, and that the facility will not increase the need for public facilities or services in the area. The Department agrees with the certificate holder and, as discussed in section III.M. *Public Services*: OAR 345-022-0110, expects no significant impacts on public services as a result of the construction and operation of the proposed BESS. Based on this analysis, recommends Council find that the changes proposed in *Request for Amendment 11* are consistent with this criterion.

<u>CCZO § 683 Uses Permitted Under Prescribed Conditions</u>

The following uses may be permitted subject to the conditions imposed for each use:

.1 Production, processing, assembling, packaging, or treatment of materials; research and development laboratories; and storage and distribution of services and facilities subject to the following findings:

A. The requested use conforms with the goals and policies of the Comprehensive Plan - specifically those policies regarding rural industrial development and exceptions to the rural resource land goals and policies.

B. The potential impact upon the area resulting from the proposed use has been addressed and any adverse impact will be able to be mitigated considering the following factors:

[29] Ibid., p. 5
[30] Ibid.

.1 Physiological characteristics of the site (ie., topography, drainage, etc.) and the suitability of the site for the particular land use and improvements;

.2 Existing land uses and both private and public facilities and services in the area;

.3 The demonstrated need for the proposed use is best met at the requested site considering all factors of the rural industrial element of the Comprehensive Plan.

C. The requested use can be shown to comply with the following standards for available services:

.1 Water shall be provided by an on-site source of sufficient capacity to serve the proposed use, or a public or community water system capable of serving the proposed use.

.2 Sewage will be treated by a subsurface sewage system, or a community or public sewer system, approved by the County Sanitarian and/or the State DEQ.

.3 Access will be provided to a public right-of-way constructed to standards capable of supporting the proposed use considering the existing level of service and the impacts caused by the planned development.

.4 The property is within, and is capable of being served by, a rural fire district; or, the proponents will provide on-site fire suppression facilities capable of serving the proposed use. On-site facilities shall be approved by either the State or local Fire Marshall.

In the *Final Order on the Application*, the Council found that the facility was a use permitted under CCZO § 683 because it is a use that involves the production of electricity through the processing of a material (natural gas) as well as the distribution of that electricity as a service.[31] The Council found that the requested use conforms with the goals and policies of the Comprehensive Plan regarding rural industrial development and exceptions to the rural resource land goals and policies. In particular, the Council found that the use was consistent with the Port Westward Exception Statement, which designates the Port Westward Industrial

[31] Ibid., p. 11

Park for industrial use due to its historic use for industrial purposes and its suitability for future industrial use. [32]

In Section 3.1.1 of Attachment 2 to *Request for Amendment 11,* certificate holder proposes that these findings apply to the proposed BESS because the BESS will be "integral to the storage and distribution of electricity produced at the facility," and is subject to the same geographic and logistical considerations. In addition, the certificate holder proposes that because there would be no change to demand for public services as a result of the addition of the proposed BESS, the proposed changes would not alter the basis for the findings that the facility meets the conditions under CCZO § 683.1.C. In its letter dated July 11, 2019, the Columbia County Planning department confirmed that Columbia County would treat the battery storage as a component of the previously approved primary use.[33] The Department agrees that the BESS should be treated as a component of the previously approved use, and that the Council's previous findings for the facility are applicable to the proposed BESS. Based on this analysis, the Department agrees with the certificate holder and recommends Council find that the changes proposed in *Request for Amendment 11* are consistent with this criterion.

.2 Accessory buildings may be allowed if they fulfill the following requirements:

A. If attached to the main building or separated by a breezeway, they shall meet the front and side yard requirements of the main building.

B. If detached from the main building, they must be located behind the main building or a minimum of 50 feet from the front lot or parcel line, whichever is greater.

C. Detached accessory buildings shall have a minimum setback of 50 feet from the rear and/or side lot or parcel line.

As discussed in the section above, the certificate holder proposes that because the proposed BESS will be "integral to the storage and distribution of electricity produced at the facility," the proposed BESS should be evaluated as a use described under CCZO § 683.1, and that the Council's findings for the facility under that section should apply to the proposed BESS. Columbia County has confirmed in its July 11, 2019 comment letter to the Department that it would treat the battery storage as a component of the previously approved primary use.[34]

In Section 3.1.1 of Attachment 2 to *Request for Amendment 11,* the certificate holder proposes that because the proposed BESS would support the facility, it would not be an accessory building, but even if it was, it would meet the conditions of CCZO § 683.2 because it would be detached from the main building and located a minimum of 50 feet from any parcel lines.

[32] Final Order on the Application, Attachment D, p. 7.
[33] Columbia County Planning Department, Comment Letter, July 11, 2019. See Attachment B.
[34] Columbia County Planning Department, Comment Letter, July 11, 2019. See Attachment B.

The Department agrees with the certificate holder and the County that the proposed BESS should be treated as a component of the previously approved primary use, recommends that CCZO § 683.2 does not apply to the changes proposed in *Request for Amendment 11*.

.3 Signs as provided in Chapter 1300.

In Section 3.1.1 of Attachment 2 to *Request for Amendment 11,* The certificate holder proposes that this section does not apply because the proposed BESS would not involve additional signage at the facility. Based on this representation, the Department agrees with the certificate holder and recommends that this criterion does not apply to changes proposed in *Request for Amendment 11*.

.4 Off street parking and loading as provided in Chapter 1400.

The certificate holder proposes that this section does not apply because the proposed BESS would not increase the number of employees at the facility and therefore would not affect parking or loading needs at the Facility. Based on this representation, the Department agrees with the certificate holder and recommends that this criterion does not apply to changes proposed in *Request for Amendment 11*.

CCZO § 685 Standards

.2 The minimum lot or parcel size, average lot or parcel width and depth, and setbacks for uses allowed under Section 683, shall be established by the Planning Commission and will be sufficient to support the requested rural industrial use considering, at a minimum the following factors:

A. Overall scope of the project. Should the project be proposed to be developed in phases, all phases shall be considered when establishing the minimum lot size.

B. Space required for off-street parking and loading and open space, as required.

C. Setbacks necessary to adequately protect adjacent properties.

In the Final Order on the Application, the Council found that "the 19-acre site provides adequate space for all site improvements and incorporates setbacks from any potential surrounding uses."[35] In Section 3.1.2 of Attachment 2 to *Request for Amendment 11*, the certificate holder proposes that these findings apply to the proposed BESS because the proposed BESS would be within the existing fence line of the Facility and would be set farther back from the lot lines than existing Facility building and structures, and that temporary uses to construct the facility will be at sites previously approved in the site certificate. Because the

[35] Final Order on the Application, Attachment D, p. 11

proposed BESS would be located inside the existing site boundary, as described above, and temporary impacts would be limited to areas previously approved for use, the Department agrees with the certificate holder and recommends Council find that the changes proposed in *Request for Amendment 11* are consistent with this criterion.

.3 Access shall be provided to a public right-of-way of sufficient construction to support the intended use, as determined by the County Roadmaster.

In the Final Order on the Application the Council found that the certificate holder and Columbia County had "identified the improvements and mitigation measures needed to address transportation-related impacts during construction." In Section 3.1.2 of Attachment 2 to *Request for Amendment 11*, the Certificate Holder explains that the addition of the proposed BESS will not require changes to access to the facility, and as a result, do not alter the Council's prior findings with respect to the availability or adequacy of access to a public right-of-way. Based on this representation, the Department agrees with the certificate holder and recommends that this criterion does not apply to changes proposed in *Request for Amendment 11*.

CCZO § 1503 Conditional Uses

1503.5 Granting a Permit: The Commission may grant a Conditional Use Permit after conducting a public hearing, provided the applicant provides evidence substantiating that all the requirements of this ordinance relative to the proposed use are satisfied and demonstrates the proposed use also satisfies the following criteria:

A. The use is listed as a Conditional Use in the zone which is currently applied to the site;

B. The use meets the specific criteria established in the underlying zone;

C. The characteristics of the site are suitable for the proposed use considering size, shape, location, topography, existence of improvements, and natural features;

D. The site and proposed development is timely, considering the adequacy of transportation systems, public facilities, and services existing or planned for the area affected by the use;

E. The proposed use will not alter the character of the surrounding area in a manner which substantially limits, impairs, or precludes the use of surrounding properties for the primary uses listed in the underlying district;

F. The proposal satisfies the goals and policies of the Comprehensive Plan, which apply to the proposed use;

G. The proposal will not create any hazardous conditions.

In the Final Order on the Application, the Council found that the certificate holder demonstrated that the facility satisfied the criteria of CCZO § 1503.5 for the Rural Industrial Zone. In section 3.3.1 of Attachment 2 to *Request for Amendment 11*, the certificate holder explains that because the BESS is an accessory use and related and supporting facility to the approved and operational Facility, the Council's findings that the facility satisfied the criteria of CCZO § 1503.5 apply to the proposed BESS. In addition, the certificate holder proposes that the proposed BESS will not create additional impacts to areas that were not previously approved for use, natural features, access, or public services, the proposed BESS, in compliance with the existing and new conditions imposed in this Order, will not alter the basis for these previous findings. Columbia County has confirmed in its July 11, 2019 comment letter to the Department that it would treat the battery storage as a component of the previously approved primary use.[36] The Department agrees with the certificate holder and the County that the proposed BESS should be treated as a component of the previously approved primary use, and recommends the Council find the changes proposed in *Request for Amendment 11* continue to satisfy the criteria in CCZO § 1503.5.

CCZO § 1100 Flood Hazard Overlay

A. Flood Hazard Areas: See CCZO § 1100, Flood Hazard Overlay Zone. All development in Flood Hazard Areas must comply with State and Federal Guidelines.

In section 3.2.1 of Attachment 2 to Request for Amendment 1, the certificate holder explains that the changes proposed in this amendment request will be located outside flood hazard areas. On May 13, 2019, the Department accessed the National Flood Hazard Layer Viewer[37] and confirmed that, with the levee re-alignment completed prior to construction of Unit 1, the facility is located outside of Flood Hazard Overlay Zone. Based on this analysis, the Department recommends the Council find that the changes proposed in *Request for Amendment 11* are consistent with CCZO § 1100 because the development will not occur in a Flood Hazard Area.

CCZO § 1170 Riparian Corridors, Wetlands, Water Quality and Fish and Wildlife Habitat Overlay Zone

1172 Riparian Corridor Standards:

A. The inventory of Columbia County streams contained in the Oregon Department of Forestry Stream Classification Maps specifies which streams and lakes are fish-bearing. Fish-bearing lakes are identified on the map entitled, "Lakes of Columbia County." A copy of the most current Stream Classification Maps is attached to the Comprehensive Plan, Technical Appendix Part XVI, Article X(B) for reference. Based upon the stream and lake inventories, the following riparian corridor boundaries shall be established:

[36] Columbia County Planning Department, Comment Letter, July 11, 2019. See Attachment B.
[37] Available at https://www.fema.gov/national-flood-hazard-layer-nfhl. Accessed May 13, 2019.

1. Lakes. Along all fish-bearing lakes, the riparian corridor boundary shall be 50-feet from the top-of-bank, except as provided in CCZO Section 1 172(A)(5), below.

2. Fish-Bearing Streams, Rivers and Sloughs (Less than1000 cfs). Along all fish-bearing streams, rivers, and sloughs with an average annual stream flow of less than 1,000 cubic feet per second (cfs), the riparian corridor boundary shall be 50-feet from the top-of-bank, except as provided in CCZO Section 1172(A)(5), below. Average annual stream flow information shall be provided by the Oregon Water Resources Department.

3. Fish-Bearing and Non-Fish-Bearing Streams, Rivers and Sloughs (Greater than 1000 cfs). Along all streams, rivers, and sloughs with an average annual stream flow greater than 1,000 cubic feet per second (cfs), the riparian corridor boundary shall be 75-feet upland from the top-of bank, except as provided in CCZO Section 1172(A)(5), below. Average annual stream flow information shall be provided by the Oregon Water Resources Department.

4. Other rivers, lakes, streams, and sloughs. Along all other rivers, streams, and sloughs, the riparian corridor boundary shall be 25 feet upland from the top-of-bank, except as provided in CCZO Section 1172(A)(5), below.

5. Wetlands. Where the riparian corridor includes all or portions of a significant wetland, as identified in the State Wetlands Inventory and Local Wetlands Inventories, the standard distance to the riparian corridor boundary shall be measured from, and include, the upland edge of the wetland. Significant wetlands are also regulated under provisions in the Wetland Overlay Zone, Columbia County Zoning Ordinance, Section 1180.

B. Distance Measurement.

*1. Except as provided in Subsection 1172(5) above, the measurement of distance to the riparian corridor boundary shall be from the top-of-bank. In areas where the top-of bank is not clearly delineated, the riparian corridor boundary shall be measured from the ordinary high water level, or the line of non-aquatic vegetation, whichever is most landward. * * *"*

In its Final Order on Request for Amendment 2, the Council amended Site Certificate Condition D.8(12) to require the facility to comply with the requirements of the then newly adopted CCZO § 1172. In section 3.4.1 of Attachment 2 to *Request for Amendment 11*, the certificate holder explains that like other components of the energy facility, the proposed BESS would be located more than 75 feet from the top of banks of the Columbia River and the Bradbury Slough. The certificate holder also notes that CCZO §§1173, 1175, and 1177 do not apply to the proposed BESS because it would be located outside of the riparian corridor. The department agrees, and recommends that, subject to compliance with Site Certificate Condition D.8(12), the changes proposed in *Request for Amendment 11* are consistent with CCZO § 1170.

CCZO § 1180 Wetland Area Overlay

CCZO § 1181 Purpose:

The purpose of this zone is to protect significant wetland within the identified Wetland Areas as shown on the State Wetland Inventory and Local Wetland Inventories, from filling, drainage, or other alteration which would destroy or reduce their biological value. The Wetland Area Overlay does not apply to land legally used for commercial forestry operations or standard farm practices, both of which are exempt from these wetland area corridor standards. The use of land for commercial forestry is regulated by the Oregon Department of Forestry. The use of land for standard farm practices is regulated by the Oregon Department of Agriculture, with riparian area and water quality issues governed by ORS 568.210 to ORS 568.805.

In section 3.4.5 of Attachment 2 to *Request for Amendment 11* the certificate holder explains that CCZO § 1181 does not apply to the proposed BESS because it would be located in a developed area with impervious surface; where no wetlands are present. The certificate holder explains that surveys also concluded that there are no wetlands or waterways located within the spoils disposal area. The certificate holder provided an updated wetland delineation report as Attachment 6 to the *Request for Amendment 11*. The study confirms the certificate holder's representation. An 3.09 acre palustrine emergent wetland adjacent the spoils disposal area was identified in the report; however, as discussed in Section III.Q.2. *Removal-Fill*, existing Site Certificate Conditions are in-place to avoid impacts if spoils are generated and disposed of during construction of the proposed BESS. Based on the analysis above, and subject to compliance with existing site certificate conditions in section E.1.b of the site certificate, the department agrees with the certificate holder, and recommends that the changes proposed in *Request for Amendment 11* are consistent with CCZO § 1181.

CCZO § 1190 Big Game Habitat Overlay

CCZO § 1191 Purpose:

To protect sensitive habitat areas for the Columbian White-tailed Deer and other Big Game by limiting uses and development activities that conflict with maintenance of the areas. This section shall apply to all areas identified in the Comprehensive Plan as a Major and Peripheral Big Game Range or Columbian White-tailed deer range, as shown on the 1995 Beak Consultant's Map, entitled "Wildlife Game Habitat" in the Comprehensive Plan in Appendix Part XVI, Article VIII(A).

In section 3.4.6 of Attachment 2 to *Request for Amendment 11*, the certificate holder explains that this standard does not apply to the proposed changes because they are not in the Big Game Habitat Overlay. The Department agrees that the Port Westward Industrial Park, including the proposed site of the BESS, is not identified as a Major and Peripheral Big Game Range or Columbian White-tailed deer range on the 1995 Beak Consultant's Map, entitled

"Wildlife Game Habitat" in the Comprehensive Plan in Appendix Part XVI, Article VIII(A)[38], likely due to its impacted status as Rural Industrial zoned land. Based on this analysis, the Department agrees with the certificate holder that CCZO § 1190 does not apply to the changes proposed in *Request for Amendment 11*.

CCZO§ 1450 Transportation Impact Analysis

Transportation Impact Analysis: A Transportation Impact Analysis (TIA) must be submitted with a land use application at the request of the Public Works Director or if the proposal is expected to involve one or more of the conditions in 1450.1 (below) in order to minimize impacts on and protect transportation facilities, consistent with Section 660-012-0045(2)(b) and (e) of the State Transportation Planning Rule.

1450.1 Applicability – A TIA shall be required to be submitted to the County with a land use application at the request of the Roads Department Director or if the proposal is expected to involve one (1) or more of the following:

A. Changes in land use designation, or zoning designation that will generate more vehicle trip ends.

B. Projected increase in trip generation of 25 or more trips during either the AM or PM peak hour, or more than 400 daily trips.

C. Potential impacts to intersection operations.

D. Potential impacts to residential areas or local roadways, including any non-residential development that will generate traffic through a residential zone.

E. Potential impacts to pedestrian and bicycle routes, including, but not limited to school routes and multimodal roadway improvements identified in the TSP.

F. The location of an existing or proposed access driveway does not meet minimum spacing or sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or such vehicles are likely to queue or hesitate at an approach or access connection, thereby creating a safety hazard.

G. A change in internal traffic patterns may cause safety concerns.

H. A TIA is required by ODOT pursuant with OAR 734-051.

[38] Available at: https://www.co.columbia.or.us/files/lds/planning/Wildlife%20and%20Sensitive%20Lands%20Maps/Clatskanie_Wildlife.pdf. Accessed August 29, 2019.

I. Projected increase of five trips by vehicles exceeding 26,000-pound gross vehicle weight (13 tons) per day, or an increase in use of adjacent roadways by vehicles exceeding 26,000-pound gross vehicle weight (13 tons) by 10 percent.

In Section 3.2.3 of Attachment 2 to *Request for Amendment 11*, the certificate holder proposes that the changes described in the request will not require a Transportation Impact Analysis because there will be no changes to zoning or land use at the Facility; there will not be any changes to access, intersections, or road improvements needed, and there will be no permanent increase in traffic. The certificate holder explains that there will be a small, temporary increase in traffic during the construction of the proposed BESS; however no impacts to the local or state road network, including multimodal routes or adjacent land uses are anticipated. Because the estimated number of trips generated by construction and operation of the proposed BESS are less than those that would require a Transportation Impact Analysis, and as discussed in Section III.M.6 *Traffic Safety*, no impacts to traffic safety are expected, the Department agrees with the certificate holder, and recommends that the Council finds the changes proposed in *Request for Amendment 11* do not require a Transportation Impact Analysis.

CCZO § 1550 Site Design Review

The Site Design Review process shall apply to all new development, redevelopment, expansion, or improvement of all community, governmental, institutional, commercial, industrial and multi-family residential (4 or more units) uses in the County.

In Section 3.4.7 of Attachment 2 to *Request for Amendment 11*, the certificate holder explains that it will construct the facility in compliance with the standards set forth in CCZO § 1562, as discussed below. The certificate holder further explains that it will submit a site plan to Columbia County as part of its building permit application consistent with Site Certificate Condition D.4(2). The Department agrees that the site design process applies, and Recommends that the Council find that the changes proposed in *Request for Amendment 11*, subject to compliance with the new Site Certificate Condition D.4(2), are consistent with the requirements of CCZO §1550.

CCZO § 1562 Landscaping: Buffering, Screening and Fencing

CCZO § 1562 A. General Provisions:

1. Existing plant materials on a site shall be protected to prevent erosion. Existing trees and shrubs may be used to meet landscaping requirements if no cutting or filling takes place within the dripline of the trees or shrubs.

2. All wooded areas, significant clumps or groves of trees, and specimen conifers, oaks or other large deciduous trees, shall be preserved or replaced by new plantings of similar size or character

In Section 3.4.8 of Attachment 2 to *Request for Amendment 11*, the certificate holder explains that the proposed BESS will be sited on areas that are currently paved. Certificate holder adds that the spoils disposal area may be cleared of some vegetation prior to use but will be revegetated after construction activities have been completed, in compliance with the Revegetation and Noxious Weed Control Plan and existing Site Certificate Conditions related to Fish and Wildlife and Soil Protection. The department agrees, and subject to compliance with the existing, amended, and new conditions in sections D.6 and D.8 of the site certificate, recommends the Council find the changes proposed in *Request for Amendment 11* are consistent with this criterion.

<u>CCZO § 1562 B. Buffering Requirements</u>

1. Buffering and/or screening are required to reduce the impacts on adjacent uses which are of a different type. When different uses are separated by a right of way, buffering, but not screening, may be required.

In Section 3.4.8 of Attachment 2 to *Request for Amendment 11*, the certificate holder explains that the buffering requirements do not apply because the facility is surrounded by parcels with the same zoning (RIPD) and that the adjacent uses are of a similar industrial nature and would not be adversely affected by the addition of BESS to the Facility. Certificate holder adds that the screening requirements are not applicable in the absence of differing uses and because proposed changes will not materially alter the visual setting of the Facility. The Department agrees with the certificate holder and recommends that this criterion is not applicable to the changes proposed in *Request for Amendment 11*.

<u>CCZO § 1562 D. Fences and Walls</u>

1. Fences, walls or combinations of earthen berms and fences or walls up to four feet in height may be constructed within a required front yard. Rear and -265- DR side yard fences, or berm/fence combinations behind the required front yard setback may be up to six feet in height.

2. The prescribed heights of required fences, walls, or landscaping shall be measured from the lowest of the adjoining levels of finished grade.

3. Fences and walls shall be constructed of any materials commonly used in the construction of fences and walls such as wood, brick, or other materials approved by the Director. Corrugated metal is not an acceptable fencing material. Chain link fences with slats may be used if combined with a continuous evergreen hedge.

4. Re-vegetation: Where natural vegetation or topsoil has been removed in areas not occupied by structures or landscaping, such areas shall be replanted to prevent erosion.

In Section 3.4.8 of Attachment 2 to *Request for Amendment 11*, the certificate holder explains

that the proposed changes do not include any new external fences or changes to existing and approved external site fences. The Department notes that construction of the proposed BESS could result in realignment of internal fences for the existing switchyard, but because no new external fences would be constructed, recommends that this criterion does not apply to the changes proposed in *Request for Amendment 11*.

CCZO § 1563 Standards for Approval

> *A. Flood Hazard Areas: See CCZO § 1100, Flood Hazard Overlay Zone. All development in Flood Hazard Areas must comply with State and Federal Guidelines.*

On May 13, 2019, the Department accessed the National Flood Hazard Layer Viewer[39] and confirmed that, with the levee re-alignment completed prior to construction of Unit 1, the facility is located outside of Flood Hazard Overlay Zone. Based on this analysis, the Department recommends the Council find that the changes proposed in *Request for Amendment 11* are consistent with CCZO § 1100 because the development will not occur in a Flood Hazard Area.

> *B. Wetlands and Riparian Areas: Alteration of wetlands and riparian areas shall be in compliance with State and Federal laws.*

The certificate holder provided an updated wetland delineation report as Attachment 6 to the *Request for Amendment 11*. The study confirms that there are no wetlands or riparian areas within areas of permanent of temporary disturbance. An 3.09 acre palustrine emergent wetland adjacent the spoils disposal area was identified in the report; however, as discussed in Section III.Q.2. *Removal-Fill*, existing Site Certificate Conditions are in-place to avoid impacts if spoils are generated and disposed of during construction of the proposed BESS. Based on the analysis above, and subject to compliance with existing site certificate conditions in section E.1.b of the site certificate, the department agrees with the certificate holder, and recommends that the Council find the changes proposed in *Request for Amendment 11* are consistent with this standard.

C. Natural Areas and Features: To the greatest practical extent possible, natural areas and features of the site shall be preserved

In Section 3.4.9 of Attachment 2 to *Request for Amendment 11*, the certificate holder explains that the proposed BESS would be constructed entirely within the fence line of the Facility, on previously developed impervious surface and will not change the developed footprint of the Facility. Because the proposed BESS would be located inside the existing site boundary, as described above, and temporary impacts would be limited to areas previously approved for use, the Department agrees with the certificate holder and recommends Council find that the changes proposed in *Request for Amendment 11* are consistent with this criterion.

[39] Available at https://www.fema.gov/national-flood-hazard-layer-nfhl. Accessed May 13, 2019.

D. Historic and Cultural sites and structures: All historic and culturally significant sites and structures identified in the Comprehensive Plan, or identified for inclusion in the County Periodic Review, shall be protected if they still exist.

In Section 3.4.9 of Attachment 2 to *Request for Amendment 11*, the certificate holder explains the proposed changes would not affect any historic resources identified because the proposed changes would all be within the existing fence line or in areas previously used and approved for use by the Facility. The Council previously found that no areas of temporary or permanent disturbance are included in the Columbia County Comprehensive Plan as a historically or culturally significant site.[40] Based on this prior finding, the Department recommends that the Council find that the changes proposed in *Request for Amendment 11* comply with this standard.

E. Lighting: All outdoor lights will be shielded so as not to shine directly on adjacent properties and roads.

In Section 3.4.9 of Attachment 2 to *Request for Amendment 11*, the certificate holder explains there will be no change to outdoor lighting as part of the changes proposed in *Request for Amendment 11*. Based on this representation, the Department recommends the Council find this standard does not apply to the changes proposed in *Request for Amendment 11*.

F. Energy Conservation: Buildings should be oriented to take advantage of natural energy saving elements such as the sun, landscaping and landforms.

In Section 3.4.9 of Attachment 2 to *Request for Amendment 11*, the certificate holder proposes that the proposed BESS would be consistent with the energy conservation standard because it would support the efficiency of the energy system. The Department disagrees with this reasoning because the existing energy system is not a natural energy saving element. However, because the proposed BESS would be a component of the previously approved primary use, which itself is located near the Columbia River to conserve energy and resources needed to produce electricity, and the BESS would further support the efficiency of energy production at the facility, the Department recommends the Council find that the changes proposed in *Request for Amendment 11* comply with this standard.

G. Transportation Facilities: Off-site auto and pedestrian facilities may be required by the Planning Commission, Planning Director or Public Works Director consistent with the Columbia County Road Standards and the Columbia County Transportation Systems Plan.

[40] Final Order on the Application, Attachment D p. 28. Also see Section III.K. *Historic, Cultural, and Archaeological Resources*: OAR 345-022-0090

In Section 3.4.9 of Attachment 2 to *Request for Amendment 11*, the certificate holder explains that because BESS will not require any additional permanent employees there will be no need for any offsite auto or pedestrian facilities. The Department agrees with the certificate holder and recommends the Council find the changes proposed in *Request for Amendment 11* comply with this standard.

Columbia County Comprehensive Plan

In section 4 of Attachment 2 to *Request for Amendment 11*, the certificate holder proposes that the changes described in *Request for Amendment 11* are consistent with the overall planning goals adopted by the county in the county Comprehensive Plan. In accordance with ORS 469.504(5), the Department requested the Special Advisory Group confirm the list of the applicable substantive criteria identified by the certificate holder in Attachment 2 to the *Request for Amendment 11* was complete. The Columbia County Planning Department confirmed that it had reviewed the preliminary *Request for Amendment 11*, and found that it includes accurate findings of fact to all relevant sections of the Columbia County Zoning Ordinance and the Columbia County Comprehensive Plan found no additional local criteria, state statute, or state planning goals that need to be addressed.[41]

In accordance with Columbia County's comments, and the findings presented in this order related to compliance with the applicable substantive criteria, the Department recommends that the requested amendment components are consistent with the goals and policies of the Columbia County Comprehensive Plan, particularly the sections related to Economy, Industrial Development, Resource Industrial Development, Public Facilities and Services and Open Space, Scenic and Historic Areas, as implemented by the Columbia County Zoning Ordinances described in this order.[42]

Conclusions of law

Based on the foregoing findings of fact, the Department Recommends the Council find that the facility, with the proposed changes, continues to comply with the Council's Land Use Standard.

III.F. Protected Areas: OAR 345-022-0040

> *(1) Except as provided in sections (2) and (3), the Council shall not issue a site certificate for a proposed facility located in the areas listed below. To issue a site certificate for a proposed facility located outside the areas listed below, the Council must find that, taking into account mitigation, the design, construction and operation of the facility are not likely to result in significant adverse impact to the areas listed below. References in*

[41] Columbia County Planning Department, Comment Letter, July 11, 2019. See Attachment B to this DPO.

[42] Rather than make findings on the broad policies and goals articulated in the Comprehensive plan that are not specific to locations, activity or use, in this Order the Department recommends the Council make findings on compliance with the land use regulations that implement the relevant sections of the Comprehensive Plan. See ORS 197.175(2) and 197.015(11).

this rule to protected areas designated under federal or state statutes or regulations are to the designations in effect as of May 11, 2007:

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

(b) National monuments, including but not limited to John Day Fossil Bed National Monument, Newberry National Volcanic Monument and Oregon Caves National Monument;

(c) Wilderness areas established pursuant to The Wilderness Act, 16 U.S.C. 1131 et seq. and areas recommended for designation as wilderness areas pursuant to 43 U.S.C. 1782;

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

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

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

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

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

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

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

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

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

(m) Agricultural experimental stations established by the College of Agriculture, Oregon State University, including but not limited to: Coastal Oregon Marine Experiment Station, Astoria Mid-Columbia Agriculture Research and Extension Center, Hood River Agriculture Research and Extension Center, Hermiston Columbia Basin Agriculture Research Center, Pendleton Columbia Basin Agriculture Research Center, Moro North Willamette Research and Extension Center, Aurora East Oregon Agriculture Research Center, Union Malheur Experiment Station, Ontario Eastern Oregon Agriculture Research Center, Burns Eastern Oregon Agriculture Research Center, Squaw Butte Central Oregon Experiment Station, Madras Central Oregon Experiment Station, Powell Butte Central Oregon Experiment Station, Redmond Central Station, Corvallis Coastal Oregon Marine Experiment Station, Newport Southern Oregon Experiment Station, Medford Klamath Experiment Station, Klamath Falls;

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

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

(p) State wildlife areas and management areas identified in OAR chapter 635, Division 8.
*****
(3) The provisions of section (1) do not apply to transmission lines or natural gas pipelines routed within 500 feet of an existing utility right-of-way containing at least one transmission line with a voltage rating of 115 kilovolts or higher or containing at least one natural gas pipeline of 8 inches or greater diameter that is operated at a pressure of 125 psig.

Findings of Fact

The Protected Areas Standard requires the Council to find that, taking into account mitigation, the design, construction, and operation of a proposed facility, or facility with proposed changes, are not likely to result in significant adverse impacts to any protected area, as defined by OAR 345-022-0040. Impacts to protected areas are evaluated based on identification of protected areas, pursuant to OAR 345-022-0040, within the analysis area and an evaluation of the following potential impacts during facility construction and operation: excessive noise, increased traffic, water use, wastewater disposal, visual impacts of facility structures or plumes, and visual impacts from air emissions. In accordance with OAR 345-001-0010(59)(e), the analysis area for protected areas is the area within and extending 20 miles from the project site boundary and spoils disposal area.

Table 1Table 2, lists the protected areas within the analysis area identified in *Request for Amendment 11*.[43] No protected areas that have not been evaluated in previous Orders were identified.

Table 2. Protected Areas within facility Analysis Area and 20 miles from Site Boundary.

Protected Area	Distance and Direction from Site Boundary
Abernathy Fish Technology Center	3.5 miles, NNE
Beaver Creek Hatchery	8.2 miles, WNW
Big Creek Hatchery	19.7 miles, W
Bradley State Scenic Viewpoint	12.6 miles, W
Fallert Creek Hatchery	19.9, miles, ES
Gnat Creek Hatchery	15.1 miles, W
Julia Butler Hansen Refuge 1	12.2, miles, WNW
Julia Butler Hansen Refuge 2	0.5 miles, NE
Julia Butler Hansen Refuge 3	4.1 miles, S
Julia Butler Hansen Refuge 4	3.6 miles, SW
Julia Butler Hansen Refuge 5	8.8 miles, WSW
Julia Butler Hansen Refuge 6	12.9 miles, WNW
Lewis and Clark National Wildlife Refuge	15.2 miles, WNW
OSU Research Forest Blodgett Tract	9.5 miles, SW

Potential adverse impacts to the protected areas shown in Table 2 during construction and operation of the BESS could include noise, traffic, water use and wastewater disposal, and visual impacts.

In the *Final Order on the Application,* the Council found that the design, construction and operation of the facility were not likely to result in significant adverse impacts to protected areas.[44] In *Final Order on Request for Amendment 7*, the Council found that these findings applied to the structures proposed for reconfigured Unit 2 in part because those structures were similar in type and smaller than those constructed for Unit 1.[45]

[43] In *Request for Amendment #11*, the certificate holder identified two potential protected areas that were not evaluated in previous Orders: Barnes State Park in Washington, and the Blind Slough Net Pen. Upon review, the Department has determined that neither area is a Protected Area under OAR 345-022-0040. As a Washington State Park, Barnes State Park is not consider a Projected Area by the EFSC Protected Areas standard as it is not a state park or waysides listed by the Oregon Department of Parks and Recreation and the Willamette River Greenway as described under OAR 345-022-0040(1)(h). Similarly, the Blind Slough Net Pen is operated and managed by Clatsop County and is not a national or state hatcheries as described under OAR 345-022-0040(1)(f). Seaquest State Park and Trojan Pond, which were evaluated in the *Final Order on the Application* are not evaluated here for the same reasons. The Department has also removed Elochoman Hatchery, which is now closed, from the evaluation. Areas included in *Request for Amendment #7* that were misidentified or are no longer active and were not addressed in previous Orders are not evaluated.

[44] Final Order on the Application, pp. 70-74

[45] Final Order on Amendment #7. 2010. Pg. 14

As discussed in Section III.M. *Public Services*: OAR 345-022-0110, the design, construction, and operation of the BESS is not expected to significantly alter the traffic, water use, or wastewater disposal impacts of the facility. There may be a temporary increase in traffic near the facility and on Highway 30 during construction of the proposed BESS, but this is expected to be substantially less impactful than construction of Unit 1 or Unit 2. In addition, the closest protected area to the BESS, the Crim's Island Unit of the Julia Butler Hansen Refuge for the Columbian White-Tailed Deer, is separated from the facility site by Bradbury Slough of the Columbia River and is only accessible by boat.

As discussed in Section III.Q.1. *Noise Control Regulations*: OAR 340-035-0035, the operation of the BESS is not expected to substantially alter the noise impacts of the facility. The significance of potential noise impacts to identified protected areas is based on the magnitude and likelihood of the impact on the affected human population or natural resource that uses the protected area.[46] In section 10.1 of *Request for Amendment 11,* the certificate holder explains that noise from construction activities associated with BESS will generally be of lesser magnitude and duration than construction of Units 1 and 2. As discussed in section III.H and III.I, the Julia Butler Hansen Refuge for the Columbian White-Tailed Deer is important habitat for Columbian White-Tailed Deer as well as several avian species; however, considering applicable existing site certificate conditions in section D.8 and E.1.a, noise from construction is not likely to result in a significant adverse impact on protected areas. Additionally, as noted, it should be further noted that the Refuge is separated from the facility by the Columbia River, and that there is existing disturbance from the operating power plants Unit 1 and 2, and other heavy industrial facilities in the area.

During operation of BESS, little to no additional impact to protected areas is anticipated compared to any existing impact that may result from the operation of Units 1 and 2, as well as other heavy industrial facilities in the area. In section 5.9 of *Request for Amendment 11*, the certificate holder explains that even if modular containers are stacked to a height of 20 feet, existing facility structures would likely block the proposed BESS from view from nearby units of the Julia Butler Hansen Refuge. Even if visible, as discussed in Section III.J. *Scenic Resources*: OAR 345-022-0080, the BESS is proposed to be constructed adjacent to larger industrial structures and is unlikely to create significant adverse visual impacts on protected areas if constructed in compliance with existing site certificate conditions adopted in Section D.10 of the Site Certificate. As shown on the table above, all other protected areas are considerable further from the facility than the Refuge. As such, impacts from construction and operation of the BESS would be anticipated as less than at the Refuge, and not likely to cause a significant adverse impact.

<u>Conclusions of Law</u>

Based on the foregoing findings, and subject to compliance with the existing site certificate conditions, the Department recommends the Council conclude that the design, construction

[46] See OAR 345-001-0010(53).

and operation of the facility, with proposed changes, would not be likely to result in significant adverse impacts to any protected areas, in compliance with the Council's Protected Area standard.

III.G. Retirement and Financial Assurance: OAR 345-022-0050

> *To issue a site certificate, the Council must find that:*
>
> *(1) The site, taking into account mitigation, can be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the facility.*
>
> *(2) The applicant has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.*

<u>Findings of Fact</u>

The Retirement and Financial Assurance standard requires a finding that the facility site can be restored to a useful, non-hazardous condition at the end of the facility's useful life, should either the certificate holder stop construction or should the facility cease to operate. In addition, it requires a demonstration that the certificate holder can obtain a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.

Restoration of the Site Following Cessation of Construction or Operation

OAR 345-022-0050(1) requires the Council to find that the site of the facility, with proposed changes, can be restored to a useful non-hazardous condition at the end of the facility's useful life. In *Request for Amendment 11*, certificate holder explains that the BESS may be decommissioned before the rest of the Port Westward power plant facility fully ceases operations. The certificate holder proposes the following procedures for separate retirement and restoration of the BESS:

- If lithium-ion batteries are selected, the batteries will be removed, packaged, and transported to an offsite disposal or recycling facility.
- If flow batteries are selected, the batteries will be removed as modules containing electrolyte fluid, packaged, and transported to an offsite disposal or recycling facility. Electrolyte fluids may be nonhazardous, or may be classified as hazardous liquid, depending on the final technology selected. For purposes of estimating disposal costs, certificate holder assumes that disposal of hazardous liquid will be required.
- Remaining above ground system components and structures will then be dismantled using industry standard methods and transported to an offsite disposal/recycling facility.

- Concrete pads/foundations may be broken to a maximum of 3 feet below grade, excavated, and transported to an offsite disposal/recycling facility or left in place until the final decommissioning of the facility.
- Underground utilities will be removed to a maximum of 3 feet below grade and transported to an offsite disposal/recycling facility or left in place until the final decommissioning of the facility.
- The area will be returned to pre-construction conditions, which consists of an asphalt surface.

Certificate holder notes that the number and layout of modular containers, inverters, and transformers may depend on technology and will be finalized prior to construction. Because decommissioning cost estimates are depended on the battery chemistry selected as described below, either flow or lithium-ion, the Department recommends adding a new condition to require the certificate holder to provide updated design information, prior to construction of the BESS:

> D.3(17) Before beginning construction of the BESS authorized by the Eleventh Amended site certificate, the certificate holder shall provide updated design information for the BESS including, but not limited to, battery chemistry and the number and layout of modular containers, inverters, and transformers for the BESS.

In the Final Order on the Application, the Council found that the facility site could be restored adequately to a useful, non-hazardous condition following permanent cessation of construction or operation of the facility. The Council has previously adopted other conditions in Section D.3 of the site certificate to ensure compliance with the Retirement and Financial Assurance Standard. These conditions require retirement of the facility upon permanent cessation of operations (Condition D.3(1)) in accordance with a retirement plan (Condition D.3(2)), along with related annual reporting requirements (Condition D.3(6)).

Bond or Letter of Credit

OAR 345-022-0050(2) requires the Council find the applicant has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.

In accordance with site certificate Condition D.3(5), a letter of credit for the existing facility is currently maintained and updated annually. In the most recent update (for 2019), the letter of credit stood at $10,840,325.

Certificate holder estimates costs of decommissioning of the BESS at $136,763 for lithium-ion batteries and $637,635 for flow batteries.[47] The estimate for flow batteries assumes that battery fluids would be classified as hazardous waste, adding significant costs. The Department has reviewed the cost and finds them sufficient.

[47] Request for Amendment 11, Attachment 3.

Certificate holder sites its compliance with site certificate condition D.3(5) as evidence of its ability to obtain a bond or letter of credit. Because the amount associated with retirement of the BESS is small in comparison with the amount of the existing bond, certificate holder did not provide a new bank letter as part of the request. Certificate holder proposes to obtain either a separate letter of credit or combined letter of credit with the existing facility prior to construction. Certificate Holder proposes addition of a new condition to require submission of a new bond or letter of credit, or increasing the amount of the existing bond or letter of credit in the amount estimated for the selected technology to demonstrate compliance with this Standard. The department agrees, and recommends additional modifications to Site Certificate Conditions D.3(5)(f) and the proposed new condition to ensure the methods for determining the present value of the new required security, and inflation adjustments are consistent with the security on file for Units 1 and 2:

> D.3(5)(f) The ~~calculation of 1st quarter 2010 dollars (or 2002 dollars for purposes of any five year supplemental payments for carbon dioxide offsets for power augmentation on Unit 1)~~present value of dollar amounts in this site certificate shall be ~~made~~ calculated 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") . If at any time the Index is no longer published, the Council shall select a comparable calculation ~~of 2002, 2004 and 2010 dollars~~. [Amendments No. 3, 6, ~~and~~ 7, & 11]
>
> (18) Before beginning construction of the BESS, the Certificate Holder shall submit a bond or letter of credit in the amount of $136,736 (1st Quarter 2019 dollars) for a lithium-ion BESS and $637,635 (1st Quarter 2019 dollars) for a flow BESS, subject to the same requirements as D.3(5)(d) through (h).

Based on the assessment provided here, and because the estimated retirement amounts are small in comparison to the current letter of credit on file for the facility, Department recommends Council find that the certificate holder has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.

Conclusions of Law

Based on the foregoing findings of fact, and subject to compliance with the existing and recommended new site certificate conditions, the Department recommends that the Council find that the facility, with proposed changes, would comply with the Council's Retirement and Financial Assurance standard.

III.H. Fish and Wildlife Habitat: OAR 345-022-0060

> *To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are consistent with:*

*(1) The general fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025(1) through (6) in effect as of February 24, 2017****

Findings of Fact

The EFSC Fish and Wildlife Habitat standard requires the Council to find that the design, construction and operation of a facility is consistent with the Oregon Department of Fish and Wildlife's (ODFW) habitat mitigation goals and standards, as set forth in OAR 635-415-0025. This rule creates requirements to mitigate impacts to fish and wildlife habitat, based on the quantity and quality of the habitat as well as the nature, extent, and duration of the potential impacts to the habitat. The rule also establishes a habitat classification system based on value the habitat would provide to a species or group of species. There are six habitat categories; Category 1 being the most valuable and Category 6 the least valuable.

The analysis area for potential impacts to fish and wildlife habitat, as defined in the project order, is the area within the site boundary and extending 0.25 miles from the proposed BESS location and spoils disposal site. As described in the *Final Order on the Application*, Habitat Categories 2, 3, 4, and 6 occur within the analysis area.

Potential Impacts from Construction and Operation of the BESS

In the *Request for Amendment 11*, the certificate holder explains that the proposed BESS would be sited on approximately 0.2 acres of previously disturbed Category 6 habitat inside the existing facility site boundary. No additional loss of habitat quantity is expected. In accordance with the EFSC Fish and Wildlife Habitat standard and the ODFW Fish and Wildlife Habitat Mitigation policy, impacts to Category 6 habitat do not require mitigation.

The certificate holder explains that there may be temporary disturbance of a small portion of Category 4 non-native grassland if spoils from construction are placed at the spoils disposal site previously approved and used during Unit 1 and Unit 2 construction. The spoils disposal site was most recently disturbed during Unit 2 construction in 2014 and is currently revegetating. The certificate holder states that the previously disturbed grassland area would be revegetated per site certificate requirements. The certificate holder has proposed amendments to conditions related to revegetation and noxious weed control that are discussed separately below. Per ODFW policy guidance, temporary impacts to grassland habitat do not require compensatory mitigation if the impacts are revegetated and restored. As described below, the certificate holder is proposing amendments to the revegetation and noxious weed control plan for the facility.

Because the temporary disturbance of the spoils disposal site would be of a similar nature and lesser magnitude than disturbance associated with construction of Unit 1 and 2, the Department recommends that, subject to compliance with existing site certificate conditions described here, construction and operation of the BESS will not alter the Council's basis for its previous findings that the Facility complies with the Fish and Wildlife Habitat standard. The

spoils disposal site, if redisturbed by construction of BESS, would be revegetated and restored in accordance with the amended revegetation and noxious weed control plan.

Indirect effects on habitat within the analysis area during construction and operation of the BESS could occur due to noise, traffic, human activity, maintenance activities, and operation of the energy facility, as amended. The Council adopted Conditions in Section D.8 of the Site Certificate to minimize these indirect impacts. In *Request for Amendment 11*, Certificate Holder states that Conditions D.8(1),(2),(4) through (7), (10), (12), (14), (15), and (18), are applicable to the construction and operation of the BESS, and reduce potential impacts.

The Certificate holder proposes a change to Condition D.8(8) to make its requirements applicable to site preparation and construction of the BESS:

> D.8(8) As possible and practicable, the Certificate Holder shall conduct site preparation for construction of the PW2 facility, <u>or the BESS</u>, in a manner that minimizes potential for impacting nesting native birds protected by the Migratory Bird Treaty Act (MBTA), such as conducting initial site clearing outside of the breeding season for most birds (generally March-July). Prior to commencement of construction activity during the breeding season, a qualified biologist will conduct a walk-down of the construction site to determine the presence of any active bird nests and to rescue and relocate any nongame protected wildlife (OAR 635-045-0002) that may be encountered according to the methods provided by ODFW. Surveys will be conducted by a qualified wildlife biologist and will include complete coverage of all areas to be disturbed using systematic transects spaced a maximum of 5 meters apart. As applicable considering construction schedule, PGE will also conduct a survey beginning in March prior to construction to detect any streaked horned larks that could be using the very limited amount of potential breeding habitat on site. PGE's survey protocol methods will be coordinated with ODFW. Construction personnel will be trained regarding avian awareness issues and reporting of bird nests and dead birds found at the construction site (also see Condition D.8(1) for wildlife awareness requirements). The Certificate Holder will consult with USFWS and ODFW regarding any active bird nests found within the construction disturbance area.

The Department also recommends that existing site certificate Conditions D.8(11), (19) through (24), and (26) are applicable to construction of the proposed BESS; however, the certificate holder has proposed changes to these conditions that would affect their applicability. These changes are discussed below.

<u>Potential Impacts from changes not specific to the BESS</u>

The certificate holder has also proposed several changes to conditions in Section D.8 of the Site Certificate that are not specific to construction and operation of the BESS.

Existing Condition D.8(11) requires the certificate holder locate chemical storage, servicing of construction and maintenance equipment and vehicles, and overnight storage of wheeled

vehicles at least 330 feet from any wetland or waterway. In *Request for Amendment 11*, the certificate holder explains that the 330-ft buffer is not an industry standard and is not required by the Oregon Department of State Lands or Army Corps of Engineers. The certificate holder states that, for areas within the energy facility site boundary, the condition is not necessary to minimize impacts to wildlife habitat because existing Conditions D.6(7) through (9) require all chemicals to be stored in appropriate spill containment areas and because the area within the facility site boundary is designed so that all storm water remains on-site and flows to one of four on-site storm water retention ponds, where it is contained and can be cleaned up. Because these improvements are not in place in the transmission corridor, the certificate holder proposes to amend Condition D.8(11) so that it only to the transmission corridor. The amended condition would read as follows:

> D.8(11) "The Certificate Holder shall locate chemical storage, servicing of construction and maintenance equipment and vehicles, and overnight storage of wheeled vehicles <u>associated with construction and maintenance of the transmission line</u> at least 330 feet from any wetland or waterway."

The Department notes that the Condition, as proposed, may be read so that the proposed amendment only applies to overnight storage of wheeled vehicles, and that the condition would still apply to all chemical storage and servicing of vehicles would continue. To address this potential ambiguity, the Department recommends amending D.8(11) as follows:

> D.8(11) "The Certificate Holder shall locate chemical storage, servicing of construction and maintenance equipment and vehicles, and overnight storage of wheeled vehicles <u>within the energy facility site boundary, or</u> at least 330 feet from any wetland or waterway."

Existing site certificate Conditions D.8(19) through (24) and (26) contain procedures and requirements for revegetation and control of noxious weeds in riparian areas and wetlands along the transmission right of way, areas temporarily disturbed by construction, temporary construction staging and laydown areas, and the spoils disposal area. In *Request for Amendment 11*, the certificate holder proposes to remove these conditions from the site certificate and move the conditions to a Revegetation and Noxious Weed Control Plan, which would be governed by a new Condition proposed by the certificate holder:

> <u>D.8(28) The Certificate Holder shall develop and implement a Revegetation and Noxious Weed Control Plan. The Revegetation and Noxious Weed Control Plan must be approved by the Department prior to construction and may be amended from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council ("Council"). Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of this plan agreed to by the Department.</u>

The Department recommends a modification of this proposed amendment to approve the Revegetation and Noxious Weed Control Plan included as Attachment D to this Order, and require its implementation:

> D.8(28) The Certificate Holder shall develop and implement a Revegetation and Noxious Weed Control Plan. The Revegetation and Noxious Weed Control Plan must be approved by the Department prior to construction **of the BESS,** and may be amended from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council ("Council"). Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of this plan agreed to by the Department.

Under the proposed amendment, the certificate holder would be able to modify success criteria and monitoring methods in the Revegetation and Noxious Weed Control plan without amendment to the site certificate. Certificate holder explains that any changes to the revegetation requirements contained in the plan would require approval of the Department, and the Council would retain the authority to approve, reject, or modify any amendment of the plan. The Department notes that all current and recent EFSC-jurisdictional energy facilities contain a very similar or identical such requirement. Port Westward Generating Project was unusual in that it did not contain a stand-alone Revegetation and Noxious Weed Control Plan, rather, the elements of what constitute certificate holder's obligations for revegetation and noxious weed control were contained in conditions in the site certificate. This is a cumbersome organization and requires amendments to the site certificate in order to change minor revegetation or noxious weed control procedures or measures. As such, the Department recommends that Council approve Condition D.8(28) and the implementation of a Revegetation and Noxious Weed Control Plan, as discussed in this order and in *Request for Amendment 11*.

The certificate holder has also proposed to amend Condition D.8(14) to reference the Revegetation plan included as Attachment 4b of Request for Amendment No. 11; the Department has included the plan as Attachment D to this order. Accordingly, the Department recommends Site Certificate D.8(14) be amended as follows:

> D.8(14) The Certificate Holder shall restore temporary upland and wetland disturbance areas by returning the areas to their original grade and seeding, with appropriate seed mixes as recommended by ODFW and as described in ~~Exhibit P, Section P.8.1., of the Certificate Holder's Request for Amendment No. 7, and by mulching the area with straw~~ the Revegetation and Noxious Weed Control Plan included as Attachment D to the Final Order on Site Certificate Amendment No. 11.

The Certificate holder has also provided proposed revisions to the revegetation plan included as Attachment D to this order. Major changes include:

- Removing provisions that are complete and no longer relevant
- Revising the seed mix for revegetation of upland disturbance areas to include 50% grasses, 35% perennial flowers, and 15% annual flowers;
- Incorporation and modification of the revegetation success criteria in existing Site Certificate Condition D.8(26)(3) to read as follows:
- The vegetation percent cover by native species and desirable non-native species (i.e., non-noxious weeds, both seeded and naturally recruited) is 80 percent or more, or the native species component is not significantly less than the native species percent cover of surrounding undisturbed areas.
- Noxious weeds are absent or constitute only a small percentage (<5%) of vegetation otherwise dominated by native or desirable non-native species.
- The percentage of bare soil (excluding rocky areas) in the sample plot is <10%, or not significantly greater than the percentage of bear soil in surrounding undisturbed areas.
- Vegetation percent cover goals may be adjusted to match the typical percent cover in nearby undisturbed areas as measured with paired monitoring plots.

The revised success criteria allow the certificate holder to revegetate disturbed areas with a larger proportion of desirable non-native species. In *Request for Amendment 11*, the certificate holder explains that the limit of 20% coverage by non-native species was not achievable considering the previous condition of temporarily disturbed areas and the existing condition of undisturbed areas in the project vicinity (i.e., non-native grasslands). ODFW also found that the "criteria originally established in the revegetation plan may have been challenging to meet given the larger patterns of noxious weed abundance and spread on the larger landscape", and recommended that the certificate holder establish paired monitoring plots outside the revegetation area that could be used for comparison with the monitoring plots inside the revegetation area to assess whether the revegetation efforts were trending toward success, calibrated by the larger landscape forces.[48]

ODFW has reviewed the Request for Amendment11 including the proposed Revegetation and Noxious Weed Control Plan and stated that the methods and criteria it contains were consistent with changes discussed by ODFW and the certificate holder, and that the criteria would continue to meet the requirements of the Fish and Wildlife Habitat Standard.

The Department has reviewed the proposed changes and agrees that, with the proposed revisions to the Revegetation and Noxious Weed Control Plan, the removal of Site Certificate Conditions D.8(19) through (24) and (26), and addition of proposed site certificate condition D.8(28) does not alter the Council's basis for its previous findings that the Facility complies with the Fish and Wildlife Habitat standard.

<u>Conclusions of Law</u>

[48] Letter from Sarah Reif, ODFW. July 26, 2019.

Based on the foregoing findings of fact and conclusions, and subject to compliance with existing and recommended amended site certificate conditions D.8(1),(2),(4) through (7), (10), (12), (14), (15), and (18), the Department recommends the Council find that facility, with proposed changes, would continue to comply with the Council's Fish and Wildlife Habitat standard.

III.I. Threatened and Endangered Species: OAR 345-022-0070

> *To issue a site certificate, the Council, after consultation with appropriate state agencies, must find that:*
>
> *(1) For plant species that the Oregon Department of Agriculture has listed as threatened or endangered under ORS 564.105(2), the design, construction and operation of the proposed facility, taking into account mitigation:*
>
> *(a) Are consistent with the protection and conservation program, if any, that the Oregon Department of Agriculture has adopted under ORS 564.105(3); or*
>
> *(b) If the Oregon Department of Agriculture has not adopted a protection and conservation program, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species; and*
>
> *(2) For wildlife species that the Oregon Fish and Wildlife Commission has listed as threatened or endangered under ORS 496.172(2), the design, construction and operation of the proposed facility, taking into account mitigation, are not likely to cause a significant reduction in the likelihood of survival or recovery of the species.*

<u>Findings of Fact</u>

The Threatened and Endangered Species standard requires the Council to find that the design, construction, and operation of a proposed facility, or facility with proposed changes, are not likely to cause a significant reduction in the likelihood of survival or recovery of a fish, wildlife, or plant species listed as threatened or endangered by Oregon Department of Fish and Wildlife (ODFW) or Oregon Department of Agriculture (ODA). For threatened and endangered plant species, the Council must also find that a proposed facility, or facility with proposed changes, is consistent with an adopted protection and conservation program from ODA. Threatened and endangered species are those listed under ORS 564.105(2) for plant species and ORS 496.172(2) for fish and wildlife species. For the purposes of this standard, threatened and endangered species are those identified as such by either the Oregon Department of Agriculture or the Oregon Fish and Wildlife Commission.

The analysis area for threatened or endangered plant and wildlife species is the area within and extending 5-miles from the proposed site of the BESS.

<u>Potential Impacts to Threatened and Endangered Species</u>

Section 8.8 of *Request for Amendment 11* provides an updated list of state and federal listed, candidate and proposed species with the potential to occur within the analysis area based on searches of the US Fish and Wildlife Service IPaC database and the Oregon Biological Information Center database. The certificate holder identifies critical habitat for marbled murrelet (*brachyramphus marmoratus),* a state threatened species, within the analysis area but the species has not been found within 300 feet of the facility site boundary during precious surveys. The certificate holder explains that no state threatened or endangered plant species have been found during previous surveys of the area within 300 feet of the facility site boundary, and none are likely to occur in the developed and previously disturbed habitat categories to be impacted by the BESS.[49] The certificate holder explains that an analysis of potential impacts to threatened and endangered aquatic species was not included in *Request for Amendment 11* because there is no potential for the design, construction, or operation of the BESS to impact aquatic habitat.

In the Final Order on the Application, the Council found that the design, construction and operation of facility would not have the potential to significantly reduce the likelihood or the survival or recovery of any threatened or endangered plant or wildlife species listed under Oregon law. The Council adopted conditions in section D.9 of the site certificate to ensure compliance with the Threatened and Endangered Species standard. The majority of these conditions are associated with construction and operation of the transmission line and none are applicable to *Request for Amendment 11.* Subsequent Orders have confirmed that the design, construction, and operation of the facility does not have the potential to significantly reduce the likelihood or the survival or recovery of any threatened or endangered species listed under Oregon law.

Because no state listed threatened or endangered species are known to occur within the analysis area for *Request for Amendment 11*, the Department recommends that the design, construction, and operation of the BESS will not alter the Council's basis for its previous findings that the Facility complies with the standard.

In *Request for Amendment 11* the certificate holder proposes to delete Condition D.9(9). The condition requires PGE to obtain a Biological Opinion from the U.S. Fish and Wildlife Service before starting construction during the bald eagle nesting period. The certificate holder explains that because the bald eagle is no longer a state or federally listed species Biological Opinions for this species are no longer applicable. Accordingly, the department recommends deletion of this Condition as proposed by the certificate holder.

<u>Conclusions of Law</u>

[49] The certificate holder explains that Columbian white-tailed deer (*Odocoileus virginianus leucurus*), a federally listed species, is known to occur in the vicinity of the facility and could forage at the spoils disposal site. The Council's standard does not address federally-listed threatened or endangered species; however, the certificate holders must comply with all applicable federal laws, including laws protecting those species, independent of the site certificate.

Based on the foregoing findings of fact and conclusions, and subject to compliance with existing site certificate conditions, the Department recommends that the Council find that the facility, with proposed changes, would continue to comply with the Council's Threatened and Endangered Species standard.

III.J. Scenic Resources: OAR 345-022-0080

> *(1) Except for facilities described in section (2), to issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic resources and values identified as significant or important in local land use plans, tribal land management plans and federal land management plans for any lands located within the analysis area described in the project order.*

Findings of Fact

The Scenic Resources Standard requires the Council to determine that the design, construction and operation of the proposed facility are not likely to result in a significant adverse impact to any significant or important scenic resources and values within the analysis area.

The analysis area for the evaluation of scenic resources, as defined in the project order, is the area within and extending five miles from the site boundary.[50] Table 3 lists scenic resources and values identified as significant or important in the Columbia County Comprehensive Plan (CCCP).[51] The certificate holder notes that the CCCP has been updated since Council approved Amendment 10, but no additional scenic resources were identified. Only one scenic resource, a one-mile section of Highway 47 between Pittsburg and Clatskanie, is within the analysis area.

Table 3. Scenic resources identified in the Columbia County Comprehensive Plan (Columbia County 1984, updated Nov. 2013).

Resource	Site	Distance & Direction from BESS

[50] Since the issuance of the First Amended Project Order, OAR 345-001-0010(59)(b) was updated to expand the study area for scenic resources from five to ten miles; however, the appropriate analysis area for scenic resources for the facility remains at five miles as specified in the *First Amended Project Order*.

[51] In section 8.9 of *Request for Amendment 11*, the certificate holder explains that it reviewed comprehensive plans for Columbia County, Oregon and Cowlitz and Wahkiakum counties in Washington. The Certificate holder also states that it called and sent letters to representatives of the Confederated Tribes of the Warm Springs Indian Reservation of Oregon, the Confederated Tribes of the Grand Ronde Community of Oregon, the Confederated Tribes of the Siletz Indian Reservation of Oregon, and the Chinook Nation in Washington. Only the Columbia County Comprehensive Plan identified scenic resources and values. The certificate holder also reviewed the 2010 Comprehensive Conservation Plan and Environmental Impact Statement for the two units of the Julia Butler Hansen Refuge for the Columbian White-tailed Deer in the analysis area and found the units are not managed for any scenic resources. (USFWS 2010).

Scenic Sites	Beaver Creek Falls Carcus Creek Falls Lava Creek Falls Clatskanie River (Apiary Falls to Carcus Creek) Scaponia Recreation Site	5.1 miles, SSE 13.1 miles, SSE 12.3 miles, S 12.1-9.9 miles,SSE 22.9 miles, S
Scenic Highways	Hwy. 30 between Deer Island and Rainier Hwy. 47 between Washington County Line and Treharne Pittsburg and Clatskanie	12.8-22.7 miles, ESE-SE 18.7 miles, S 4.8 miles, SSW
Scenic Views	Wayside north of Rainier on Hwy. 30 Wayside north of Rainier on Old Columbia River Hwy.	9.7 miles, ESE 10 miles, ESE
SSE - South Southeast, SSW – South Southwest, S - South, ESE - East Southeast, SE - Southeast		

Council previously found that the facility, as modified through Amendment 10, complied with the Scenic Resources Standard based on analysis of the CCCP. [52]

In *Request for Amendment 11*, the certificate holder explains that design, construction and operation of the BESS is not likely to result in significant adverse impact to the scenic section of Highway 47 between Pittsburg and Clatskanie because the BESS will not be visible from the section, which is 4.8 miles from the facility site.

<u>Conclusion of Law</u>

Based on the findings of fact above, the Department recommends that the Council find that the facility as modified by *Request for Amendment 11* continues to comply with the Council's Scenic Resources standard.

III.K. Historic, Cultural, and Archaeological Resources: OAR 345-022-0090

> *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impacts to:*
>
> *(a) Historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places;*
>
> *(b) For a facility on private land, archaeological objects, as defined in ORS 358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c); and*
>
> *(c) For a facility on public land, archaeological sites, as defined in ORS 358.905(1)(c).*

[52] Final Order on the Application, p. 96; Final Order on Amendment 7, p. 23; Final Order on Amendment 10, p. 26.)

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

Findings of Fact

OAR 345-022-0090(1), generally requires the Council to find that the proposed amended facility is not likely to result in significant adverse impacts to identified historic, cultural, or archaeological resources. The analysis area for the evaluation of potential impacts to identified historic, cultural or archeological resources is the area within the site boundary.

In the *Final Order on the Application,* the Council found that the design, construction and operation of the facility were not likely to result in significant adverse impacts to identified historic, cultural and archaeological resources (collectively referred to as "cultural resources") for the area within the site boundary.[53] The Council adopted conditions in section D.11 of the site certificate to ensure compliance with the Historic, Cultural, and Archaeological Resources standard.

In the *Final Order on Amendment 7,* the Council found that the design, construction and operation of the proposed Unit 2 were not likely to result in significant adverse impacts to identified historic, cultural and archaeological resource, taking into account the conditions adopted in section D.11 of the site certificate.[54]

In the Final Order on Amendment 10, the Council found that the proposed amendment would not alter the potential impacts of the facility on cultural resources. There has been no change in facts or circumstances that would affect the Council's findings on the previously-approved site for the facility.

A cultural survey of the spoils disposal area was completed in 2001 as part of the Water Discharge Alignment Reroute for the facility. In Section 8.10 of *Request for Amendment 11*, the certificate holder notes that on January 11, 2019, John Pouley of SHPO confirmed no additional surveys of the spoils disposal area are necessary because of the nature of the site and the disturbance. The certificate holder states that it will comply with all existing site certificate conditions related to Cultural and Archaeological Resources in Section D.11 of the site certificate that are applicable to the design, construction, and operation of the proposed BESS. The certificate holder states, and the Department confirms, that these include Conditions D.11(2) through (5).

Conclusions of Law

[53] Final Order on the Application, pp. 96-100.
[54] Final Order on Amendment 7, p. 23.

Based on the findings of fact above, and subject to compliance with existing Conditions D.11(2) through (5), the Department recommends the Council find that the facility, as modified by *Request for Amendment 11*, would continue to comply with the Council's Historic, Cultural, and Archaeological Resources Standard.

III.L. Recreation: OAR 345-022-0100

> *(1) Except for facilities described in section (2), to issue a site certificate, the Council must find that the design, construction and operation of a facility, taking into account mitigation, are not likely to result in a significant adverse impact to important recreational opportunities in the analysis area as described in the project order. The Council shall consider the following factors in judging the importance of a recreational opportunity:*
>
> *(a) Any special designation or management of the location;*
> *(b) The degree of demand;*
> *(c) Outstanding or unusual qualities;*
> *(d) Availability or rareness;*
> *(e) Irreplaceability or irretrievability of the opportunity.*
> *****

<u>Findings of Fact</u>

The Recreation standard requires Council to find that the design, construction, and operation of the facility is not likely result in significant adverse impacts to important recreational opportunities. The importance of recreational opportunities is assessed based on the factors outlined in the standard. The departments assessment of significant adverse impacts to important recreational opportunities is based on the potential of construction or operation of the facility, with the proposed changes, to result in any of the following: direct or indirect loss of an important recreational opportunity, excessive noise, increased traffic, and visual impacts of facility structures or plumes.

In accordance with OAR 345-001-0010(59)(d) and consistent with the study area boundary, the analysis area for recreational opportunities is the area within and extending 5 miles from the site boundary.

Existing recreational opportunities within the analysis area include the Columbia River, Clatskanie River, and numerous sloughs within the area from Clatskanie to Quincy. In Section 8.11 of the *Request for Amendment 11*, the certificate holder lists important recreation sites within the analysis area including two county parks, two city parks, an ODFW owned and operated boat ramp, a fish technology center operated by the US Fish and Wildlife Service, and two points of interest. These sites are listed in Table 4, below.

Table 4. Important recreation sites within the Analysis Area.

Recreation Site	**Type**	**Distance (direct path) and direction**
Abernathy Fish Tech Center	Technology Center	3.5 miles, NNE
Abernathy Point	Point of Interest	0.9 miles, NNE
Beaver Boat Ramp and Park	County Park	5.2 miles, SSW
Clatskanie City Park	City Park	5.3 miles, SWW
County Line Park	County Park	2.3 miles, W
Mayger Boat Ramp	Boat Ramp	3.4 miles, ESE
Mill Creek	Point of Interest	0.7 miles, N
Willow Grove Boat Ramp and Park	Local Park	4.2 miles, E
NNE – North Northeast, SSW – South Southwest, W – West, ESE – East Southeast, N – North, E – East		

Except for except the Willow Grove Boat Ramp and Park, the importance of and potential impacts of the design, construction, and operation of the facility on all listed recreational sites and opportunities were evaluated in previous Orders. The certificate holder states that there have been no changes to the previously analyzed recreational sites or opportunities that modify the relevant factors of management, demand, unusual qualities, rareness, or irreplaceability.[55]

No analysis was previously conducted for Willow Grove Boat Ramp and Park; however, given its distance from the proposed site of the BESS and location on the other side of Crim's Island, impacts of the facility on the park would likely be similar to other recreational opportunities with similar use within the analysis area, and less than significant.

Under the Council's Recreation standard, the Council must find that, taking into account mitigation, the facility, with proposed changes, is not likely to result in a significant adverse impact to those identified important recreational opportunities.

In the *Final Order on the Application*, the Council found that the energy facility would not adversely affect any existing recreational opportunities within the analysis area and that there would be no loss of recreational use.[56]

The proposed BESS would be located within the site boundary of the Port Westward power plant, and would not physically disturb, or result in ground disturbance, to the important recreational opportunities identified within the analysis area. The facility, with proposed changes, would also not require any temporary or permanent closure or removal of the important recreation opportunities to public use.

[55] Request for Amendment 11, p. 41
[56] Final Order on the Application, p. 102.

As discussed in Sections III.J. *Scenic Resources*: OAR 345-022-0080, III.M. *Public Services*: OAR 345-022-0110, and III.Q.1. *Noise Control Regulations*: OAR 340-035-0035, the design, construction, and operation of the proposed BESS are not expected to significantly alter the noise, traffic, water use, wastewater disposal, or visual impacts of the facility. Temporary increases in noise and traffic from construction of the BESS are expected to be less extensive than those from construction of Unit 1 and Unit 2, and are not likely to affect the quality of recreational opportunities in the area. Construction of the BESS would be short-term and limited in duration. During operation, the BESS would not cause an increase in traffic, noise, water or wastewater use or disposal, or visual effects to recreational opportunities.

Conclusions of Law

Based on the recommended findings of fact above, the Department recommends that the Council find that the facility, as modified by the proposed changes, is not likely to result in a significant adverse impact to important recreational opportunities in the analysis area, and would continue to comply with the Council's Recreation standard.

III.M. Public Services: OAR 345-022-0110

> *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to the ability of public and private providers within the analysis area described in the project order to provide: sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.*
>
> *(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.*
>
> *****

Findings of Fact

The Council's Public Services standard requires the Council to find that the facility, with proposed changes, is not likely to result in significant adverse impacts on the ability of public and private service providers to supply sewer and sewage treatment, water, stormwater drainage, solid waste management, housing, traffic safety, police and fire protection, health care, and schools. Pursuant to OAR 345-022-0110(2), the Council may issue a site certificate for a facility that would produce power from wind energy without making findings regarding the Public Services standard; however, the Council may impose site certificate conditions based upon the requirements of the standard.

In accordance with OAR 345-001-0010(59)(b) and consistent with the study area boundary, the analysis area for potential impacts to public services from construction and operation of the facility, with proposed changes, is defined as the area within and extending 10-miles from the

site boundary. On July 11, 2019, the Columbia County Planning Department submitted a letter on the record stating that the *Request for Amendment 11* had included accurate findings of fact on all relevant sections of the Columbia County Zoning Ordinance and the Columbia County Comprehensive Plan, and made no comment regarding any potential issues to public services.[57]

III.M.1 Sewer and Sewage Treatment;

In the Final Order on the Application, the Council found that the construction and operation of the energy facility would not result in any significant adverse impact on the ability of local sewage collection and treatment systems to serve their other users.[58]

Operation of the proposed BESS would not use water or generate wastewater; however, some sewage is expected to be generated by construction workers on site during construction. In section 8.12.1 of *Request for Amendment 11*, the certificate holder explains that the facility is equipped with an engineered septic system which can accommodate 500 gallons of wastewater per day. The certificate holder proposes that this system will be sufficient to accommodate temporary needs of the 10 to 20 additional employees that will be on site during construction. The certificate holder proposes that it, if needed, it will utilize contractor provided chemical toilets as required by existing site certificate condition D.13(1).

Because the existing facility systems are expected to accommodate the wastewater generating during construction and operation of the proposed BESS, and existing site certificate conditions further reduce the potential for impacts on public sewer and sewage treatment facilities, the Department recommends that addition of the proposed BESS will not alter the basis for the Council's previous findings.

III.M.2 Water

In the Final Order on the Application, the Council found that construction and operation of the facility would not result in any significant adverse impact on the ability of the local water system to serve its other users.

In Section 8.12.2 of *Request for Amendment 11*, the certificate holder explains that water for the facility is currently obtained from the facility's intake structure at a permitted point of diversion on the Bradbury Slough. The certificate holder proposes that the water amounts needed for the construction of the proposed BESS, including water for dust suppression, are expected to be minimal and are not expected to exceed the water supply available under the certificate holder's existing water right. In addition, the certificate holder explains that no water will be needed on an ongoing basis for operations because the BESS will not increase the number of permanent employees at the site. If a water-based fire suppression system is installed for the proposed BESS, the certificate holder explains that the necessary water would be obtained in a single withdrawal from the permitted point of diversion under the certificate holder's existing water right, and would not increase demand on an ongoing basis.

[57] Columbia County Planning Department, Comment Letter, July 11, 2019. See Attachment B to this DPO.
[58] p. 103-104

Because the water needed for the construction and operation of the proposed BESS is not expected to exceed the amount available under the facility's existing water right, the Department recommends that the addition of the proposed BESS will not alter the basis for the Council's previous findings.

III.M.3 Stormwater drainage

The Council did not include findings specific to the impact of the facility on the ability of the local stormwater drainage system to provide services in discussions of the Public Services Standard included in previous Orders. The certificate holder similarly did not include its analysis of the impact of the proposed BESS on the local stormwater system in its discussion of the public services standard in *Request for Amendment 11*. All stormwater runoff from the facility is contained and treated onsite. The facility is within the Beaver Drainage District, and is protected by a levee system.

The Council has previously imposed conditions related to stormwater management which are relevant to this standard. Existing Site Certificate Condition D.14(4) requires all stormwater runoff from roofs and paved areas at the facility to be diverted to pervious areas to percolate into shallow groundwater. To prevent stormwater runoff from chemical storage, existing Site Certificate Condition D.6(9) requires all outdoor spill containment areas to be designed to hold the volume of precipitation that might accumulate within them during a 100-year storm event in addition to a minimum 110 percent of liquids stored.

In addition to the construction and operation of the proposed BESS, the certificate holder has proposed a modification of existing Site Certificate Condition D.6(7) to reflect that all fuel and chemical storage will be in paved spill containment areas with a curb, or appropriately sized and compatible secondary containment to allow for the use of secondary containment options that do not require installation of permanent pavement. The Department recommended additional edits to this condition in *III.D. Soil Protection*: OAR 345-022-0022, to ensure that secondary containment would be designed to accommodate runoff that has potentially come into contact with chemicals or fuels to prevent contamination of soils or groundwater.

The Department recommends that the addition of the Proposed BESS, and the proposed change to condition D.6(7), will not substantially alter the stormwater runoff from the facility or create new impacts to the ability of the local stormwater drainage system to serve its other users.

III.M.4 Solid Waste Management

In the Final Order on the Application, the Council found that construction and operation of the Facility would not have a significant adverse impact on the capacity of solid waste facilities in the analysis area. Solid Waste for the facility is currently hauled to a transfer station in St. Helens, where the waste is compacted before being transferred to the River Bend Landfill in McMinnville, Oregon.

In Section 8.12.3 of *Request for Amendment 11*, the certificate holder explains that because the BESS will be factory-built and will consist of modular components, solid waste generated during construction would likely be limited to a relatively small amount of waste in the form of packaging materials and construction debris (e.g., waste concrete from foundation construction). Excess soil produced during construction would be either trucked offsite or disposed of at the pre-approved spoils disposal area.

The certificate holder explains that operation of the BESS could produce a small amount of waste in the form of batteries requiring replacement. In section 8.13 of the *Request for Amendment 11,* the certificate holder states that it expects lithium-ion batteries to last between 7 and 10 years and for flow batteries to last between 10 and 20 years. The certificate holder proposes that battery components will be removed by a qualified vendor and recycled or disposed of. The certificate holder has proposed changes to Site Certificate Condition D.14(2) to require the segregation and recycling of lithium-ion batteries, as discussed in Section III.N. *Waste Minimization*: OAR 345-022-0120, and the certificate holder and Department have proposed amendments to Site Certificate conditions D.2(5), D.3(7), and D.3(8) related to the safe handling and disposal of batteries as described in section III.B. *Organizational Expertise*: OAR 345-022-0010 Additionally, because the proposed BESS is not expected to increase the number of permanent employees at the facility, no additional waste is expected to be generated.

In Section 8.12.3 of *Request for Amendment 11*, the certificate holder states that materials, including battery cell components, will be recycled to the extent practicable at the time of retirement to be determined by the accessibility of battery recycling at the time the service is needed. The certificate holder explains that retirement of the BESS will produce waste in the form of materials that cannot be recycled, but that these materials will be small in comparison to waste from the overall Facility.

Based on the low amounts of waste anticipated during construction, operation, and retirement of the facility, the Department recommends the Council find that the addition of the proposed BESS, with compliance with existing and amended site certificate conditions, is not likely result in a significant adverse impact on the ability of public and private providers of solid waste management to deliver services.

III.M.5 Housing

In the *Final Order on the Application*, the Council found that, although the availability of permanent housing in the analysis area is limited, sufficient housing is available in the local area to accommodate the construction and operation of the Facility.[59]

In section 8.12 of Request of Amendment 11, the certificate holder explains that it estimates that construction of the BESS would involve a maximum of 20 employees, and an average of 10

[59] Final Order on the Application, p. 105.

employees over a 12-month construction schedule. Operation of the proposed BESS is not expected to increase the number of permanent employees at the facility.

In section 8.12.4, the certificate holder explains that in an estimated 1,586 housing units were available in the communities of Prescott and Rainier in Oregon (60 units) and Kelso and Longview in Washington (1,526 units) in 2017. This estimate does not appear to include housing that may be available in other communities such as Clatskanie.

Due to the relatively low number of employees expected to be involved in the construction of the BESS, and based on the assumption that there will be no additional permanent employees at the facility, the Department recommends the Council find the that the addition of the proposed BESS is unlikely to have a significant adverse impact on the availability of housing within the analysis area.

III.M.6 Traffic Safety

In the Final Order on the Application, the Council imposed Site Certificate Conditions D.13(2) through (7) and found that, in compliance with the conditions, construction and operation of the Facility would not adversely affect traffic in the analysis area.

These findings were based on temporary impacts from an estimated 350 daily trips (330 cars and 20 trucks) over 24 months, and a permanent increase in traffic from about 40 daily trips on an ongoing basis. In comparison, in Section 8.12.5 of *Request for Amendment 11*, the certificate holder estimates that the construction of the proposed BESS will require approximately 40 total trips to deliver containers, electrical equipment, and concrete to the site using the same transportation and supply routes as previously approved for the facility. No permanent increase in traffic is expected because operation of the proposed BESS is not expected to increase the number of permanent employees at the facility, and will not require the ongoing, regular restocking of supplies or removal of waste products.

Due to the relatively low number of vehicle trips expected to be involved in the construction of the BESS, and based on the assumption that there will be no additional permanent employees at the facility, the Department recommends the Council find the that the addition of the proposed BESS, in compliance with existing Site Certificate Conditions D.13(2) through D.13(7) and the Amended Traffic Improvement Agreement, is unlikely to alter the basis for the Council's previous findings.

III.M.7 Police Protection

In the Final Order on the Application, the Council found that the construction and operation of the Facility would not place significant additional demand on local police protection services.[60]

[60] Final Order on the Application, p. 112.

In section 8.12.6 of *Request for Amendment 11*, the certificate holder explains that the Columbia County Sherriff's Department and Oregon State Police will continue to provide the facility with first-response protection. There may be a small temporary increase in demand for police services during construction; however, because the proposed BESS would be located inside multiple layers of security as described in section II.A. *Requested Amendment*, and there are not expected to be additional permanent employees at the facility, no permanent increase in demand for police services is expected.

Because no permanent increase in demand for police services is expected, the Department recommends the Council find that the addition of the proposed BESS does not alter the basis for the Council's previous findings.

III.M.8. Fire Protection

In the *Final Order on the Application*, the Council found that construction and operation of the Facility would not significantly affect the Clatskanie Rural Fire Department's ability to provide fire protection service within the analysis area, and imposed Conditions D.13(8), (9), and (10) related to Fire Protection Services.[61]

In section 8.12.7 of *Request for Amendment 11*, the certificate holder explains that the addition of the proposed BESS could present a potential fire hazard at the facility if lithium-ion batteries are selected. While not specifically addressed in the Request, a 2016 hazard assessment published by the Fire Protection Research Association explains that "due to the presence of a flammable organic electrolyte, Li-ion batteries can experience thermal runaway reactions resulting in the combustion of the flammable organics and the potential rupture of the battery."[62] However, this risk can be mitigated through facility design measures and fire safety and suppression systems, as described below.

The certificate explains how fire suppression systems would be incorporated into the modular battery containers if Lithium-ion battery chemistry is selected:

> "Lithium-ion battery systems are designed to prevent fire by detailed electronic monitoring of battery function, so that the electrical connection to the batteries will be shut down if battery function or temperature is outside of the allowable operating range, and operators will be alerted to respond to anomalies before they become unsafe. In the unlikely event that a fire does occur, the systems are designed to prevent the spread of fire between battery modules by virtue of their physical arrangement and by employing barriers within the enclosure. Enclosures have adequate internal fire protection and temperature control to contain the heat and flames. Depending on the final design of the BESS, a clean agent system that disperses an inert gas that poses a low health risk to those responding to a fire will likely be installed. Other possible systems include a gas-pressured deluge system or dry pipe system. If selected, a gas-pressured deluge system is designed to simultaneously discharge

[61] Final Order on the Application, pp. 112-113

[62] Long, R.T. and Blum, A (2016), "Lithium Ion Batteries Hazard and Use Assessment - Phase III" p. 10.

water from all sprinkler heads as soon as the system is activated. An independent detector system (such as a heat detector or smoke detector) will control system activation. A dry pipe system, in which the installation pipe work is permanently charged with gas under pressure above the alarm valve, is often installed in cold climates where pipes could freeze. In such a system, the gas pressure drops when a sprinkler head opens, allowing the dry pipe valve to open and admit water to the system."

The certificate holder explains that a flow-battery system would also have a fire suppression, but since most flow-battery chemistries utilize a nonflammable electrolyte, they require a less complex suppression systems. The certificate holder proposes that if flow batteries are chosen, appropriate extinguishing media include water spray, alcohol-resistant foam, a dry chemical, or carbon dioxide.

In addition to the fire suppression system incorporated into the battery containers, the certificate holder represents that it will implement the following measures if a lithium-ion battery system is selected:

- The battery systems will be stored in completely contained, leak-proof modules, each with a heating, ventilation, and air conditioning system; a fire detection and suppression system; and an underground conduit to contain all wiring.

- Operations and maintenance staff will conduct frequent inspections of the battery systems according to the manufacturer's recommendations.

- Per Condition D.13(8), battery storage and fire protection systems will comply with applicable standards specified by the Columbia County building department through the permitting process, which will include the Uniform Fire Code, as amended by Oregon and the National Fire Protection Association standards, and all other applicable fire protection standards in effect at the time of construction.

- The Facility's existing Emergency Response Plan will be modified as appropriate with response procedures specific to the BESS in the event of an emergency such as a fire. Updated Emergency Response Plans will be shared with the local fire protection providers.

While the certificate holder proposes these measures only if a lithium-ion battery system is selected, the Department recommends that they are appropriate for both lithium-ion and flow-battery systems. The certificate holder explains that the proposed on-site fire protection measures are consistent with battery manufacturer recommendations and with fire codes applicable to battery storage systems. The Department also recommends that these measures are consistent with requirements of the Site Certificate, with the exception that there is currently no requirement for the certificate holder to share its emergency response plans with local protection providers. To document this representation, the Department recommends Council impose a new condition, as follows:

> D.13(12) Before beginning operation of the BESS, the certificate holder will provide Emergency Response Plans for the facility, updated with response procedures specific to the BESS, to the Clatskanie Rural Fire Department, the St. Helens Fire District, and the Department.

The certificate holder explains that transportation of lithium-ion batteries is subject to federal regulation under 49 CFR 173.185. The regulations include requirements for the prevention of a dangerous evolution of heat, short circuits, and damage to the terminals, and require that no battery come in contact with other batteries or conductive materials. The certificate holder explains that adherence to the requirements and regulations, personnel training, safe interim storage, and segregation from other potential waste streams will minimize any public hazard related to transport, use, or disposal of the batteries. The Department has proposed amendments to Site Certificate Condition D.2(5) to clarify the applicability of these provisions to the handling, transportation, and disposal of batteries and battery wastes, as discussed in Section III.B. *Organizational Expertise*: OAR 345-022-0010.

The Department agrees that proposed on-site fire protection measures and facility design features are adequate to minimize additional demand on local fire protection providers. Based on the analysis above, and the Department recommends the Council find that the construction and operation of the BESS, in compliance with existing, amended, and new site certificate conditions, is not likely to significantly impact the ability of local fire protection service providers to provide fire protection service.

III.M.9 Healthcare

In the *Final Order on the Application*, the Council found that the construction and operation of the Facility would not adversely affect medical services in the analysis area.[63] In Section 8.12.8 of *Request for Amendment 11*, the certificate holder states that the facility will continue to be serviced by St. Johns Medical Center in Longview, Washington, and that the Clatskanie Rural Fire Department will continue to provide emergency medical services.

Based on the assumption that the proposed addition of the BESS will not increase the number of permanent employees at the facility, and given the limited scope of construction activities associated with the BESS, the Department recommends that the addition of the proposed BESS will not alter the basis for Council's previous finding.

III.M.10 Schools

In the *Final Order on the Application*, the Council found that the construction and operation of the Facility would not adversely affect school districts in the analysis area.[64] In Section 8.12.9 of *Request for Amendment 11*, the certificate holder states that schools within the Clatskanie

[63] Final Order on the Application, p. 113
[64] Ibid.

School District, which serves the area the facility is located in, continue to operate below their designed capacity.

Based on the assumption that the proposed addition of the BESS will not increase the number of permanent employees at the facility, and because the presence of temporary workers is not expected to impact the student population in the area, the Department recommends that the addition of the proposed BESS will not alter the basis for Council's previous finding.

Conclusions of Law

Based on the foregoing analysis, and subject to the existing, and recommended new and conditions, the Department recommends that the Council find that the facility, with proposed changes, would continue to comply with the Council's Public Services standard.

III.N. Waste Minimization: OAR 345-022-0120

> *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that, to the extent reasonably practicable:*
>
> *(a) The applicant's solid waste and wastewater plans are likely to minimize generation of solid waste and wastewater in the construction and operation of the facility, and when solid waste or wastewater is generated, to result in recycling and reuse of such wastes;*
>
> *(b) The applicant's plans to manage the accumulation, storage, disposal and transportation of waste generated by the construction and operation of the facility are likely to result in minimal adverse impact on surrounding and adjacent areas.*
>
> *(2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.*
> *****

Findings of Fact

The Waste Minimization Standard requires the Council to find that the certificate holder will minimize the generation of solid waste and wastewater, and that the waste generated would be managed to minimally impact surrounding and adjacent areas.

In Section 8.13 of *Request for Amendment 11*, the certificate holder explains that that construction of the BESS will generate solid waste including concrete waste from the construction of concrete pads for container and inverter support, erosion control materials and packaging materials. The certificate holder does not provide specific measures it will take to minimize generation of these materials; however, given the limited scope of construction required for the BESS this waste is unlikely to result in significant adverse impacts to the surrounding area as discussed in Section *III.M.4 Solid Waste Management.* The certificate holder

explains that as well as a limited amount of waste from paints, adhesives, and lubricants may be generated during construction, and the contractor will be responsible for disposing of the chemicals after construction in compliance with all applicable laws and regulations, as required by Site Certificate Condition D.2(5). If excess soil is produced during construction, the certificate holder explains it would be transported offsite or disposed of at the spoils disposal area, which the Council approved in the Final Order on Request for Amendment 3.

The Certificate Holder explains that that operation of the BESS may generate waste from the repair or replacement of electrical equipment, as well as periodic replacement of the batteries. Certificate holder expects lithium-ion batteries to last between 7 and 10 years and flow-batteries to last between 10 and 20 years. Certificate holder explains that battery modules would be removed and recycled or disposed by a qualified vendor as needed to keep the Facility operational. The certificate holder proposes a modification to Site Certificate Condition D.14(2) to address the potential recycling and disposal of lithium-ion batteries. The Department has included additional editorial changes to the condition to improve clarity:

> D.14(2) During construction, operation and retirement of the energy facility, the Certificate Holder shall segregate all used oil~~,~~; mercury-containing lights~~,~~; and lead-acid, lithium-ion, and nickel cadmium batteries~~,~~. The Certificate Holder shall store such materials on-site, and deliver such materials to a recycling firm specializing in the proper disposal of such materials.

Potentially hazardous materials associated with the BESS would be the lithium battery cells if selected, which could contain lithium-ion electrolyte gel or liquid. If flow batteries are selected, they may contain potentially hazardous electrolyte fluid. The fire suppression system could also contain hazardous fire-suppressing chemicals. Containment of leaks or spills of hazardous material will be incorporated into the battery container design, and the materials would be managed according to the Materials Management and Monitoring Plan required under Existing Site Certificate Condition D.3(8).

Distribution transformers may contain either a natural ester or mineral oil. Oils will be managed in accordance with the existing site SPCC plan discussed in Section *III.D. Soil Protection*: OAR 345-022-0022.

Non-hazardous materials associated with the BESS include the battery module cases, storage racks, the electrical wiring used to connect the battery modules to the switchgear, up to five 10-foot by 40-foot metal containers, at least two transformers and one bi-directional inverter for each container, one cooling system for each container, and electrical cabling to connect the container systems to the transformers, inverters, and the substation. Existing Site Certificate Condition D.14(1) requires the certificate holder to separate any of these materials that are recyclable from the solid waste stream during construction, operation, or retirement of the facility to the extent practicable.

Conclusions of Law

Based on the foregoing analysis, and subject to the existing, and recommended new and conditions, the Department recommends that the Council find that the facility, with proposed changes, would continue to comply with the Council's Waste Minimization standard.

III.O. Division 23 Standards

The Division 23 standards apply only to "nongenerating facilities" as defined in ORS 469.503(2)(e)(K), except nongenerating facilities that are related or supporting facilities. The facility, with proposed changes, would not be a nongenerating facility as defined in statute and therefore Division 23 is not applicable to the facility, with proposed changes.

III.P. Division 24 Standards

The Council's Division 24 standards include specific standards for the siting of energy facilities, including wind projects, underground gas storage reservoirs, transmission lines, and facilities that emit carbon dioxide. While some Division 24 standards are applicable to the facility in general, none are applicable to the changes proposed in *Request for Amendment 11*.

III.Q. Other Applicable Regulatory Requirements Under Council Jurisdiction

Under ORS 469.503(3) and under the Council's General Standard of Review (OAR 345-022-0000), the Council must determine whether the facility, with proposed changes, complies with "all other Oregon statutes and administrative rules…as applicable to the issuance of a site certificate for the proposed facility." This section addresses the applicable Oregon statutes and administrative rules that are not otherwise addressed in Council standards, including noise control regulations, regulations for removal or fill of material affecting waters of the state, and regulations for appropriating ground water.

<u>III.Q.1. Noise Control Regulations: OAR 340-035-0035</u>

(1) Standards and Regulations:
*****
(b) New Noise Sources:

(B) New Sources Located on Previously Unused Site:

(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, L10 or L50, by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule, except as specified in subparagraph (1)(b)(B)(iii).

(ii) The ambient statistical noise level of a new industrial or commercial noise source on a previously unused industrial or commercial site shall include all noises generated or indirectly caused by or attributable to that source including all of its related activities.

Sources exempted from the requirements of section (1) of this rule, which are identified in subsections (5)(b) - (f), (j), and (k) of this rule, shall not be excluded from this ambient measurement.

Findings of Fact

The Department of Environmental Quality (DEQ) noise control regulations at OAR 340-035-0035 have been adopted by Council as the compliance requirements for EFSC-jurisdiction energy facilities. The analysis area for the Noise Control Regulation is the area within and extending 1-mile from the site boundary.

In the *Final Order on the Application*, the Council found the facility met the DEQ noise standard and imposed Site Certificate Conditions E.1.a.(1) through (5) to address noise from the facility. This finding was made following a Contested Case on the issue of noise.[65] In the *Final Order on Request for Amendment 7*, the Council found that the facility would continue to meet the standard with the changes to then proposed Unit 2, and imposed additional monitoring and measurement requirements through Site Certificate Conditions E.1.a(6) and (7) to ensure compliance with the standard.[66]

In section 10.1 of *Request for Amendment 11*, the certificate holder states that noise from construction of the BESS will generally be of lesser magnitude and duration than construction of noise from construction of Units 1 and 2. The certificate holder explains that noisy construction activities will be limited to daytime hours, as required by Site Certificate Condition E.1.a.(1), and that nighttime construction activities will be of limited duration and limited to operations such as wire splicing, which would not exceed the existing noise limits summarized in Table 8.

The certificate holder explains that the operation of the proposed BESS would add system noise from components including inverters and associated HVAC systems and transformers, but that the components would emit a low level of sound compared to equipment in operation for Unit 1 and 2. The certificate holder states that the entire BESS will be specified to yield a sound level of not more than 65db (A-weighted scale) (dBA) at 50 feet.

The certificate holder proposes that operational sound levels from Unit 1, Unit 2 and the predicted noise from the BESS will not exceed the limits imposed by the DEQ rule. As evidence, the certificate holder provided the estimated values in Table 5. BESS and Port Westward Operation Sound Levels (L50, dBA) which shows the predicted noise levels of the BESS added to the documented noise levels from Unit 1 and Unit 2 at residential receiver sites identified in Request for Amendment 7.

[65] Final Order on the Application, p. 139-141.
[66] Final Order on Request for Amendment 7, p. 34.

Table 5. BESS and Port Westward Operation Sound Levels (L50, dBA)

Site	Description	PW1 + PW2 + Ambient	BESS	PW2 + Ambient BESS + PW1 +	Noise Limit (L50, dBA)	Comply with Limit
1	18645 Hermo Road (Oregon)	34	24	34	50	Yes
2	80869 Kallunki Road (Oregon)	36	24	36	43	Yes
5	128 Kathy Road (Washington)	40	23	40	50	Yes
6	108 Kathy Road (Washington)	39	24	39	44	Yes
7	233 Eagle Crest Drive (Washington)	42	26	42	48	Yes

Based on this assessment, the Department recommends Council find that operational noise levels from the proposed BESS are not likely to alter the certificate holders' ability to comply with OAR 340-035-0035 and existing Site Certificate Conditions E.1.a.(1) through (3) are likely sufficient to address noise associated with construction of the proposed BESS.

Conclusions of Law

Based on the foregoing findings, the Department recommends that the Council find that the facility, with proposed changes, is likely to continue to comply with the Noise Control Regulations in OAR 340-035-0035(1)(b)(B).

III.Q.2. Removal-Fill

The Oregon Removal-Fill Law (ORS 196.795 through 196.990) and Department of State Lands (DSL) regulations (OAR 141-085) require a removal-fill permit if 50 cubic yards or more of material is removed, filled, or altered within any waters of the state, including, but not limited to, wetlands.

The analysis area for potential impacts to wetlands and other waters of the state, as defined in the project order, is the area within the site boundary.

Findings of Fact

In the Final Order on the Application, the Council directed the Department of State Lands to issue a Removal/Fill Permit, provided that all unavoidable wetland impacts are fully mitigated in compliance with approved mitigation plans pursuant to the conditions in this Order and the Removal/Fill Permit. Taking into account mitigation, and subject to compliance with the conditions of the site certificate and the permit, the Council found that the certificate holder complied the State Removal/Fill Law.

The certificate holder provided an updated wetland delineation report as Attachment 6 to *Request for Amendment 11*. No wetlands or waters were identified within the proposed site of the BESS, or the spoils disposal area; however, a 3.09 acre palustrine emergent wetland adjacent the spoils disposal area was identified. This wetland area was previously identified,

and in the *Final Order on Request for Amendment 3* the Council imposed Site Certificate Condition E.1.b to require that the certificate holder clearly stake the wetland boundary adjacent to the spoils disposal area prior to any disturbance, including disposal of soil, in the spoils disposal area and that the certificate holder leave the staking in place until it has completed all soil disturbing activity. This condition was intended to avoid the potential impacts on the wetland from disposal of soils from construction of Units 1 and 2, and is likely to be sufficient to address the potential impacts from construction of the proposed BESS.

Conclusions of Law

Based on the foregoing findings of fact and conclusions, the Department recommends that the Council find that subject to compliance with existing Site Certificate Condition E.1.b, the facility, with the changes proposed in *Request for amendment 11,* will continue to comply with the Oregon Removal/Fill Law.

III.Q.3. Water Rights

Under ORS Chapters 537 and 540 and OAR Chapter 690, the Oregon Water Resources Department (OWRD) administers water rights for appropriation and use of the water resources of the state. Under OAR 345-022-0000(1)(b), the Council must determine whether the facility would comply with these statutes and administrative rules. OAR 345-021-0010(1)(o)(F) requires that if a facility needs a groundwater permit, surface water permit, or water right transfer, that a decision on authorizing such a permit rests with the Council.

Findings of Fact

In Section 10.3 of the *Request for Amendment 11*, the certificate holder explains that when the certificate holder initially obtained a site certificate the development of an onsite sewage treatment system incorporating a septic tank, dosing tank, and bottomless sand filter was considered a form of wastewater discharge that required a Water Pollution Control Facilities (WPCF) Permit from DEQ.

In the Final Order on the Application, the Council found that the facility met the requirements for a WPCF permit, and imposed two DEQ-recommended conditions related to the permit: Condition E.1.d(1) required PGE to demonstrate before beginning construction that DEQ had issued a permit allowing for on-site sanitary waste disposal and Condition E.1.d(2) requires PGE to comply with state laws and rules applicable to WPCF Permits that are adopted in the future.

The certificate holder further explains that it received a letter from DEQ in March 2014, informing the certificate holder that revisions to OAR 340-071 allowed for the termination of the WPCF permit and conversion to oversight by Columbia County provided specific requirements were met. Certificate holder provided the necessary documentation and forms to DEQ and the WPCF permit was terminated.

In *Request for Amendment 11*, the certificate holder has proposed a modification to the Wastewater Section in Section C.1.a to reflect that the septic system is now under the oversight

of Columbia County. The certificate holder did not propose any modifications to the site certificate conditions related to Condition E.1.d(1) or Condition E.1.d(2).

Conclusions of Law

Based on the foregoing findings of fact, the Department recommends that the Council conclude that the changes proposed in *Request for Amendment 11* will not require changes to a groundwater permit, surface water permit, or water rights.

IV. PROPOSED CONCLUSIONS AND ORDER

Based on the recommended findings and conclusions included in this order, the Department recommends that Council make the following findings:

1. The proposed facility modifications included in Request for Amendment 11 comply with the requirements of the Oregon Energy Facility Siting Statutes, ORS 469.300 to 469.520.

2. The proposed facility modifications included Request for Amendment 11 comply with the standards adopted by the Council pursuant to ORS 469.501.

3. The proposed facility modifications included in Request for Amendment 11 comply with all other Oregon statutes and administrative rules identified in the project order as applicable to the issuance of an amended site certificate for the facility.

Accordingly, the Department recommends that the Council find that the proposed facility modifications included in Request for Amendment 11 of the Site Certificate for the Port Westward Generating Project complies with the General Standard of Review (OAR 345-022-0000). The Department recommends that the Council find, based on a preponderance of the evidence on the record, that the site certificate may be amended as requested.

Proposed Order

The Department recommends that the Council issue the Eleventh Amended Site Certificate for the Port Westward Generating Project as proposed in Attachment A.

Notice of the Right to Appeal

[Text to be added to Final Order]

Issued this 29th day of August, 2019

The OREGON DEPARTMENT OF ENERGY

By: _____

Todd Cornett, Assistant Director for Siting
Oregon Department of Energy, Energy Facility Siting Division

Attachments:
Attachment A: Draft Amended Site Certificate (Red-line version)
Attachment B: Reviewing Agency Comments on preliminary Request for Amendment 11
Attachment C: [Reserved for Draft Proposed Order Comments/Index]
Attachment D: Draft Amended Revegetation and Noxious Weed Control Plan

Attachment A: Draft Amended Site Certificate (Red-line version)

~~TENTH~~ ELEVENTH AMENDED

SITE CERTIFICATE

FOR THE

PORT WESTWARD GENERATING PROJECT

Issued By

OREGON ENERGY FACILITY SITING COUNCIL
~~625 MARION~~550 CAPITOL STREET NE
SALEM, OR 97301~~-3737~~

~~*PHONE:* 503-378-4040~~
~~*FAX:* 503-373-7806~~

~~August xx, 2013~~AUGUST 29, 2019

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~~TENTH~~ ELEVENTH AMENDED
SITE CERTIFICATE
FOR THE
PORT WESTWARD GENERATING PROJECT

A. INTRODUCTION

This site certificate for the Port Westward Generating Project ("PWGP or Project") is issued and executed in the manner provided by ORS Chapter 469, by and between the State of Oregon ("State"), acting by and through its Energy Facility Siting Council ("Council"), and the Portland General Electric Company ("PGE" or "Certificate Holder").

The findings of fact, reasoning and conclusions of law underlying the terms and conditions of this site certificate are set forth in the following documents, which by this reference are incorporated herein: (a) the Council's Final Order in the Matter of the Application for a Site Certificate for the Port Westward Generating Project, which the Council granted on November 8, 2002; (b) the Council's Final Order in the Matter of the Site Certificate for the Port Westward Generating Project Request for Amendment No. One, which the Council granted on December 5, 2003; (c) the Council's Final Order in the Matter of the Site Certificate for the Port Westward Generating Project Request for Amendment No. Two, which the Council granted on September 24, 2004; ~~-~~(d) the Council's Final Order in the Matter of the Site Certificate for the Port Westward Generating Project Request for Amendment No. Three, which the Council granted on January 28, 2005; ~~and~~ (e) the Council's Final Order in the Matter of the Fourth Request to Amend the Site Certificate for the Port Westward Generating Project, which the Council granted on May 19, 2006; (f) the Council's Final Order in the Matter of the Fifth Request to Amend the Site Certificate for the Port Westward Generating Project, which the Council granted on September 29, 2006~~,~~; (g) the Council's Final Order in the Matter of the Sixth Request to Amend the Site Certificate for the Port Westward Generating Project, which the Council granted on March 27,2009; (h) the Council's Final Order in the Matter of the Seventh Request to Amend the Site Certificate for the Port Westward Generating Project, which the Council granted on March 12, 2010; (i) the Council's Final Order in the Matter of the Eighth Request to Amend the Site Certificate for the Port Westward Generating Project, which the Council granted on August 19, 2011; (j) the Council's Final Order in the Matter of the Ninth Request to Amend the Site Certificate for the Port Westward Generating Project, which the Council granted on March 15, 2013; ~~and~~ (k) the Council's Final Order in the Matter of the Tenth Request to Amend the Site Certificate for the Port Westward Generating Project, which the Council granted on August ~~xx~~23, 2013~~.~~; and (l) the Council's Final Order in the Matter of the Eleventh Request to Amend the Site Certificate for the Port Westward Generating Project, which the Council granted on August 29, 2019~~.~~ ~~-~~[Amendments No. 1, 2, 3, 4, 5, 6, 7, 8, 9, ~~&~~ 10, & 11.]~~.~~ Collectively, we refer to the Final Orders listed in (a) through (~~k~~l) as "the Orders."~~.~~

In interpreting this site certificate, any ambiguity shall be clarified by reference to, and in the following priority: this Site Certificate, the record of the proceedings that led to the Orders, and the Application for a Site Certificate for the Port Westward Generating Project. As used in this Site Certificate, the "application for site certificate" or the "ASC" includes: (a) the Application for a Site Certificate for the Port Westward Generating Project, which the ~~Department of Energy ("Department")~~Certificate Holder filed on April 11, 2002; (b) the Certificate Holder's Request for First Amendment to the Site Certificate for the Port Westward Generating Project, which the Council received on October 25, 2003; (c) the Certificate Holder's Request for Second Amendment to the Site Certificate for the Port Westward Generating Project, which the Council received on May 7, 2004; (d) the Certificate Holder's Request for Third Amendment to the Site Certificate for the Port Westward Generating Project, which the Council received on November 3, 2004~~,~~; (e) the Certificate Holder's Request for Fourth Amendment to the Site Certificate for the Port Westward Generating Project, which the Council received on January 18, 2006~~,~~; (f) the Certificate Holder's Request for Fifth Amendment to the Site Certificate for the Port Westward Generating Project, which the Council received on July 18, 2006~~,~~; (g) the Certificate Holder's Request for Sixth Amendment to the Site Certificate for the Port Westward Generating Project, which the Council received on November 7,2008~~,~~; (h) the Certificate Holder's Request for Seventh Amendment to the Site Certificate for the Port Westward Generating Project, which the Council received on September 18, 2009~~,~~; (i) the Certificate Holder's Request for the Eighth Amendment to the Site Certificate for Port Westward Generating Project, which the Council received on November 4, 2010~~,~~; (j) the Certificate Holder's Request for the Ninth Amendment to the Site Certificate for Port Westward Generating Project, which the Council received on October 30, 2012~~,~~; ~~and~~ (k) the Certificate Holder's Request for the Tenth Amendment to the Site Certificate for Port Westward Generating Project, which the Council received on May 28, 2013; and (l) the Certificate Holder's Request for the Eleventh Amendment to the Site Certificate for Port Westward Generating Project, which the Council received on ~~April xx~~July 12, 2019~~.~~ [Amendments 1 through ~~10~~11.]~~.~~

The terms used in this Site Certificate shall have the same meaning set forth in ORS 469.300, 469.503(2)(e) and ~~Oregon Administrative Rules (~~OAR~~)~~ 345-001-0010, except where otherwise stated or where the context clearly indicates otherwise.

B. SITE CERTIFICATION

1. To the extent authorized by State law and subject to the conditions set forth herein, the State approves and authorizes the Certificate Holder to construct, operate and retire a natural gas-fired~~, combined cycle combustion turbine energy facility~~ power plant, together with
certain related or supporting facilities, at the site as described in Section C of this Site Certificate, near Clatskanie, Oregon. ORS 469.401(1). [Amendment 11]

2. This site certificate shall be effective (1) until it is terminated pursuant to OAR 345-027-0110 or the rules in effect on the date that termination is sought, or (2) until the Site Certificate is

revoked pursuant to 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).

3. This Site Certificate does not address, and is not binding with respect to, matters that were not addressed in the ~~Council's Final~~ Orders~~, as amended~~. These matters include, but are not limited to: building code compliance, wage, hour and other labor regulations, local government fees and charges, and other design or operational issues that do not relate to siting the Project; 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 469.401(4) and 469.503(3). [Amendment 11]

4. Both the State and the Certificate Holder shall abide by local ordinances and state law and the rules of the Council in effect on the date this Site Certificate is executed. In addition, upon a clear showing of a significant threat to the 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).

5. 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).

6. Subject to the conditions herein, this Site Certificate binds the State and all counties, cities and political subdivisions in this state as to the approval of the site and the construction, operation and retirement of the Project as to matters that are addressed in and governed by this Site Certificate. ORS 469.401(3).

7. 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).

8. After issuance of this Site Certificate, each state agency or local government agency that issues a permit, license or other approval for the Project shall continue to exercise enforcement authority over such permit, license or other approval. ORS 469.401(3).

9. After issuance of this Site Certificate, the Council shall have continuing authority over the site and may inspect, or direct the Department to inspect, or request another state agency or local government to inspect, the site at any time in order to assure that the Project is being operated consistently with the terms and conditions of this Site Certificate. ORS 469.430.

10. The Certificate Holder may develop the energy facility in two phases. Phase 1 would consist of the southernmost generating unit ("Unit 1"), including one combustion turbine generator, heat recovery steam generator, steam generator, one step-up transformer bank, auxiliary transformer, and cooling tower. Phase 1 would also include all ~~of the~~ energy facility components ~~common to the two units~~ and ~~the~~ related or supporting facilities common to the two units. Phase 2 would consist of the northernmost generating unit ("Unit 2") and its associated facilities. All conditions of this Site Certificate apply equally to Phase 1 and Phase 2, unless a condition specifies different obligations for Phase 1 or Phase 2. [Amendments No. 1, 3 & ~~3~~11]

C. SITE DESCRIPTIONS

C.1. FACILITY

C.1.a. Major Structures and Equipment

Major Structures and Equipment. The net electric power output of the energy facility will be about 650 MW comprised of base load generation, power augmentation (i.e., duct burning), and non-base load generation.~~)~~ The power augmentation and non-base load generation provide flexible peaking, load-following, and wind integration services that are needed to maintain a reliable and stable utility system. [Amendment No. 7 & 11]

Unit 1 of the energy facility will consist of one heavy-duty frame-type combustion turbine generator (Mitsubishi G Class), one heat recovery steam generator ("HRSG"), and one steam turbine. It will burn natural gas in the combustion turbine and duct burners. Expanding gases from combustion will turn the rotor within the turbine that is connected to an electric generator-. The hot gases exhausted from the combustion turbine and duct burners will be used to raise steam in the HRSG. Steam from the HRSG will be expanded through the steam turbine, driving its own electric generator. [Amendments No. 1, 7 & ~~7~~11.]

For Unit 1, the combustion turbine will be housed in a turbine building that provides thermal insulation, acoustical attenuation and fire extinguishing media containment. The turbine building, occupying a footprint measuring about 150 feet by 250 feet and standing about 90 feet high, will also house the steam turbine generator, condenser and balance of plant equipment. -The enclosure will allow access for routine inspection and maintenance. -The administration building, occupying a footprint measuring about 110 feet by 140 feet and standing about 30 feet high, includes the control room and administrative offices. [Amendment No. 7 & 11]

For Unit 1, the HRSG will occupy a footprint measuring about 50 feet by 150 feet and will stand about 110 feet high. A stack will be provided for the HRSG. The stack will be about 36 feet in diameter and 200 feet high. [Amendment No. 7]

For Unit 2, ~~aeroderivative combustion turbine~~reciprocating internal combustion generators will be equipped with outdoor enclosures with thermal insulation, acoustical attenuation and fire extinguishing media containment. ~~Reciprocating engine~~Unit 2 generators will be housed in an engine building, occupying a footprint measuring up to 100 feet by 500 feet and standing about 30 to 40 feet high. [Amendment No. 7]

Six transformers will step-up the generator voltages to the substation voltage of 230 kilovolts ("kV"). Two auxiliary transformers will supply power for plant auxiliary loads. [Amendments No. 1 & **7]**

Two mechanical-draft cooling towers will be used to remove the waste heat from the main condenser and the plant auxiliary heat exchangers. The cooling towers and circulating water pumps will cover an area of about 75 feet by 650 feet and will stand about 50 feet high. [Amendment No. 7]

A switchyard or dead-end transmission structure will interconnect the plant's output to the 230-kV transmission network. The switchyard footprint will measure about 300 feet by ~~500~~ 550 feet. [Amendment No. 1 & 11]

An auxiliary boiler will supply steam for plant start-ups and short duration shut-downs. The auxiliary boiler will be fueled with natural gas. [Amendment No. 3]

Additional facilities will include: a plant services/warehouse building, a boiler feed pump building; a fire water pump building; a water treatment building; a clarifier; a settling basin; a condensate tank, ~~a~~ two fire water/service water storage tanks and two demineralized water storage tanks (~~440~~880,000 gallon and 1,100,000 gallon capacity respectively); lubricating oil tanks**;** a natural gas metering station; natural gas compressor stations with electric compressors of 1,000 to 7,000 horsepower total, enclosed in buildings with acoustical insulation; and, aqueous ammonia storage tanks (each with up to 70,000-gallon capacity and equipped with containment**). [**Amendments No. 1, 7 & ~~7~~11]

Natural gas will not be stored at the energy facility site. Diesel fuel for the fire pumps and reciprocating engine micro-pilot systems will be stored in aboveground tanks. Water treatment chemicals will be stored in permanent aboveground storage tanks or portable plastic tanks (totes). To prevent storm water runoff from chemical storage, all fuel and chemical storage will be inside buildings or under cover in paved areas with a curb, or in appropriately sized and compatible secondary containment. All individual spill containment areas will be designed to hold at least 110 percent of the volume of liquids stored within them. [Amendments No. 7 & 11]

A complete fire protection system will be installed within the buildings and yard areas at the energy facility site. The system will be designed to meet the requirements of the Uniform Fire

Code, as amended by Oregon and the National Fire Protection Association, and all other applicable fire protection standards. The fire protection system will include a fire water system, a dry chemical extinguishing system, a carbon dioxide ("CO2") extinguishing system, and portable fire extinguishers. The road system within the energy facility site will be designed for access by large trucks needed for equipment and material deliveries. The minimum turning inside radius for roads will be 40 feet.

The fire water system will include a fire water supply loop, fire hydrants, sprinkler systems, and hoses placed at appropriate locations. Reserved capacity ~~in the~~of 180,000-gallons within the Unit 1 fire water/service water storage tank and 400,000 gallons in the Unit 2 fire water tank (total 580,000 gallons) will serve as the firewater source.

The combustion turbine enclosures will be protected by foam or CO2 systems. If the systems were to activate, an alarm will sound and/or a visual indicator will light up on the gas turbine control panel.

Portable fire extinguishers will be placed at key locations within the energy facility site. The type and number of portable fire extinguishers will conform to applicable code requirements.

The Certificate Holder may develop the whole facility at the same time or it may develop only one of the generating units and the related or supporting facilities ("Phase 1") or the two units of the energy facility in two distinct phases ("Phase 1" and "Phase 2"). As referred to in this Site Certificate, the Certificate Holder would develop Phase 1 first if it develops the energy facility in phases. Phase 1 would consist of the southernmost generating unit ("Unit 1"), including a combustion turbine generator, heat recovery steam generator, steam generator, one step-up transformer bank, auxiliary transformer, and cooling tower. Phase 1 would also include all of the energy facility components ~~common to the two units~~ and ~~the~~ related or supporting facilities common to the two units. [Amendments No. 1, 3 & ~~3~~11]

Output. The net electric power output of the energy facility will be up to 650 MW, comprised of base load generation, power augmentation (i.e. duct burning), and non-base load generation. The power augmentation and non-base load generation provide flexible peaking, load-following, and wind integration services that are needed to maintain a reliable and stable utility system. [Amendments No. 1, 3 & 7]

The Certificate Holder proposes to operate Unit 1 with power augmentation technologies for 3,000 hours annually on average. The Certificate Holder proposes to operate Unit 2 as a non-base load power plant. [Amendments No. 1,3 & 7]

Fuel Use. The energy facility will use natural gas as the only fuel to power the turbines, the reciprocating engines, and the power augmentation technologies. It will use up to approximately 4,700 MMBtu per hour of natural gas at full load with the duct burners in operation at the average annual site condition. [Amendments No. 1, 3, 7 & ~~7~~11]

Water Use. The energy facility will obtain water to generate steam and to cool the steam process from an existing PGE intake structure on the Bradbury Slough of the Columbia River. For Unit 1, the Certificate Holder obtained a permanent transfer of 5.4 cfs of a water right associated with PGE's Trojan Nuclear Plant, Certificate No. 81969. -For Unit 2, PGE will obtain a permanent transfer of an additional 3.0 cfs under the same water right.[1] [Amendments No. 1, 3 &7]

Average water demand over at the energy facility will be about 2,800 gallons per minute ("gpm"), or 4.03 -million gallons per day ("gpd"). Peak water demand will be about 3,770 gpm, 5.4 million gpd, or 8.4 cubic feet per second ("cfs"). [Amendments No.1, 3 & 7]

PGE owns and operates an existing intake structure on the Bradbury Slough, which will be the authorized point of diversion for surface water rights transferred for use at the energy facility site. To serve the energy facility, PGE will place additional pumps within the existing intake facility. PGE will employ fish screens compliant with National Marine Fisheries Service ("NMFS") screening criteria and Oregon Department of Fish and Wildlife ("ODFW") criteria. [Amendments No. 1& 7]

Wastewater. Process blowdown is washdown water, filter backwash or other non-sanitary liquid waste produced within the energy facility. The average volume of process blowdown for both units combined will be about 30 gpm. Cooling system blowdown is water withdrawn from the cooling system to control the buildup of dissolved salts. The average volume of cooling system blowdown for both units combined will be about 970 -gpm, but it could vary depending on the quality of the river water supply. The energy facility will discharge its process and cooling system blowdown to the Columbia River under a National Pollution Discharge Elimination System ("NPDES") permit ~~that~~ issued to the Port of ~~St. Helens~~Columbia County ~~has requested from DEQ~~. [Amendments No. 1, 7 & ~~7~~11].

The Certificate Holder will discharge sanitary sewage to an engineered septic tank and drain field at a rate of about 500 gallons per day, ~~as permitted by a Water Pollution Control Facilities permit~~under the oversight of Columbia County. The Certificate Holder will route storm water from roofs and paved areas to pervious areas to percolate into the shallow groundwater.

C.1.b. Related or Supporting Facilities

The energy facility will include the following related or supporting facilities:

Natural Gas Pipelines. Natural gas will fuel the combustion turbine generators, reciprocating engines, and duct burners. The energy facility will be served by the Kelso-Beaver Pipeline, an existing FERC-regulated interstate pipeline with a current capacity of ~~193,000~~200,913

[1] WRD will issue the transferred water right a new number, replacing #81969

decatherms per day. PGE owns the pipeline jointly with two other parties. To create the additional capacity that will be required to serve the energy facility, PGE will add 1,000 to 7,000 compressor horsepower to the Port Westward site and/or up to 8,000 compressor horsepower to the Kelso-Beaver Pipeline. All work on the existing pipeline will be subject to FERC approval. The addition of compressor horsepower is intended to ensure 300 to 1000 psig gas pressure at the Port Westward Industrial Area with total capacity of 310 million standard cubic feet/day. [Amendments No. 1, 7 & ~~7~~11]

The interconnecting pipeline, about 18 inches in diameter, between the existing Kelso-Beaver Pipeline and the energy facility will be about 1,000 feet long and will be installed below grade with appropriate cathodic protection.

In addition, the facility will include as a related or supporting facility a secondary natural gas pipeline that will connect the energy facility to an extension of the existing 20-inch NW Natural Beaver Lateral. The connecting pipeline will be approximately 2,000 feet long and about 12 inches in diameter. The new pipeline will be installed below grade with appropriate cathodic protection. The new pipeline will be owned and operated by NW Natural. [Amendment No. 5]

Water Supply Pipeline. Water supply for the energy facility will be drawn from Bradbury Slough at about River Mile 53.8 of the Columbia River from an existing PGE intake facility for the PGE Beaver Generating Plant. The pump capacity of the existing intake facility will be expanded. No major structural improvements or modifications to the intake facility will be required. However, PGE will upgrade the fish screens to comply with NMFS and ODFW criteria~~ regardless of whether it builds the Port Westward Generating Project~~. The Certificate Holder will install a water supply pipeline about 20 inches in diameter and 6,000 feet long to convey water from the intake facility to the energy facility. The water supply pipeline will traverse upland areas and will avoid wetlands. [Amendment No. 1 & 11]

Chlorination and Electrical Control Buildings. Two small structures will be constructed on upland south of the intake facility. One structure, with a footprint of about 600 square feet, will be for chlorination. The other structure, with a footprint of about 150 feet, will be for electrical control. Underground lines in a 25-foot wide corridor will connect these structures to the intake structure. [Amendment No. 3]

Wastewater Pipeline. Process and cooling wastewater discharged from the energy facility will be collected in a settling basin and returned to the Columbia River about one-half mile northwest of the energy facility, pursuant to the ~~Port of St. Helens'~~ NPDES permit issued to the Port of Columbia County. [Amendment No. 1 & 11]

Battery Energy Storage System (BESS). The certificate holder will construct up 6 MW of battery energy storage as a related or supporting facility to Unit 2. The BESS will be factory built with batteries, enclosures, power conversion systems (inverters), an interconnection system, and

step-up transformers. The point of interconnect for the BESS will be the switchgear in the existing switchyard. [Amendment No. 11]

Utility Lines Between the Energy Facility Site and the PGE Beaver Generating Plant. The Certificate Holder will construct water, backup electricity and communications lines between the existing PGE Beaver Generating Plant and the energy facility. The Certificate Holder will install the lines below ground within existing roadways. Potable water may be conveyed to the energy facility in a pipeline from the potable water storage tank located in the vicinity of the PGE water intake facility that currently serves the PGE Beaver Generating Plant. The potable water pipeline will be about two inches in diameter. The Certificate Holder will install the potable water line underground. The potable water line will join the energy facility's water supply pipeline corridor at their intersection as shown on revised Figure B-2. [Amendment No. 1]

The Certificate Holder may also construct a demineralized water pipeline about six inches in diameter from the PGE Beaver Generating Plant to the energy facility. If the Certificate Holder constructs the demineralized water pipeline, it will not construct a water treatment building as part of the energy facility. The Certificate Holder will install a backup 13.8 kV electrical distribution line and a communications line in a conduit from the PGE Beaver Generating Plant to the energy facility. The demineralized water line, communications line, and backup electricity lines will be about 1,-200 feet long, and the portion of the potable water line between the potable water storage tank and the water supply pipeline corridor will be about 1,700 feet long [Amendments No. 1 & 3]

Temporary Construction Staging and Laydown Areas. Temporary construction staging and laydown areas totaling approximately 12.4 acres will be located around the energy facility site. Another laydown area of about 6 acres will be located on upland south of the existing PGE water intake structure. The areas will be used for storing equipment and materials and as staging areas for constructing the power plant. Construction laydown and staging areas are as depicted on Figure B-2 rev.1, submitted with the Fourth Request for Amendment on January 18, 2006. [Amendment No. 4]

In addition to the temporary construction staging and laydown areas approved through RFA #4 and through the Change Order issued April 29, 2013, which allows the Certificate Holder to use a 9.13-acre graveled area within the fence line of the adjacent Beaver Generating Plant for laydown and staging area used in the construction of Unit 2, the Certificate Holder is authorized to use an additional approximately 10.9 acres for temporary laydown, as depicted in Figures 1-3 of the Final Order approving Amendment #10. Specifically, the previously approved laydown area north of the energy facility site is expanded by approximately 1.9 acres; the previously approved laydown area to the south, in the vicinity of the water intake structure, is expanded by approximately 5.7 acres; and the Certificate Holder is authorized to use approximately 3.3 acres within the fence line of the Beaver Generating Plant. [Amendment No. 10]

Spoils Disposal Area. Excess soils from construction at the energy facility site will be spread across the spoils disposal site of about 11.6 acres, which will be located southeast of the PGE Beaver Generating Plant. [Amendment No. 3]~~.~~

Electric Transmission Line. The energy facility will deliver electric power to the regional grid by means of a new transmission line consisting of one 230 kV circuit on monopole towers (up to 120 feet high) routed along existing power line easements. There ~~are~~ were two transmission line alternatives routes under consideration, with two other short alternative segments in the vicinity of the BPA Allston Substation:

Alternative One. The first alternative will entail routing the transmission line from the energy facility to the Bonneville Power Administration ("BPA") Allston Substation near Alston, Oregon (a distance of about 10 miles).

Alternative Two. The second alternative will entail routing the transmission line from the energy facility to the PGE Trojan Substation near Goble, Oregon (a distance of about 20 miles).

PWGP and the Summit Project present a unique situation regarding the transmission lines for their facilities. The two proposed energy projects will be located close to each other and will use the same existing transmission corridor and the same towers from Port Westward to the vicinity of the BPA Allston Substation, Alternative One. The towers will be double-circuited, with PWGP on one side and the Summit Project on the other.

The Portland General Electric Transmission Group will build the transmission lines for either or both projects, depending on which energy facilities are eventually constructed. The transmission line for each project is a related or supporting facility for that project, and therefore, must be built to Council standards. However, because the Council is reviewing the applications for both projects simultaneously, because they will use the same towers, and because the same company will build and operate the transmission lines, the Council has consolidated the reviews within the PWGP proceeding and is placing conditions for the transmission lines in the site certificate for the Port Westward Generating Project.

Some conditions account for the possibility that the Certificate Holder may construct the Port Westward to BPA Allston Substation Transmission Line separately from constructing the energy facility. Additionally, if the Certificate Holder for PWGP does not construct the energy facility within the time specified in its Site Certificate or if it terminates its Site Certificate, the Council intends that the Certificate Holder of the Summit Project must amend its Site Certificate to include the 230 kV transmission line from the Summit Project to the BPA Allston Substation.

C.2. LOCATION OF THE FACILITY

C.2.a. The Energy Facility Site

The energy facility will be located about seven miles by road northeast of the city of Clatskanie in Columbia County, Oregon. The energy facility site will be located on an approximately 852-acre parcel leased to PGE by the Port of ~~St. Helens~~Columbia County in Section 15, Township 8 North, Range 4 West, Willamette Meridian. The energy facility site will be fenced and will comprise about 26 acres of the larger parcel [Amendments No. 1, 2 & 7]

Bradbury Slough of the Columbia River lies to the northeast of the energy facility site. Access to the energy facility site will be by traveling about 1.5 miles north on Kallunki Road from its intersection with Alston-Mayger Road. The existing PGE Beaver Generating Plant is located about one-half mile southwest of the energy facility site.

C.2.b. Related or Supporting Facility Sites

Natural Gas Pipeline Corridors. The primary natural gas pipeline will be about 18 inches in diameter and will interconnect with the existing Kelso-Beaver Pipeline about 1,000 feet west of the energy facility site. The natural gas pipeline corridor will lie within the 852-acre parcel leased to PGE by the Port of ~~St. Helens~~Columbia County and situated within Section 15, Township 8 North, Range 4 West, Willamette Meridian.

The secondary natural gas pipeline will be about 12 inches in diameter, extending from the energy facility to an extension of the existing NW Natural Beaver Lateral, near the northeast corner of the Beaver Generating Plant. The related or supporting portion of the new natural gas pipeline corridor will be approximately 2,000 feet long and will lie within the 852-acre parcel leased to PGE by the Port of ~~St. Helens~~Columbia County and situated within Sections 15 and 16, Township 8 North, Range 4 West, Willamette Meridian. [Amendment No. 5]

Water Supply Pipeline Corridor. The proposed water supply pipeline will supply raw water to the energy facility from the existing PGE Beaver Generating Plant water intake structure in Bradbury Slough of the Columbia River. The pipeline right-of-way will be about 50 feet wide and 6,000 feet long, will cover an area of about 7 acres, and will lie within the 852-acre parcel leased to PGE by the Port of ~~St. Helens~~Columbia County and situated within Section 15, Township 8 North, Range 4 West, Willamette Meridian.

Chlorination and Electrical Control Buildings. Two small structures will be constructed on upland south of the existing PGE Beaver Generating Plant water intake structure in Bradbury Slough. The two structures, with a combined footprint of about 750 square feet, will lie within the 852-acre parcel leased to PGE by the Port of ~~St. Helens~~Columbia County and situated within Section 15, Township 8 North, Range 4 West, Willamette Meridian. [Amendment No. 3].

Wastewater Pipeline Corridor. Water discharged from the energy facility will be returned to the Columbia River about one-half mile northwest of the energy facility. The wastewater pipeline corridor will be about 100 feet wide and 2,400 feet long, will cover an area of about 6 acres, and will lie primarily within the 852-acre parcel leased to PGE by the Port of St. ~~Helens~~

Columbia County and situated within Section 15 and 16, Township 8 North, Range 4 West, Willamette Meridian. [Amendment No. 1]

Battery Energy Storage System

The BESS will be installed within the energy facility site described in Section C.2.a. [Amendment No. 11]

Utility Line Corridor Between the Energy Facility Site and the PGE Beaver Generating Plant. The Certificate Holder will construct a potable water pipeline, backup electricity line, communications line and possibly a demineralized water pipeline from the PGE Beaver Generating Plant or the potable water tank to the energy facility site. It will install the lines a minimum depth of three feet below grade in existing roadways entirely with the 825-acre parcel that the Port of ~~St. Helens~~Columbia County has leased to PGE. The parcel is located within Section 15 and 22, Township 8 North, Range 4 West, Willamette Meridian. [Amendment No. 1]

Temporary Construction Staging and Laydown Areas. Temporary construction staging and laydown areas totaling approximately 12.4 acres will be located around the energy facility site, within the 852-acre parcel leased to PGE by the Port of ~~St. Helens~~Columbia County and situated within Sections 15 and 16, Township 8 North, Range 4 West, Willamette Meridian. Another laydown area of about 6 acres will be located on upland south of the existing PGE water intake structure within Section 15, Township 8 North, Range 4 West, Willamette Meridian. The areas will be used for storing equipment and materials and as staging areas for constructing the power plant. Construction laydown and staging areas are as depicted on Figure B-2 rev.1 as submitted with the Request for Fourth Amendment on January 18, 2006 [Amendment No. 4]

Spoils Disposal Area. Excess soils from construction at the energy facility site will be spread across the spoils disposal site of about 11.6 acres, which will be located southeast of the PGE Beaver Generating Plant, within the 852-acre parcel leased to PGE by the Port of ~~St. Helens~~Columbia County and situated within Sections 15 and 22, Township 8 North, Range 4 West, Willamette Meridian. [Amendment No. 3]

Transmission Line Corridor. The transmission line will follow one of two alternative routes:

Alternative One. Under this alternative, the energy facility will deliver electric power to the BPA Allston Substation near Alston, Oregon, by means of a new 230-kV circuit on monopole steel structures, except where it will have to cross the existing BPA lines. A separate 230 kV circuit will carry the output of the Summit Project on the same structures, as noted above. The new transmission line will be routed on an existing PGE right-of-way that is 250 feet wide, except at the BPA Allston Substation where a new right-of-way may be required. The structures will be placed on or near the centerline of the unused north half of the right-of-way. The transmission line corridor will be about 125 feet wide and 10 miles long, will occupy an area of about 300

acres, and will pass through Sections 15, 22, 23, 26, 35 and 36, Township 8 North, Range 4 West, and Sections 31, 5, 6, 4, 3 and 10, Township 7 North, Range 3 West, Willamette Meridian.

Alternative Two. Under this alternative, the energy facility will deliver electric power to Trojan near Goble, Oregon, by means of a new 230-kV circuit on monopole steel structures. Between PWGP and the BPA Allston Substation, the new transmission line will be routed on an existing PGE right-of-way 250 feet wide as described in Alternative One. The structures will be placed on or near the centerline of the unused north half of the right-of-way. Between the BPA Allston Substation and Trojan, the new transmission line will run parallel to an existing BPA transmission line. This section of the transmission line corridor will be about 125 feet wide and ten miles long, will occupy an area of about 300 acres, and will pass through Sections 10, 11, 15, 14, 23 and 24, Township 7 North, Range 3 West, and Sections 19, 30, 29, 28, 33 and 34, Township 7 North, Range 2 West, and Sections 3 and 2, Township 6 North, Range 2 West, Willamette Meridian.

Alternates 3 and 4. These short alternate segments are in the vicinity of the BPA Allston Substation. They provide flexibility for interconnecting with the substation.

~~Unanalyzed Options. As shown on Figure C-2 of the ASC, and in particular the enlarged detail of the BPA Allston Substation, there is a segment of Alignment 1 identified as "2nd (future) circuit." This Site Certificate does not address that proposed segment of Alignment 1.~~

D. COUNCIL SITING STANDARDS

D.1. [PLACEHOLDER]

[No Conditions]

D.2. ORGANIZATIONAL EXPERTISE

(1) The Certificate Holder shall report to the Department of Energy ("Department") in a timely manner any change in the ownership of Portland General Electric Company ("PGE").

(2) Before beginning construction of the energy facility, the Port Westward to Bonneville Power Administration ("BPA") Allston Substation Transmission Line, or other related or supporting facilities, the Certificate Holder shall identify to the Energy Facility Siting Council ("Council") whom it has chosen to act in the role of the engineering, procurement and construction ("EPC") contractor(s) for specific portions of the work.

(3) If the Certificate Holder chooses a third-party contractor to operate the facility, the Certificate Holder shall submit to the Council the identity of the contractor so the Council may review the qualifications and capability of the contractor to meet the standards of OAR 345-0022-0010. If the Council finds that a new contractor meets these

standards, the Council shall not require an amendment to the Site Certificate for the Certificate Holder to hire the contractor.

(4) Any matter of non-compliance under this Site Certificate shall be the responsibility of the Certificate Holder. Any notice of violation issued under the Site Certificate will be issued to the Certificate Holder. Any civil penalties levied shall be levied on the Certificate Holder.

(5) The Certificate Holder shall contractually require ~~the~~ any EPC contractor(s) and all independent contractors and subcontractors involved in the construction, ~~and~~ operation, or retirement of the facility, including contractors involved in the transportation and disposal of batteries and battery wastes, to comply with all applicable laws and regulations and with the terms and conditions of the Site Certificate. Such contractual provision shall not operate to relieve the Certificate Holder of responsibility under the Site Certificate.

(6) The Certificate Holder shall obtain necessary state and local permits or approvals required for the construction, operation and retirement of the facility or ensure that its contractors obtain the necessary state and local permits or approvals.

~~-~~(7) [Deleted]. [Amendments No. 1 & 7]

(8) Before beginning construction of the energy facility, the Certificate Holder shall deliver to the Department evidence that the Oregon Department of Environmental Quality has issued to the Port of ~~St. Helens~~Columbia County a National Pollutant Discharge Elimination System ("NPDES") permit that provides for the discharge of non-sanitary wastewater from the Port Westward Industrial Site, including all non-sanitary wastewater produced by the energy facility.

(9) Before beginning construction of the energy facility, the Certificate Holder shall deliver to the Department a copy of the agreement between the Certificate Holder and the Port of ~~St. Helens~~Columbia County that provides for discharge of non-sanitary wastewater from the energy facility by means of the NPDES permit issued to the Port of ~~St. Helens~~Columbia County.

(10) Before beginning operation of the BESS, the certificate holder shall submit to the Department, the plan or curriculum covering operation and maintenance of the BESS that demonstrates certificate holder's staff will receive adequate training to operate and maintain the BESS in a manner that protects public health and safety. [Amendment No. 11]

D.3. RETIREMENT AND FINANCIAL ASSURANCE

(1) The Certificate Holder shall retire the facility if the Certificate Holder permanently ceases construction or operation of the facility. The Certificate Holder shall retire the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, and prepared pursuant to Condition D.3(2).

(2) Two years before closure of the energy facility, the Certificate Holder shall submit to the Department a proposed final retirement plan for the facility and site, pursuant to OAR 345-027-0110, including:

(a) A plan for retirement that provides for completion of retirement within two years of permanent cessation of operation of the energy facility and that protects the public health and safety and the environment;

(b) A description of actions the Certificate Holder proposes to take to restore the site to a useful, non-hazardous condition; and,

(c) A detailed cost estimate, a comparison of that estimate with the dollar amount secured by a bond or letter of credit and any amount contained in a retirement fund, and a plan for assuring the availability of adequate funds for completion of retirement.

(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.

(4) A retirement plan that the Certificate Holder submits may provide transmission lines constructed and operated under this Site Certificate remain in operation to serve other energy facilities. [Amendment No. 3]

(5) The Certificate Holder shall submit to the State of Oregon, through the Council, a bond or letter of credit in the amount described below, naming the State of Oregon, acting by and through the Council, as beneficiary or payee [Amendments No. 3 & 7]

(a) Before beginning construction of Unit 1, the Certificate Holder submitted a bond or letter of credit in the amount of $3,698,000 (in 2004 dollars as of the fourth quarter). Upon execution of the Seventh Amended Site Certificate**,** the Certificate Holder shall adjust the amount of the bond or letter of credit to $5,201,000 (in 1st Quarter 2010 dollars)**.**-[Amendments No. 1, 3 & 7]

-(b) Before beginning construction of Unit 2, the Certificate Holder shall submit a bond or letter of credit in an amount equal to the sum of (i) $5,201,000 (in 1st Quarter 2010 dollars) for Unit 1, plus (ii) an amount for Unit 2 determined by application of the

Department's Facility Retirement Cost and Estimating Guide[2] -subject to review and approval by the Department. -[Amendments No. 3 & 7]

(c) [Deleted]. [Amendments No. 1 & 3]

(d) The form of the bond or letter of credit and identity of the issuer shall be subject to approval by the Council.

(e) The Certificate Holder shall maintain a bond or letter of credit in effect at all times until the energy facility or the Port Westward to BPA Allston Substation Transmission Line has been retired, as appropriate.

(f) The ~~calculation of 1st quarter 2010 dollars (or 2002 dollars for purposes of any five year supplemental payments for carbon dioxide offsets for power augmentation on Unit 1)~~present value of dollar amounts in this site certificate shall be ~~made~~ calculated 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")[3]. If at any time the Index is no longer published, the Council shall select a comparable calculation ~~of 2002, 2004 and 2010 dollars~~. [Amendments No. 3, 6, ~~and~~ 7, & 11]

(g) The amount of the bond or letter of credit account shall increase annually by the percentage increase in the Index.

(h) The Certificate Holder shall not revoke or reduce the bond or letter of credit before retirement of the facility without approval by the Council.

(6) The Certificate Holder shall describe in the annual report submitted to the Council, pursuant to OAR 345-026-0080, the status of the retirement fund or other instrument to ensure it has adequate funds to restore the site.

(7) Before beginning construction of the energy facility or BESS, the Certificate Holder shall prepare and submit to the Department a materials management and monitoring plan that addresses the handling and transportation of hazardous substances, the measures it will implement to prevent site contamination, and how it will document implementation of the plan during construction. The materials management and monitoring plan shall be subject to approval by the Department. For the purpose of this condition and Conditions D.3(8),

[2] The Department's Facility Retirement Cost and Estimating Guide is available from the Oregon Department of Energy

[3] DAS maintains the Index and places it on line at https://www.oregon.gov/das/OEA/Documents/other-quarterly.xls ~~http://www.oregon.gov/DAS/OEA/docs/economic/econdata/other-quarterly.xls~~

D.3(10), D.3(11), and D.3(12) below, the terms “release” and “hazardous substances” shall have the meanings set forth at ORS 465.200. [Amendment No. 11]

(8) Before beginning operation of the energy facility or BESS, the Certificate Holder shall prepare and submit to the Department a materials management and monitoring plan that addresses the handling and transportation of hazardous substances, the measures it will implement to prevent site contamination, and how it will document implementation of the plan during operation. The materials management and monitoring plan shall be subject to approval by the Department. [Amendment No. 11]

(9) Not later than 10 years after the date of commercial operation of Phase 1 of the energy facility, and each 10 years thereafter during the life of the energy facility, the Certificate Holder shall complete an independent Phase I Environmental Site Assessment of the energy facility site. Within 30 days after its completion, the Certificate Holder shall deliver the Phase I Environmental Site Assessment report to the Department. [Amendment No. 1]

(10) In the event that any Phase I Environmental Site Assessment identifies improper handling or storage of hazardous substances or improper record keeping procedures, the Certificate Holder shall correct such deficiencies within six months after completion of the corresponding Phase I Environmental Site Assessment. It shall promptly report its corrective actions to the Department. The Council shall determine whether the corrective actions are sufficient.

(11) The Certificate Holder shall report any release of hazardous substances, pursuant to DEQ regulations, to the Department within one working day after the discovery of such release. This obligation shall be in addition to any other reporting requirements applicable to such a release.

(12) If the Certificate Holder has not remedied a release consistent with applicable Oregon Department of Environmental Quality standards or if the Certificate Holder fails to correct deficiencies identified in the course of a Phase I Environmental Site Assessment within six months after the date of the release or the date of completion of the Phase I Environmental Site Assessment, the Certificate Holder shall submit within such six-month period to the Council for its approval an independently prepared estimate of the additional cost of remediation or correction.

(a) Upon approval of an estimate by the Council, the Certificate Holder shall increase the amount of its bond or letter of credit by the amount of the estimate.

(b) 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 or correcting deficiencies identified in the course of a Phase I Environmental Site Assessment.

(13) All funds received by the Certificate Holder from the salvage of equipment and buildings during retirement of the facility shall be committed to the restoration of the energy facility site to the extent necessary to fund the approved site restoration and remediation. [Amendment No. 11]

(14) The Certificate Holder shall pay the actual cost to restore the site to a useful, non-hazardous condition at the time of retirement, notwithstanding the Council's approval in the Site Certificate of an estimated amount required to restore the site.

(15) 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 and prepared pursuant to Condition D.3(2), 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.

(a) If the Certificate Holder does not submit a proposed final retirement plan by the specified date or if the Council rejects the retirement plan that the Certificate Holder submits, the Council may direct the Department to prepare a proposed a final retirement plan for the Council's approval.

(b) Upon the Council's approval of the final retirement plan prepared pursuant to subsection (a), the Council may draw on the bond or letter of credit described in Condition D.3(5) and shall use the funds 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.

(c) 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.

(d) 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.

(16) In the event that soils are removed from the temporary laydown areas approved through Amendment #10, the site certificate holder shall manage and dispose of the soil in a manner consistent with the *Hazardous Materials Management and Monitoring Plan* for Unit 2, and in accordance with state cleanup and solid waste statutes and rules. [Amendment No. 10]

(17) Before beginning construction of the BESS, the certificate holder shall provide updated design information including, but not limited to, battery chemistry and the number and

layout of modular containers, inverters, and transformers for the BESS. [Amendment No. 11]

(18) Before beginning construction of the BESS, the Certificate Holder shall submit a bond or letter of credit in the amount of $136,736 (1st Quarter 2019 dollars) for a lithium-ion BESS and $637,635 (1st Quarter 2019 dollars) for a flow BESS, subject to the same requirements as D.3(5)(d) through (h). [Amendment No. 11]

D.4. LAND USE

(1) Before beginning construction of the energy facility, the Certificate Holder shall submit a landscaping plan for the energy facility to Columbia County as part of its building permit application for the energy facility. The landscaping plan shall be subject to County approval, provided that the plan is consistent with this Site Certificate and the Final Order. The Certificate Holder shall implement the landscaping plan.

(2) Before beginning construction of the energy facility, the Certificate Holder shall submit a site plan to Columbia County as part of its building permit application. Before beginning construction of the BESS, the Certificate Holder shall submit an updated site plan to Columbia County to reflect the addition of the BESS as a related or supporting facility. [Amendment No. 11]

(3) Before beginning construction of the energy facility, the Certificate Holder shall submit to Columbia County as part of its building permit application for the energy facility a final parking lot plan that complies with Section 1400 of the Columbia County Zoning Ordinance. The parking plan shall be consistent with this Site Certificate and Attachment D of the Final Order. The Certificate Holder shall implement the parking lot plan.

(4) Before beginning construction of the energy facility or the Port Westward to BPA Allston Substation Transmission Line, as appropriate, the Certificate Holder shall apply for and obtain all appropriate land use permits from Columbia County and the City of Rainier.

(5) Before beginning construction of the energy facility, the Certificate Holder shall enter into a written contract with Columbia County that recognizes the rights of land owners who are adjacent to and nearby the corridor for the transmission line from the BPA Allston Substation to the Trojan Nuclear Plant where it crosses PF-76 and FA-19 zones to conduct forest operations consistent with the Forest Practices Act and Rules for uses authorized in OAR 660-006-0025, subsections (4)(e), (m), (s), (t), and (w).

D.5. STRUCTURAL STANDARD

(1) The Certificate Holder shall design, engineer and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. In no event shall the recommended seismic design parameters be any less than those prescribed by the Oregon Uniform Building Code. As used in this condition, "seismic hazard" includes ground shaking, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement, and subsidence.

(2) If the Certificate Holder does not have subsurface information for design of the transmission lines that is acceptable to the Department and the Oregon Department of Geology and Mineral Industries ("DOGAMI"), then the Certificate Holder shall drill exploratory borings at critical locations during final design of the proposed transmission lines.

(3) Before beginning construction of the facility, the Certificate Holder shall provide the Department and DOGAMI with a report containing results of geotechnical investigations and recommendations for the design of the energy facility, transmission lines and other related or supporting facilities.

(a) The Certificate Holder shall prepare the report consistent with the study designs detailed in the Section D.5 of the Final Order and Section H.3 the Application for a Site Certificate ("ASC").

(b) If DOGAMI is not able to review the reports, the Department shall arrange, in consultation with DOGAMI, for an independent review of the report by a qualified registered geologist.

(c) If the Certificate Holder begins construction of the Port Westward to BPA Allston Substation Transmission Line before beginning construction of other parts of the facility, Condition D.5(3) shall apply only to the Port Westward to BPA Allston Substation Transmission Line as long as it is the only part of the facility under construction.

(4) In addition to, or concurrent with Condition D.5(3), before beginning construction within the City of Rainier's Watershed zone, the Certificate Holder shall submit to the City of Rainier, the Department and DOGAMI a geotechnical report prepared by a registered engineer establishing that it can safely accomplish any construction in a known slide hazard area, flood hazard area, or drainage way, or on slopes exceeding 20 percent in that zone.

(5) If the geotechnical investigation reveals evidence that is not described in the ASC, the Certificate Holder shall revise the facility design parameters to comply with appropriate Uniform Building Code requirements.

(6) The Certificate Holder shall notify the Department, the State Building Codes Division and DOGAMI promptly if site investigations or trenching reveals that subsurface conditions differ significantly from those described in the ASC. After the Department receives the notice, the Council may require the Certificate Holder to consult with DOGAMI and the Building Codes Division and to propose mitigation actions.

(7) The Certificate Holder shall notify the Department, the Building Codes Division and DOGAMI promptly if shear zones, artesian aquifers, deformations, or clastic dikes are found at or in the vicinity of the facility site.

(8) The Certificate Holder shall design, engineer and construct the facility to avoid dangers to human safety presented by non-seismic or aseismic hazards affecting the site. As used in this condition, "non-seismic or aseismic hazards" includes settlement, landslides, groundwater, flooding, and erosion.

(9) The secondary gas supply pipeline constructed and operated by NWN shall be designed to accommodate the potential for different settlement and seismic induced differential deformation, particularly where the pipeline connects to the existing supply line.

(10) If additional geotechnical investigations are performed for the design of the BESS, the Certificate Holder shall provide the Department and DOGAMI with a report containing the results of the investigation. The report shall conform to Oregon State Board of Geologist Examiners Guideline for Preparing Engineering Geologic Reports. [Amendment No. 11]

D.6. SOIL PROTECTION

(1) Upon completion of construction in an area, the Certificate Holder shall use native seed mixes to restore vegetation to the extent practicable and shall landscape portions of the site disturbed by construction in a manner compatible with the surroundings and proposed use. Conditions D.6(1) through D.6(6) shall apply to all soil disturbing activities, including maintenance, repair, reconstruction, and retirement of facilities. [Amendment No. 1]

(2) The Certificate Holder shall employ the following measures to control soil erosion and sediment runoff by water and wind erosion:

(a) Avoid excavation and other soil disturbances beyond that necessary for construction of the facility or confine equipment use to specific areas.

(b) Remove vegetation only as necessary.

(c) Apply water or mulch, as necessary, for wind erosion control during construction.

(d) Revegetate those construction areas that will no longer be used.

(e) Use temporary erosion and sediment control measures, such as sediment fences, straw wattles, bio-filter bags, mulch, permanent and temporary seeding, sediment traps and/or basins, rock check dams or gravel filter berms, and gravel construction entrances, and maintain these features throughout construction and restoration to reduce the potential for soil erosion and sediment runoff.

(f) Protect soil stockpiles with mulch and plastic sheeting.

(3) If excessively wet conditions occur during construction, the Certificate Holder shall limit construction activities during such periods to the degree practicable in areas susceptible to soil compaction.

(4) After completing construction in an area, the Certificate Holder shall monitor the construction area for a period of 12 months to evaluate whether construction-related impacts to soils are being adequately addressed by the mitigation procedures described in the Sediment Erosion and Control Plan. It shall submit its quality assurance measures to the Department for approval before beginning monitoring.

(5) After completing construction in an area, the Certificate Holder shall use the results of the monitoring program in Condition D.6(4) to identify remaining soil impacts associated with construction that require mitigation. As necessary, the Certificate Holder shall implement follow-up restoration measures to address those remaining impacts and shall report in a timely manner to the Department what measures it has taken.

(6) The Certificate Holder shall remove trapped sediment when the capacity of the sediment trap has been reduced by 50 percent and shall place such sediment in an upland area certified by a qualified wetland specialist.

(7) The Certificate Holder shall contain all fuel and chemical storage in paved spill containment areas with a curb or appropriately sized and compatible secondary containment, in a manner consistent with the Hazardous Materials Management and Monitoring Plan for the facility. [Amendment No. 11].

(8) The Certificate Holder shall design all ~~inside~~ indoor spill containment areas or secondary containment to hold at least 110 percent of the volume of liquids stored within them.

(9) The Certificate Holder shall design all outdoor spill containment areas ~~located outdoors~~or secondary containment to hold at least 110 percent of the volume of liquids stored within them, together with the volume of precipitation that might accumulate during the 100-year return frequency storm.

(10) During operation, the Certificate Holder shall minimize drift from the cooling towers through the use of high efficiency drift eliminators that allow no more than 0.002 percent drift.

D.7. PROTECTED AREAS

[No Conditions]

D.8. FISH AND WILDLIFE HABITAT

(1) The Certificate Holder shall, to the extent practicable, avoid and, where avoidance is not possible, minimize construction and operation disturbance to areas of native vegetation and areas that provide important wildlife habitat. With respect to construction of the facility, the Certificate Holder shall mitigate possible impacts to wildlife by measures including, but not limited to, the following:

(a) Posting speed limit signs throughout the energy facility construction zone.

(b) Instructing construction personnel, including construction contractors and their personnel, on sensitive wildlife of the area and on required precautions to avoid injuring or destroying wildlife.

(c) Instructing construction personnel, including construction contractors and their personnel, to watch out for wildlife while driving through the facility site, to maintain reasonable driving speeds so as not to harass or strike wildlife accidentally, and to be cautious and drive at slower speeds in a period from one hour before sunset to one hour after sunrise when some wildlife species are the most active.
(d) Requiring construction personnel, including construction contractors and their personnel, to report any injured or dead wildlife detected at the facility site.

(2) The Certificate Holder shall construct, operate and retire the facility to minimize impacts to vegetation and habitat.

(a) The energy facility shall be located within previously disturbed Habitat Category 6, non-native grassland Habitat Category 4, and palustrine emergent and forested/scrub-shrub wetlands Habitat Category 3.

(b) The Certificate Holder shall limit Habitat Category 3 impacts to 0.43 acres of permanent impact within palustrine emergent and forested/scrub-shrub wetlands.

(3) The Certificate Holder shall site transmission towers outside wetlands and waterways to the greatest extent practicable. If the Certificate Holder must site transmission towers in riparian zones or wetlands, the Certificate Holder shall use a monopole design for the transmission towers to minimize ground impacts and vegetation control, except where it would have to cross the existing BPA lines.

(4) The Certificate Holder shall prohibit construction and maintenance equipment from entering perennial and intermittent streams, except as follows:

(a) Construction equipment may cross a stream if it is dry;

(b) Construction equipment may cross streams that are not dry by using temporary structures to bridge the stream in a manner that minimizes disturbance to the bed, banks and water of the stream;

(c) Construction equipment may cross a wet stream if the Certificate Holder notifies the Division of State Lands, the Oregon Department of Fish and Wildlife ("ODFW") and the Department of its intent to cross the stream prior to the crossing and these agencies concur that the crossing is acceptable.

(A) The Certificate Holder shall return any stream bed or bank that it disturbs during construction or maintenance to conditions that are comparable to pre-disturbed conditions, including stabilizing the bed and banks and revegetating the riparian area with appropriate plant species.

(B) The Certificate Holder shall construct wet stream crossings within the ODFW-designated in-water work period.

(C) The Certificate Holder shall keep the wet stream crossing width to the minimum needed.

(5) The Certificate Holder shall take advantage of existing roads to the extent practicable.

(6) Before beginning construction of the energy facility or beginning construction of the transmission lines, and in the appropriate season, the Certificate Holder shall conduct

wildlife surveys within 0.25 miles of the site to locate great blue heron rookeries. Should it locate rookeries, the Certificate Holder shall consult with ODFW and the Department to determine the action necessary to avoid adverse impacts. If it cannot avoid impacts, the Certificate Holder shall suspend construction in the affected areas during the critical nesting period of the species, as determined by the Department in consultation with ODFW.

(7) The Certificate Holder will confirm breeding status and nest location of the Crims Island bald eagles each year and consult with the Department and ODFW concerning the need for monitoring and/or modifications to construction activities if:

a) the project scope changes in a manner that may affect the bald eagles; and/or,

b) the location(s) of bald eagle nests on Crims Island changes (e.g. moves closer to the project construction site). -[Amendment No. 7]

(8) As possible and practicable, the Certificate Holder shall conduct site preparation for construction of the PW2 facility, or the BESS, in a manner that minimizes potential for impacting nesting native birds protected by the Migratory Bird Treaty Act (MBTA), such as conducting initial site clearing outside of the breeding season for most birds (generally March-July). Prior to commencement of construction activity during the breeding season, a qualified biologist will conduct a walk-down of the construction site to determine the presence of any active bird nests and to rescue and relocate any nongame protected wildlife (OAR 635-045-0002) that may be encountered according to the methods provided by ODFW. Surveys will be conducted by a qualified wildlife biologist and will include complete coverage of all areas to be disturbed using systematic transects spaced a maximum of 5 meters apart. As applicable considering construction schedule, PGE will also conduct a survey beginning in March prior to construction to detect any streaked horned larks that could be using the very limited amount of potential breeding habitat on site. PGE's survey protocol methods will be coordinated with ODFW. Construction personnel will be trained regarding avian awareness issues and reporting of bird nests and dead birds found at the construction site (also see Condition D.8(1) for wildlife awareness requirements). The Certificate Holder will consult with USFWS and ODFW regarding any active bird nests found within the construction disturbance area. [Amendments No. 7, 9 & ~~9~~11]

(9) The Certificate Holder shall schedule construction at the existing raw water intake pump station to avoid the purple martin nesting season (April 1 through June 30). Before beginning construction at the existing raw water intake pump station, the Certificate Holder shall conduct a survey to determine the exact location of any purple martin nests. Should the Certificate Holder cause unavoidable impacts to occur to any purple martin nest, it shall construct, install and maintain an artificial nest site at a

nearby location. It shall pick an appropriate location in consultation with ODFW and the Department.

(10) When working around riparian areas or waterways, the Certificate Holder shall use only herbicide labeled for use in those areas. The Certificate Holder shall abide by all labeling instructions when using herbicides for vegetation maintenance associated with the energy facility and transmission lines rights-of-way.

(11) The Certificate Holder shall locate chemical storage, servicing of construction and maintenance equipment and vehicles, and overnight storage of wheeled vehicles within the energy facility site boundary, or at least 330 feet from any wetland or waterway. [Amendment No. 11]

(12) The Certificate Holder shall not construct any structure other than fences, signs and the water supply pipeline within 50 feet of any Class I river, stream or the emergent vegetation adjacent to such a river or stream or within 25 feet of any other rivers, streams, and sloughs or the emergent vegetation adjacent to such a river, stream, or slough or within the riparian corridors established under Columbia County Zoning Ordinance Section 1172, as appropriate for the local jurisdiction. [Amendment No. 2]

(13) To mitigate for impacts to 19 acres of non-native grassland, the Certificate Holder shall protect 19 acres of on-site emergent wetland habitat identified in the ASC by execution of a conservation easement for the life of the energy facility. Before beginning construction of Phase 1 of the energy facility, the Certificate Holder shall provide a copy of the conservation easement or similar conveyance to the Department. [Amendment No. 1]

(14) The Certificate Holder shall restore temporary upland and wetland disturbance areas by returning the areas to their original grade and seeding, with appropriate seed mixes as recommended by ODFW and as described in ~~Exhibit P, Section P.8.1, of Certificate Holder's Request for Amendment No. 7,[4] and by mulching the areas with straw~~.the Revegetation and Noxious Weed Control Plan included as Attachment D to the Final Order on Request for Amendment 11. [Amendments No. 7 & 11]

(15) The Certificate Holder shall not clear any more riparian vegetation than is necessary for the permitted land use, including clearing required for safety purposes, during construction or operation of the facility.

~~[4] PGE submitted revised Exhibit P of its request for amendment 7 in a November 19, 2009 letter from Rick Tetzloff to Adam Bless "Port Westward Generating Project – Revisions to Request to Amend Site Certificate (Amendment 7) to address ODFW comments." Revised section P.8.1 is attached to this Site Certificate as Attachment D.~~

(16) During construction of the transmission line(s) and maintenance of the rights-of-way, the Certificate Holder shall limit clearing of vegetation in riparian areas and wetlands to that needed to prevent contact with the transmission line and to meet clearance standards for safety and transmission line reliability, as provided in the appropriate sections of the National Electrical Code. [Amendment No. 2]

(17) The Certificate Holder shall mitigate for impacts to riparian shrub and forest habitat that result in canopy cover of less than 25 percent by revegetating these areas with appropriate native woody species according to the Typical Revegetation Plan (ASC, Exhibit Q, page Q-6.1).

(18) The Certificate Holder ~~1~~ shall, as soon as practicable and appropriate after completing construction in an area, implement the mitigation measures specified in Conditions D.8(13), D.8(14) and D.8(17).

(19)~~ The Certificate Holder shall monitor revegetated areas for a period of five years and shall ensure that new vegetation has an 80 percent survival rate~~[Deleted]. [Amendment No. 11]

(20)~~ The Certificate Holder shall monitor and control nuisance and invasive plant species annually for a period of five years in areas where vegetation removal and/or revegetation has occurred in (1) riparian areas and wetlands along the transmission line rights-of-way, and (2) in areas temporarily disturbed by construction of the raw water, gas, and process water discharge lines, in all temporary construction staging and laydown areas, and in the spoils disposal site~~[Deleted]. [Amendments No. 3, 10 & ~~10~~11]

(21)~~ The Certificate Holder shall submit an annual monitoring report to ODFW and the Department during the five-year monitoring period specified in Condition D.8(20)~~[Deleted]. [Amendment No. 11]

(22)~~ Within one year after completion of construction of the facility or the Port Westward to BPA Allston Substation Transmission Line, if constructed separately, the Certificate Holder shall provide a summary report to ODFW and the Department that identifies the revegetation actions it took and the results of revegetation monitoring conducted to that time. If the Certificate Holder constructs the energy facility in phases, the Certificate Holder shall provide the summary report to ODFW and the Department within one year after completion of each phase~~[Deleted]. [Amendments No. 1 & 11]

(23)~~ Within three months after completion of the final annual monitoring survey, the Certificate Holder shall provide a report to ODFW and the Department that presents the results of its revegetation monitoring~~[Deleted]. [Amendment No. 11]

(24) ~~If revegetation is not successful at establishing appropriate plant cover and controlling erosion, the Certificate Holder shall take remedial actions as the Department directs~~[Deleted]. [Amendment No. 11]

(25) To mitigate for impacts to 8.5 acres of non-native grassland, the Certificate Holder shall protect and enhance at least 8.5 acres of on-site emergent wetland habitat identified in Certificate Holder's Request for Amendment No. 7 by execution of a conservation easement for the life of the energy facility. Habitat enhancement measures will include planting of trees and shrubs and controlling invasive plant species as described in revised Exhibit P, Section P.8.1 of Certificate Holder's Request for Amendment No. 7, November 19, 2009 revision (Attachment D of the Site Certificate). Before beginning construction of Unit 2 of the energy facility, the Certificate Holder shall provide a copy of the conservation easement or similar conveyance to the Department. [Amendment No. 7]

(26) ~~Within 120 days of completing construction of Unit 2, the Certificate Holder shall initiate restoration of all temporarily disturbed construction laydown areas by implementing the following measures:~~

~~(1) Removal of gravel and fabric~~

~~(2) Ground decompaction~~

~~(3) Revegetation with an ODFW-approved native seed mix.~~

~~The Certificate Holder shall maintain and monitor revegetated areas and report on the status of revegetation efforts until the Department determines that the each revegetated area has demonstrated successful uplift for two consecutive years. The Department shall determine successful uplift in consultation with ODFW, based on the following percent cover targets:~~

- ~~60% cover by native grasses~~
- ~~10% cover by native forbs~~
- ~~10% cover by bare ground~~
- ~~Not to exceed 20% cover by non-native plants.~~

[Deleted] [Amendments No. 10 & 11]

(27) The Certificate Holder shall not use the South Laydown Area prior to October 1, 2013, unless a qualified biologist has determined that the adjacent osprey nest is inactive, and the Department has concurred with that determination in writing. [Amendment No. 10]

(28) The Certificate Holder shall implement the Revegetation and Noxious Weed Control Plan included as Attachment D to the Final Order on Request for Amendment 11. The Revegetation and Noxious Weed Control Plan may be amended from time to time by agreement of the certificate holder and the Council. Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of this plan agreed to by the Department. [Amendment No. 11]

D.9. THREATENED AND ENDANGERED SPECIES

(1) Before beginning construction of the transmission line between the BPA Allston Substation and the Trojan Nuclear Plant, the Certificate Holder shall direct qualified personnel to conduct species ground surveys along the transmission line corridor and within 150 feet on either side of the transmission line corridor at the appropriate time of year to determine the presence of listed plant species. If listed plant species are identified in the course of the species ground surveys, their presence shall be noted on maps, and PGE shall provide copies of the maps to the Department and the Department of Agriculture.

(2) During construction of the transmission lines, the Certificate Holder shall manipulate construction equipment and site poles, towers and access roads to avoid impacts, except as provided in Condition D.9(4), to known populations of state- or federally-listed plant species.

(3) The Certificate Holder shall ensure that all maintenance practices along the transmission line corridor minimize impacts to known populations of listed plant species.

(4) In the event the Certificate Holder determines that it cannot avoid known populations of listed plant species, the Certificate Holder shall engage qualified personnel to determine whether the proposed action has the potential to reduce appreciably the likelihood of the survival or recovery of the listed species, notify the Department of its findings, and obtain approval from the Oregon Department of Agriculture before proceeding with construction activities that affect the listed plant species. (OAR 603-073-0090).

(5) Before beginning construction of the transmission line, the Certificate Holder shall employ measures to protect raptors in the design and construction of transmission lines. It shall design all energized transmission conductors with either a minimum separation of nine feet or other measures to reduce the potential for electrocution of raptors or other birds.

(6) The Certificate Holder shall not conduct construction activities at the transmission line terminus at the Trojan Nuclear Plant that generate extreme noise or high levels of visual disturbance during the peregrine falcon critical nesting period from January 1 to June 30. Such activities include pile driving, excavation, and grading for ground stabilization purposes

and site preparation. Construction activities involving lower levels of visible activity and less noise are allowed throughout the year. These include such activities as excavating and setting forms, pouring footings, erecting power line towers and bus duct, hanging conductor wires, installing control wires, and testing.

(a) Prior to beginning construction at the terminus site, the Certificate Holder shall provide the Department and ODFW with a final construction schedule that lists various construction activities, and time periods when specific work will be conducted. The schedule shall include information on the types of heavy construction equipment that will be used and the approximate number of workers and shall demonstrate that the construction activities are consistent with the limitations of this condition. The Certificate Holder shall provide scheduling updates as necessary to alert the Department and ODFW ahead of time of any proposed changes in the work schedule should the changes occur during the critical nesting period.

(b) The Certificate Holder shall monitor peregrine falcon activity at the transmission line terminus at the Trojan Nuclear Plant between January 1 to June 30 of construction years. Before beginning construction at the transmission line terminus at the Trojan Nuclear Plant, the Certificate Holder shall coordinate with ODFW and the Department and shall consequently prepare a peregrine falcon contingency plan. This contingency plan shall address actions that the Certificate Holder would undertake in the event that the Department and ODFW determine that monitoring shows the peregrine falcon pair's nesting activities are negatively affected by the transmission line construction activities.

(c) The Certificate Holder shall not proceed with construction activity at the transmission line terminus at the Trojan Nuclear Plant during the peregrine falcon critical nesting period from January 1 to June 30 to the extent that ODFW or the Department determines that the activity is not consistent with the limitations of this condition. [Amendment No. 3]

(7) The Certificate Holder shall plant suitable vegetative species for deer forage and cover within the wetland mitigation/enhancement area.

(8) The Certificate Holder shall coordinate with ODFW about whether to conduct site-specific fish sampling at waterways that do not have confirmation of species presence or absence along the transmission line corridor. If ODFW recommends that the Certificate Holder conduct site-specific sampling, the Certificate Holder shall do so and report the results to ODFW and the Department.

(9)~~ The Certificate Holder shall not undertake construction at the energy facility site during the bald eagle nesting season unless it obtains a final Biological Opinion and Incidental Take Statement issued by the U.S. Fish and Wildlife Service that addresses potential impacts to the bald eagle nest site on the northwest tip (downstream end) of Crims Island.~~

~~(a) The Certificate Holder shall construct and operate the energy facility consistent with the final Biological Opinion and Incidental Take Statement issued by the U.S. Fish and Wildlife Service.~~

~~(b) If the requirements of the Biological Opinion and Incidental Take Statement conflict with any conditions imposed in this Site Certificate, the Certificate Holder shall consult with the Department and ODFW to resolve the conflicts prior to taking any action in reliance on the Biological Opinion and Incidental Take Statement~~[Deleted]. [Amendments No. 3 & 11]

D.10. SCENIC AND AESTHETIC VALUES

(1) 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, backhoes, when not in use in order to minimize visibility.

(2) During construction of the facility, the Certificate Holder shall control dust through the application of water.

(3) During construction of the energy facility, the Certificate Holder shall use directing and shielding devices on lights to minimize off-site glare. When there is no nighttime construction activity, the Certificate Holder shall minimize night lighting consistent with safety and security requirements.

(4) During operation of the energy facility, the Certificate Holder shall use directing and shielding devices on lights to minimize off-site glare, consistent with safety and security requirements.

(5) Before beginning construction of the energy facility, the Certificate Holder shall submit to Columbia County and the Department an outdoor lighting plan that shows how it will minimize glare from the energy facility site, consistent with Conditions D.10(3) and D.10(4).

(6) The Certificate Holder shall paint structures with low-glare paint in colors selected to complement the surrounding foreground and background colors.

(7) After completion of construction of related and supporting pipelines in an area, the Certificate Holder shall re-vegetate any undeveloped areas disturbed by construction activities using native species, including grasses, shrubs, and trees. If necessary, the

Certificate Holder shall water re-vegetated areas on a regular basis until the plant species have been successfully established.

D.11. HISTORIC, CULTURAL AND ARCHAEOLOGICAL RESOURCES

(1) Before beginning construction of the Port Westward to BPA Allston Substation Transmission Line or the BPA Allston Substation to Trojan Transmission Line, the Certificate Holder shall complete an archaeological survey of the approved transmission line corridors in consultation with the Oregon Historic Preservation Office ("SHPO"), the Confederated Tribes of the Warm Springs Indian Reservation of Oregon, the Confederated Tribes of the Grand Ronde Community of Oregon, the Confederated Tribes of the Siletz Indian ~~Reservation~~ of Oregon, the Chinook Tribe in Washington, and appropriate federal agencies. The Certificate Holder shall ensure that a qualified archaeologist evaluates all cultural resources identified during the cultural resources survey. The Certificate Holder shall report to SHPO and the Department about whether its archaeologist recommends that a discovery is significant or not significant. If SHPO determines that a discovery is significant, the Certificate Holder shall make recommendations to the Council for mitigation in consultation with SHPO, the Department, the tribes, and other appropriate parties. Mitigation measures shall include avoidance or data recovery. [Amendment No. 1]

(2) During construction of the facility, the Certificate Holder shall ensure that a qualified person instructs construction personnel in the identification of cultural materials.

(3) During construction of the facility, in the event any artifacts or other cultural materials are identified, the Certificate Holder shall cease all ground-disturbing activities until a qualified archaeologist can evaluate the significance of the find. The Certificate Holder shall report to SHPO and the Department about whether its archaeologist recommends the artifacts or cultural materials are significant or not significant. If SHPO determines that the materials are significant, the Certificate Holder shall make recommendations to the Council for mitigation in consultation with SHPO, the Department, the tribes, and other appropriate parties. Mitigation measures shall include avoidance or data recovery. The Certificate Holder shall not restart work in the affected area until it has demonstrated to the Department that it has complied with the archaeological permit requirements administered by SHPO. [Amendment No. 1]

(4) The Certificate Holder shall allow monitoring by the Confederated Tribes of the Warm Springs Indian Reservation of Oregon, the Confederated Tribes of the Grand Ronde Community of Oregon, the Confederated Tribes of the Siletz Indian ~~Reservation~~ of Oregon, and the Chinook Tribe in Washington of earth-moving activities within any areas with a potential for containing archaeological remains.

(5) Before beginning construction of the facility or of the Port Westward to BPA Allston Substation Transmission Line separately, the Certificate Holder shall notify the Confederated Tribes of the Warm Springs Indian Reservation of Oregon, the Confederated Tribes of the Grand Ronde Community of Oregon, the Confederated Tribes of the Siletz Indians ~~Reservation~~ of Oregon, and the Chinook Tribe in Washington and provide their representatives the opportunity to be available for periodic on-site monitoring during construction activities. If the Certificate Holder constructs the energy facility in phases, the Certificate Holder shall notify the Tribes prior to construction of each phase. [Amendment No. 1]

(6) If construction activities for the secondary gas pipeline occur at a level below the sandy dredge fill (a depth of 10 feet), then the Site Certificate holder or NW Natural shall immediately contact the State Historic Preservation Officer. [Amendment 5]

D.12. RECREATION

[No Conditions]

D.13. PUBLIC SERVICES

(1) During construction, the Certificate Holder shall hire a contractor to provide chemical toilet services or other appropriate facilities for construction personnel.

(2) Prior to applying for construction permits for the second power generation unit, the Certificate Holder shall enter into an Amended Traffic Improvement Agreement and pay a new Traffic Improvement Contribution to Columbia County according to the Amended Traffic Improvement Agreement and consistent with a Traffic Impact Analysis Study for the second power generation unit performed according to parameters agreed to by Columbia County and the Certificate Holder. [Amendment No. 8]

(3) The Certificate Holder shall not agree to amend the Agreement with Columbia County to reduce, revoke or waive the requirement for payment of the appropriate TIC without prior approval of the Council; however, such approval by the Council shall not require an amendment to the Site Certificate.

(4) Before beginning construction of the energy facility, the Certificate Holder shall coordinate with Columbia County the improvement and maintenance of signage and striping at the mainline rail crossing on Kallunki Road, including the installation of “DO NOT STOP ON TRACKS” signs.

(5) If construction of the energy facility occurs concurrently with construction of other projects in the Port Westward Industrial Area, the Certificate Holder shall coordinate

with other users of the Port Westward Industrial Area to provide a carpooling program that identifies and/or creates park-and-ride locations to facilitate carpooling.

(6) If construction of the energy facility occurs concurrently with construction of other projects in the Port Westward Industrial Area, the Certificate Holder shall coordinate with Columbia County and other users of the Port Westward Industrial Area on the implementation of a staggered shift schedule if Columbia County determines that traffic conditions warrant it.

(7) During construction of the energy facility, the Certificate Holder shall use barge and railroad deliveries of bulk materials to the extent practicable to minimize the number of freight truck deliveries on local roads.

(8) The Certificate Holder shall construct a fire protection system within the buildings and yard areas of the energy facility site that meets the requirements of the Uniform Fire Code, as amended by Oregon and the National Fire Protection Association standards, and all other applicable fire protection standards in effect at the time of construction.

(9) The Certificate Holder shall provide a dedicated reserve capacity of 180,000 gallons in the raw water storage tank to serve as the fire suppression water source.

(10) For fire truck access, the minimum inside turning radius of curves in the road system on the energy facility site shall be 40 feet.

(11) Prior to start of construction of Unit 2 of the energy facility, the certificate holder shall obtain from the Water Resources Department (WRD) a permanent water right transfer subject to the following conditions:

a. the right to the use of the water is restricted to beneficial use at the place of use described in transfer application T-10955, and is subject to all other conditions and limitations contained in Certificate **Error! Reference source not found.**~~**Error! Reference source not found.**81969~~ and any related decree.

b. The quantity of water diverted at the new point of diversion, shall not exceed the quantity of water (3.0 cfs) lawfully available at the original point of diversion.

c. WRD may require the water user to install a headgate, a totalizing flow meter, or other suitable measuring devices at the point of diversion. If WRD notifies the water user to install a headgate, a totalizing flow meter, or other measuring devices, the water user shall install such devices specified by WRD within the period allowed in the notice. Once installed, the water user shall maintain the meters or measuring devices in good working order and shall allow the Watermaster access to the meters or measuring devices.

d. The water user shall maintain and operate a fish screening and/or by-pass device, as appropriate, at the point of diversion consistent with the Oregon Department of Fish and Wildlife's operational and maintenance standards.

e. The approved changes shall be completed and full beneficial use of the water shall be made on or before October 1, 2015. -A Claim of Beneficial Use prepared by a Certified Water Rights Examiner shall be submitted by the Certificate Holder to the Department within one year after the deadline for completion of the changes and full beneficial use of the water.

f. Prior to issuance of the permanent transfer, the certificate holder shall provide to ODOE and WRD a report of land ownership for the lands to which the water right is appurtenant (the FROM lands). The report must be prepared by a title company. The title company's report must either be: 1) prepared within three months of the Energy Facility Siting Council's Final Order on PWGP Amendment 7, or 2) reflect ownership information within three months of the recording of any water right conveyance agreements for the property in the county deed records. The ownership report shall include:

(A) Date reflected by the ownership information

(B) List of owners at that time

(C) Legal description of the property to which the water right involved in the transfer is currently appurtenant, and

(D) A notarized statement of consent from any landowner listed in the ownership report who is not already included in the transfer application, or other information such as a water right conveyance agreement, if applicable. [Amendments No. 7 & 9]

(12) Before beginning operation of the BESS, the certificate holder will provide Emergency Response Plans for the facility, updated with response procedures specific to the BESS, to the Clatskanie Rural Fire Department, the St. Helens Fire District, and the Department.

D.14. WASTE MINIMIZATION, OAR 345-022-0120

(1) During construction, operation and retirement of the energy facility, the Certificate Holder shall separate recyclable materials from the solid waste stream to the extent

practicable, store those materials on site until sufficient quantities exist to make recycling economic, and periodically deliver or sell those materials to a recycling facility.

(2) During construction, operation and retirement of the energy facility, the Certificate Holder shall segregate all used oil~~,~~; mercury-containing lights~~,~~; and lead-acid, ~~and~~ nickel-cadmium, lithium-ion batteries.~~,~~ The Certificate Holder shall store such materials on site, and deliver such materials to a recycling firm specializing in the proper disposal of such materials. [Amendment No. 11]

(3) Upon completion of construction, the Certificate Holder shall dispose of all temporary structures not required for facility operation and all timber, brush, refuse, and flammable or combustible material resulting from clearing of land and construction of the facility.

(4) During operation of the energy facility, the Certificate Holder shall convey all storm water and water discharges other than sanitary sewage to pervious areas to allow for percolation into the shallow groundwater.

(5) During operation of the energy facility, the Certificate Holder shall use internal recycling of aqueous streams whereby water shall be recycled several times in the cooling system before being discharged.

D.15. CARBON DIOXIDE STANDARD

(1) Before beginning construction of Phase 1 and Phase 2 of the energy facility, respectively, the Certificate Holder shall submit to The Climate Trust a bond or letter of credit in the amount of the monetary path payment requirement (in 2002 dollars for Phase 1 and in 1st quarter 2010 dollars for Phase 2) as determined by the calculations set forth in Condition D.15(3) and based on the estimated heat rates and capacities certified pursuant to Condition D.15(4) and as adjusted in accordance with the terms of this Site Certificate pursuant to Condition D.15(3)(c). For the purposes of this Site Certificate, the "monetary path payment requirement" means the offset funds determined pursuant to OAR 345-024-0550 and -0560 and the selection and contracting funds that the Certificate Holder must disburse to The Climate Trust, as the qualified organization, pursuant to OAR 345-024-0710 and this Site Certificate. The offset fund rate for the monetary path payment requirement shall be $0.85 per ton of carbon dioxide (in 2002 dollars) for Phase 1 and $1.27 per ton of carbon dioxide (in 1st quarter 2010 dollars) for Phase 2. The calculation of 2002 and 1st quarter 2010 dollars shall be made using the Index set forth in Condition D.3(5) and as required below in subsection (g). [Amendments No. 1, 6 & 7]

(a) The form of the bond or letter of credit and identity of the issuer shall be subject to approval by the Council.

(b) The form of the Memorandum of Understanding "MOU") between the Certificate Holder and the Climate Trust establishing the disbursement mechanism to transfer selection and contracting funds and offset funds to The Climate Trust shall be substantially in the form of Attachment A to this Site Certificate.

(c) 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 that concerns the terms of the bond, letter of credit, or MOU concerning the disbursement mechanism for the monetary path payments, or any other issues related to the monetary path payment requirement. The Council's decision shall be binding on all parties.

(d) The bond or letter of credit shall remain in effect until such time as the Certificate Holder has disbursed the full amount of the monetary path payment requirement to The Climate Trust. The Certificate Holder may reduce the amount of the bond or letter of credit commensurate with payments it makes to The Climate Trust. The bond or letter of credit shall not be subject to revocation before disbursement of the full monetary path payment requirement.

(e) In the event that the Council approves a new Certificate Holder for the energy facility:

(A) The new Certificate Holder shall submit to the Council for the Council's approval the form of a bond or letter of credit that provides comparable security to the bond or letter of credit of the current Certificate Holder. The Council's approval of a new bond or letter of credit shall not require a site certificate amendment.

(B) The new Certificate Holder shall submit to the Council for the Council's approval the form of an MOU between the new Certificate Holder and The Climate Trust that is substantially in the form of Attachment A to this Site Certificate. In the case of a 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 for the Council's resolution as provided in Condition D.15(1)(c). Council approval of a new MOU shall not require a site certificate amendment.

(f) If calculations pursuant to Condition D.15(5) demonstrate that the Certificate Holder must increase its monetary path payments, the Certificate Holder shall increase the bond or letter of credit sufficiently to meet the adjusted monetary path payment requirement within the time required by Condition D.15(3)(c). Alternately, the Certificate Holder may disburse any additional required funds directly to The Climate Trust within the time required by Condition D.15(3)(c).

(g) The amount of the bond or letter of credit shall increase annually by the percentage increase in the Index, and the disbursement of funds shall be pro-rated within the year to the date of disbursement to The Climate Trust from the calendar quarter of Council approval of the Site Certificate.

(2) The Certificate Holder shall disburse to The Climate Trust offset funds and selection and contracting funds as requested by The Climate Trust. The Certificate Holder shall make disbursements in response to requests from The Climate Trust in accordance with subsections (a), (b), and (c).

(a) The Certificate Holder shall disburse all selection and contracting funds to The Climate Trust before beginning construction.

(b) Upon notice pursuant to subsection (c), The Climate Trust may request from the issuer of the bond or letter of credit the full amount of all offset funds available or it may request partial payment of offset funds at its sole discretion. Notwithstanding the specific amount of any contract to implement an offset project, The Climate Trust may request up to the full amount of offset funds the Certificate Holder is required to provide to meet the monetary path payment requirement.

(c) The Climate Trust may request disbursement of offset funds by providing notice to the issuer of the bond or letter of credit that The Climate Trust has executed a letter of intent to acquire an offset project. The Certificate Holder shall provide that the issuer of the bond or letter of credit disburse offset funds to The Climate Trust within three business days of a request by The Climate Trust for the offset funds in accordance with the terms of the bond or letter of credit.

(3) The Certificate Holder shall submit all monetary path payment requirement calculations to the Department for verification in a timely manner before submitting a bond or letter of credit for Council approval and before entering into an MOU with The Climate Trust. The Certificate Holder shall use the contracted design parameters for capacities and heat rates that it reports pursuant to Condition D.15(4) to calculate the estimated monetary path payment requirement, along with the estimated annual hours of operation of power augmentation technologies and of non-base load power plants for Unit 2. The Certificate Holder shall use the Year One Capacities and Year One Heat Rates that it reports for the facility pursuant to Condition D.15(5) to calculate whether it owes additional monetary path payments**.** [Amendment No. 7]

(a) The net carbon dioxide emissions rate for the base load gas plant shall not exceed 0.675 pounds of carbon dioxide per kilowatt-hour of net electric power output, with carbon dioxide emissions and net electric power output measured on a new and clean basis, as defined in OAR 345-001-0010.

(b) The net carbon dioxide emissions rate for Unit 2, and for incremental emissions of Unit 1 operating with power augmentation technologies that increase the capacity and heat rate of the facility above the capacity and heat rate that it can achieve as a base load gas plant on a new and clean basis ("power augmentation technologies") shall not exceed 0.675 pounds of carbon dioxide per kilowatt-hour of net electric power output, with carbon dioxide emissions and net electric power output measured on a new and clean basis, as the Department may modify such basis pursuant to Condition D.15(4)(d) and (g). [Amendment No. 7]

(c) When the Certificate Holder submits the Year One Test reports required in Condition D.15(5), it shall increase its monetary path payments if the calculation using reported data shows that the adjusted monetary path payment requirement exceeds the monetary path payment requirement for which the Certificate Holder had provided a bond or letter of credit before beginning construction, pursuant to Condition D.15(1). The Certificate Holder shall submit its calculations to the Department for verification.

(A) The Certificate Holder shall make the appropriate calculations and fully disburse any increased funds directly to The Climate Trust within 30 days of filing the Year One Test reports.

(B) In no case shall the Certificate Holder diminish the bond or letter of credit it provided before beginning construction or receive a refund from The Climate Trust based on the calculations made using the Year One Capacities and the Year One Heat Rates.

(4) The Certificate Holder shall include an affidavit certifying the heat rates and capacities reported in subsections (a**)**, (b), (e) and (f).

(a) Before beginning construction of the energy facility, the Certificate Holder shall notify the Council in writing of its final selection of a gas turbine vendor and heat recovery steam generator vendor and shall submit written design information to the Council sufficient to verify the base-load gas plant's designed new and clean heat rate (higher heating value) and its net power output at the average annual site condition.

(b) Before beginning construction of the energy facility, the Certificate Holder shall submit written design information to the Council sufficient to verify the facility's designed new and clean heat rate and its net power output at the average annual site condition when operating with power augmentation technologies.

(c) Before beginning construction of the energy facility, the Certificate Holder shall specify the estimated annual average hours that it expects to operate the power augmentation technologies.

(d) Upon a timely request by the Certificate Holder, the Department may approve modified parameters for testing the power augmentation technologies on a new and clean basis, pursuant to OAR 345-024-0590(1). The Department's approval of modified testing parameters for power augmentation technologies shall not require a site certificate amendment.

(e) Before beginning construction of Unit 2, the Certificate Holder shall notify the Council in writing of its final selection of the quantities and vendors for reciprocating engines and combustion turbine generators and shall submit written design information to the Council sufficient to verify the non-base load power plant's designed new and clean heat rate (higher heating value) and its net power output at the average annual site condition. [Amendment No. 7]

(f) Before beginning construction of Unit 2, the Certificate Holder shall specify the estimated annual average hours that it expects to operate each type of generating unit. The Certificate Holder may estimate annual average hours of operation in a manner consistent with OAR 345-001-0010(38). [Amendment No. 7]

(g) Upon a timely request by the Certificate Holder, the Department may approve modified parameters for testing the non-base load power plants of Unit 2 on a new and clean basis, pursuant to OAR 345-024-0590(1). The Department's approval of modified testing parameters for non-base load power plants shall not require a site certificate amendment. [Amendment No. 7]

(5) Within the first 12 months of commercial operation of each phase of the energy facility, the Certificate Holder shall conduct a 100-hour test at full power without power augmentation technologies ("Year One Test-1") and a test at full power with power augmentation technologies for Unit 1 ("Year One Test-2"). A 100-hour test performed for purposes of the Certificate Holder's commercial acceptance of the facility shall suffice to satisfy this condition in lieu of testing after beginning commercial operation. [Amendments No. 6 & 7]

(a) Year One Test-1 shall 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, and using a rate of 117 pounds of carbon dioxide per million Btu of natural gas fuel pursuant to OAR 345-001-0010(35).

(b) Year One Test-2 shall 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 technologies, without degradation, with the results adjusted for the average annual site condition for temperature, barometric pressure and relative

humidity, and using a rate of 117 pounds of carbon dioxide per million Btu of natural gas fuel pursuant to OAR 345-001-0010(35). The full power test shall be 100 hours duration unless the Department has approved a different duration pursuant to Condition (4)(d**)** or (4)(g). [Amendment No. 7]

(c) The Certificate Holder shall notify the Department at least 60 days before conducting the tests required in subsections (a) and (b) unless a shorter time is mutually agreed upon.

(d) Before conducting the tests required in subsections (a) and (b), the Certificate Holder shall, in a timely manner, provide to the Department a copy of the protocol for conducting the tests.

(e) Within two months after completing the Year One Tests, the Certificate Holder shall provide to the Council a report of the results of the Year One Tests.

(f) If the certificate holder elects to report all carbon dioxide emissions based on direct measurements pursuant to OAR 345-024-0590(5)(b), then the Year One Test for Unit 2 is not required. However, if the Year One test is not performed, then the certificate holder must continue to report carbon dioxide emissions using actual measured emissions as reported to the Department of Environmental Quality or the U.S. Environmental Protection Agency for all subsequent five year periods over the life of Unit 2, and may not change its election to report based on new and clean heat rate in any subsequent five year period. [Amendment No. 7]

(g) If the Year One test is not performed for Unit 2 pursuant to subsection (f) of this condition, then the certificate holder shall report its net kWh generation and actual measured carbon dioxide emissions for the 12 month period following start of commercial operation of Unit 2. -The certificate holder shall report the net kWh generation and actual carbon dioxide emissions for this period to the Department within two months of the end of the first 12 month period.- The certificate holder shall use the net kWh generation and measured carbon dioxide emissions to perform the calculations to determine if supplemental monetary path payments are needed as set forth in Condition D.15(6). -The certificate holder shall submit these calculations to the Department for verification as set forth in Condition D.15(7). [Amendment No. 7]

(6) If calculations pursuant to Condition D.15(7) demonstrate that the Certificate Holder must supplement its monetary path payments ("supplemental monetary path payment requirement"), the Certificate Holder shall provide a bond or letter of credit sufficient to meet the supplemental monetary path payment requirement within the time required by Condition D.15(7)(b). The bond or letter of credit shall not be subject to revocation before disbursement of the supplemental monetary path payment requirement. Alternately, the Certificate Holder may disburse in cash any such supplemental monetary path payments

directly to The Climate Trust within the time required by Condition D.15(7). [Amendment No. 7]

(7) The Certificate Holder shall submit all supplemental monetary path payment requirement calculations and data to the Department for verification. [Amendment No. 7]

(a) Each five years after beginning commercial operation of Unit 1 ("Unit 1 five-year reporting period"), the Certificate Holder shall report to the Department the annual average hours Unit 1 operated with power augmentation technologies during that Unit 1 five-year reporting period, pursuant to OAR 345-024-0590(6). The Certificate Holder shall use the Year One Capacity-2 and Year One Heat Rate-2 that it reports for Unit 1 pursuant to Condition D.15(5)(b) to calculate whether it owes supplemental monetary path payments. The Certificate Holder shall submit Unit 1 five-year reports to the Department within 30 days of the anniversary date of beginning commercial operation of Unit 1. [Amendment No. 7]

(b) If the Department determines that Unit 1 exceeds the projected net total carbon dioxide emissions calculated pursuant to Conditions D.15(4) and D.15(5), prorated for five years, during any Unit 1 five-year reporting period described in subsection (a), the Certificate Holder shall offset excess emissions for the specific reporting period according to subsection (A) and shall offset the estimated future excess emissions according to subsection (B), pursuant to OAR 345-024-0600(4). The Certificate Holder shall offset excess emissions using the monetary path as described in OAR 345-024-0710, except that contracting and selecting funds shall equal twenty (20) percent of the value of any offset funds up to the first $250,000 (in 2002 dollars) and 4.286 percent of the value of any offset funds in excess of $250,000 (in 2002 dollars). The Certificate Holder shall disburse the funds to The Climate Trust within 30 days after notification by the Department of the amount that the Certificate Holder owes. [Amendment No. 7]

(A) In determining the excess carbon dioxide emissions that the Certificate Holder must offset for a Unit 1 five-year period, the Department shall apply OAR 345-024-0600(4)(a). The Certificate Holder shall pay for the excess emissions at $0.85 per ton of carbon dioxide emissions (in 2002 dollars). The Department shall notify the Certificate Holder and The Climate Trust of the amount of payment required, using the monetary path, to offset excess emissions. [Amendments No. 6 & 7]

(B) The Department shall calculate estimated future excess emissions and notify the Certificate Holder of the amount of payment required, using the monetary path, to offset them. To estimate excess emissions for the remaining period of the deemed 30-year life of the facility, the Department shall use the parameters specified in OAR 345-024-0600(4)(b). The Certificate Holder shall pay for the estimated excess emissions at $ 0.85 per ton of carbon dioxide (in 2002 dollars). -The Department

shall notify the Certificate Holder of the amount of payment required, using the monetary path, to offset future excess emissions. [Amendments No. 6 & 7]

(c) At the time the Certificate Holder submits to the Department the information required by Condition D.15(4)(e) and (f), the Certificate Holder shall make the election required by OAR 345-024-0590(5)(b).– The election shall apply for each reporting period required pursuant to subsections (d) and (e). [Amendment No. 7]

(d) Each five years after beginning commercial operation of Unit 2 ("Unit 2 five-year reporting period"), the Certificate Holder shall report to the Department the information required by either subsection A or B. -The Certificate Holder shall submit Unit 2 five-year reports to the Department within 30 days of the anniversary date of beginning commercial operation of Unit 2.- [Amendment No. 7]

(A) If the Certificate Holder has elected to calculate any excess emissions using annual average hours of operation and new and clean heat rates, the Certificate Holder shall report the annual average hours of operation of each generating unit within Unit 2 during that Unit 2 five-year reporting period, pursuant to OAR 345-024-0590(6). The Certificate Holder shall use the Year One Capacity-1 and Year One Heat Rate-1 that it reports for the corresponding generating units of Unit 2 pursuant to Condition D.15(5)(a) to calculate whether it owes supplemental monetary path payments. [Amendment No. 7]

(B) If the Certificate Holder has elected to calculate any excess emissions using actual or measured carbon dioxide emissions as reported to either the Oregon Department of Environmental Quality or the U.S. Environmental Protection Agency pursuant to a mandatory carbon dioxide reporting requirement, the Certificate Holder shall submit to the Department the carbon dioxide reporting data and net kWh generation for that Unit 2 five-year reporting period and shall use that data to determine whether it owes supplemental monetary path payments. [Amendment No. 7]

(e) If the Department determines that Unit 2 exceeds the projected net total carbon dioxide emissions calculated pursuant to Conditions D.15(4) and D.15(5), prorated for five years, during any Unit 2 five-year reporting period described in subsection (d), the Certificate Holder shall offset excess emissions for the specific reporting period according to subsection (A) and shall offset the estimated future excess emissions according to subsection (B), pursuant to OAR 345-024-0600(4). The Certificate Holder shall offset excess emissions using the monetary path as described in OAR 345-024-0710, except that contracting and selecting funds shall equal twenty (20) percent of the value of any offset funds up to the first $250,000 (in 1st quarter 2010 -dollars) and 4.286 percent of the value of any offset funds in excess of $250,000 (in 1st quarter 2010 dollars). The Certificate Holder shall disburse the funds to The Climate Trust within 30

days after notification by the Department of the amount that the Certificate Holder owes. [Amendment No. 7]

(A) In determining the excess carbon dioxide emissions that the Certificate Holder must offset for a Unit 2 five-year period, the Department shall apply OAR 345-024-0600(4)(a), unless the Certificate Holder has elected under OAR 245-024-0590(5) to utilize actual or measured carbon dioxide emissions as reported to either the Oregon Department of Environmental Quality or the U.S. Environmental Protection Agency pursuant to a mandatory carbon dioxide reporting requirement. The Certificate Holder shall pay for the excess emissions at $1.27 per ton of carbon dioxide emissions (in 1st Quarter 2010 dollars). The Department shall notify the Certificate Holder and The Climate Trust of the amount of payment required, using the monetary path, to offset excess emissions. [Amendment No. 7]

(B) The Department shall calculate estimated future excess emissions and notify the Certificate Holder of the amount of payment required, using the monetary path, to offset them. To estimate excess emissions for the remaining period of the deemed 30-year life of the facility, the Department shall use 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 1st quarter 2010 dollars). The Department shall notify the Certificate Holder of the amount of payment required, using the monetary path, to offset future excess emissions. [Amendment No. 7]

(8) The combustion turbine for the base-load gas plant and power augmentation technologies and any combustion turbines constructed as part of Unit 2 shall be fueled solely with pipeline quality natural gas or with synthetic gas with a carbon content per million Btu no greater than pipeline-quality natural gas**.** Any reciprocating engines constructed as part of Unit 2 shall be fueled solely with pipeline quality natural gas or with synthetic gas with a carbon content per million Btu no greater than pipeline-quality natural gas, except that distillate fuel may be used for micro-pilot systems. [Amendment No. 7]

(9) With respect to incremental capacity and fuel consumption increases for which the Certificate Holder has not previously complied with the carbon dioxide standard, the Certificate Holder shall comply substantially with Conditions D.15(1) through D.15(8) in lieu of the Council's requiring an amendment, provided that:

(a) The Council determines, pursuant OAR 345-027-0050, that the Certificate Holder does not otherwise require an amendment, and further provided that:

(b) The Certificate Holder shall meet the appropriate carbon dioxide emissions standard and monetary offset rate in effect at the time the Council makes its determination pursuant to OAR 345-027-0050.

(10) Notwithstanding Conditions D.15(1) through d.15(9), if the Certificate Holder begins construction of the Port Westward to BPA Allston Substation Transmission Line, but no other part of the energy facility or other related or supporting facilities, the Certificate Holder shall not be required to comply with Conditions D.15(1) through D.15(9). The Certificate Holder shall comply with Conditions D.15(1) through D.15(9) in connection with construction of any part of the energy facility or related or supporting facilities other than the Port Westward to BPA Allston Substation Transmission Line.

(11) If the Certificate Holder begins construction of Phase 1, but not Phase 2, the Certificate Holder shall comply with Conditions D.15(1) through D.15(9) for Phase 1. If the Certificate Holder later begins construction of Phase 2, the Certificate Holder shall comply with Conditions D.15(1) through D.15(9)for Phase 2. [Amendment No. 1]

E. OTHER APPLICABLE REGULATORY REQUIREMENTS

E.1. REQUIREMENTS UNDER COUNCIL JURISDICTION

E.1.a. Noise

(1) During construction of the facility, the Certificate Holder shall schedule most heavy construction to occur during daylight hours. Construction work at night shall be limited to work inside buildings and other structures when possible.

(2) During construction of the facility, the Certificate Holder shall require contractors to equip all combustion engine-powered equipment with exhaust mufflers.

(3) During construction of the energy facility, transmission lines or other related or supporting facilities, the Certificate Holder shall establish a complaint response system at the construction manager's office to address noise complaints.

(4) Within six months after the start of commercial operation of the energy facility, the Certificate Holder shall retain a qualified noise specialist to measure noise levels associated with the energy facility operation-when environmental conditions are expected to result in maximum sound propagation between the source and the receivers and when the energy facility is operating in a typical operations mode that produces maximum noise levels.

(a) The specialist shall measure noise levels at sites (1), (2), (5) and (6), as described in Exhibit X of the ASC, to determine if actual noise are within the levels specified in the applicable noise regulations in OAR 345-035-0035(1)(b)(B)(i).

(b) The Certificate Holder shall report the results of the noise evaluation to the Department.

(c) If actual noise do not comply with applicable DEQ regulations, the Certificate Holder shall take those actions necessary to comply with the regulations as soon as practicable.

(d) If initial measurements show that actual noise levels at site (5) by 7 dBA or more, the Certificate Holder shall measure the noise levels as specified in this condition and shall repeat the process outlined in subsections (a), (b), and (c) for site (5) within six months after completion of the initial measurements.

(5) The Certificate Holder shall install silencers on short duration noise sources (e.g. steam vents) from the heat recovery steam generator.

(6) The certificate holder shall confirm the PW1 noise level estimate at receiver 7 prior to the final design of PW2 and propose mitigation measures as necessary to ensure that the total PWGP noise levels do not exceed the limits specified in Table N-2 of the Final Order on Port Westward Amendment 7. [Amendment No. 7]

(7) Within six months after the start of commercial operation of PW2, the Certificate Holder shall retain a qualified noise specialist to measure noise levels associated with the PWGP energy facility operation (the operation of PW1 and PW2) during late night hours when environmental conditions are expected to result in maximum sound propagation between the source and each receiver and when the entire energy facility is operating in a typical operations mode that produces maximum noise levels.

(a) The specialist shall measure noise levels at sites (1), (2), (5),(6), and (7), to determine if actual noise levels generated by the PWGP are within the levels shown on Table N-2 of the Final Order on Amendment 7. The noise levels at sites 1 and 2 shall be measured when the wind is either calm or out of a northerly direction but blowing no more than 10 mph. The noise levels at sites 5, 6 and 7 shall be measured when the wind is either calm or out of a southerly direction but blowing no more than 10 mph.

(b) The Certificate Holder shall report the results of the noise evaluation to the Department.

(c) If actual noise levels do not comply with applicable DEQ regulations, the Certificate Holder shall take those actions necessary to comply with the regulations as soon as practicable.

(d) If initial measurements at site (5) show that the hourly L_{50} noise level is 48 dBA or more with the Beaver Plant in operation or 47 dBA or more without the Beaver Plant in operation, the Certificate Holder shall repeat the process outlined in subsections (a), (b), and (c) at site (5) and (7) within six months after completion of the initial measurements. [Amendment No. 7]

(7) To address the concern that noise from any other noise source not associated with the PWGP or Beaver Plant have contributed to the results of the compliance noise measurements, the Certificate Holder may measure noise levels to determine if the operation of any other source has contributed to the compliance results. The Certificate Holder shall report the results of the noise evaluation to the Department indicating any adjustments to applicable noise limits consistent with OAR 340-035-0035(1)(b)(B)(i). [Amendment No. 7]

E.1.b. Wetlands and Removal/Fill Permit

(1) Before beginning construction of Phase 1 of the energy facility or the Port Westward to BPA Allston Substation Transmission Line, as appropriate, the Certificate Holder shall obtain a U.S. Army Corps of Engineers and Oregon Division of State Lands Joint Removal/Fill Permit substantially in the form of the Removal/Fill Permit in Attachment C; provided, that mitigation required under the Removal/Fill Permit shall allow for accommodation of Corps of Engineers mitigation requirements, subject to the concurrence of the Department, in consultation with the Division of State Lands and affected federal agencies. [Amendment No. 1]

(2) The Certificate Holder shall comply with state laws and rules applicable to the Removal/Fill Permit that are adopted in the future to the extent that such compliance is required under the respective statutes and rules.

(3) The Certificate Holder shall clearly stake the wetland boundary adjacent to the spoils disposal area and the wetland number 4 boundary adjacent to the construction laydown/staging areas in the vicinity of the energy facility and the wetland boundary adjacent to the Beaver Generating Plant laydown/staging area prior to any ground disturbing activity in corresponding areas, and shall maintain the staking until all ground-disturbing activities in the corresponding areas have been completed. The Certificate Holder shall instruct all contractors disposing of soil in the spoils disposal area and using the construction laydown/staging areas in the vicinity of the energy facility or at the Beaver Generating Plant laydown/staging area about the purpose of the staking and shall require them to avoid any impact to the wetlands. [Amendments No. 3 & 10]

E.1.c. Public Health and Safety

(1) If local public safety authorities notify the Certificate Holder and the Department that the operation of the energy facility is contributing significantly to ground level fogging or icing along public roads and is likely to pose a significant threat to public safety, the Certificate Holder shall cooperate with local public safety authorities regarding the posting of warning signs on affected roads and the implementation of other reasonable safety measures.

(2) The Certificate Holder shall design the transmission lines and backup electricity lines so that alternating current electric fields shall not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public. [Amendment No. 1]

(3) The Certificate Holder shall design the transmission lines and backup electricity lines so that induced currents and voltage resulting from the transmission lines are as low as reasonably achievable. [Amendment No. 1]

(4) The Certificate Holder shall develop and implement a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the transmission line.

(5) The Certificate Holder shall restore or mitigate the reception of radio and television at residences and commercial establishments in the primary reception area to the level present before operation of the transmission line at no cost to residents or businesses experiencing interference resulting from the transmission line.

(6) The Certificate Holder shall design, construct and operate the transmission lines and backup electricity lines in accordance with the requirements of the National Electrical Safety Code. [Amendment No. 1]

(7) The Certificate Holder shall take reasonable steps to reduce or manage exposure to electromagnetic fields (EMF), consistent with Council findings presented in the "Report of EMF Committee to the Energy Facility Siting Council," March 30, 1993, and subsequent findings. Effective on the date of this Site Certificate, the Certificate Holder shall provide information to the public, upon request, about EMF levels associated with the energy facility and related transmission lines and backup electricity lines. [Amendment No. 1]

(8) At least 30 days before beginning preparation of detailed design and specifications for the electrical transmission line(s) and backup electricity line(s) or the natural gas pipelines, the Certificate Holder shall consult with the Oregon Public Utility Commission staff to ensure that its designs and specifications are consistent with applicable codes and standards. [Amendments No. 1 & 5]

(9) With respect to the related or supporting natural gas pipelines, the Certificate Holder shall design, construct and operate the pipeline in accordance with the requirements of the U.S. Department of Transportation as set forth in Title 49, Code of Federal Regulations, Part 192. [Amendment No. 5]

E.1.d. Water Pollution Control Facilities Permit

(1) Before beginning commercial operation of Phase 1 of the energy facility, the Certificate Holder shall demonstrate that the DEQ has issued to the Certificate Holder a Water Pollution Control Facilities Permit, substantially in the form of Attachment B.1, allowing for on-site sanitary waste disposal. [Amendment No. 1]

(2) 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.

F. CONDITIONS REQUIRED OR RECOMMENDED BY COUNCIL RULES

F.1. MANDATORY CONDITIONS IN SITE CERTIFICATES

Amendment of Site Certificate

(1) The Council shall not change the conditions of the Site Certificate except in accordance with the applicable provisions of OAR 345, Division 27, in effect on the date of the Council action.

Legal Description

(2) Before beginning construction of Phase 1 of the energy facility, the Certificate Holder shall submit to the Department a legal description of the site, except as provided in OAR 345-027-0023(6). [Amendment No. 1]

(a) The legal description of the site for purposes of beginning construction of Phase 1 may exclude the 180-foot wide strip (50 feet south and 130 feet north of an existing road) immediately north of Phase 1.

(b) The Certificate Holder shall notify the Department in writing if it is exercising the option to exclude the 180-foot wide strip from Phase 1.

(c) If the Certificate Holder excludes the strip from the legal description during Phase 1, the Certificate Holder shall submit to the Office, before beginning construction of Phase 2 of the energy facility, a legal description indicating whether the energy facility site for Phase 2 includes the 180-foot wide strip. [Amendment No. 2]

General Requirements

(3) 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 Council issues the Site Certificate; and,

(c) In compliance with all applicable permit requirements of other state agencies.

Construction Rights on Site

(4) Except as necessary for the initial survey or as otherwise allowed for transmission lines or pipelines in this condition, the Certificate Holder shall not begin construction, as defined in OAR 345-001-0010, or create a clearing on any part of the site until the Certificate Holder has construction rights on all parts of the site. For the purpose of this condition, "construction rights" means the legal right to engage in construction activities. For transmission lines or pipelines, if the Certificate Holder does not have construction rights on all parts of the site, the Certificate Holder may nevertheless begin construction or create a clearing on a part of the site if:

(a) The Certificate Holder has construction rights on that part of the site; and,

(b) The Certificate Holder would construct and operate part of the facility on that part of the site even if a change in the planned route of the transmission line or pipeline occurs during the Certificate Holder's negotiations to acquire construction rights on another part of the site.

For purposes of this condition, the "site" for purposes of beginning construction of Phase 1 may exclude the 180-foot wide strip (50feet south and 130 feet north of an existing road) immediately north of Phase 1. [Amendment No. 2]

Beginning and Completing Construction

(5) The Certificate Holder shall begin construction of the energy facility by November 8, 2006. Beginning construction of the Port Westward to BPA Allston Substation Transmission Line shall not satisfy this requirement. [Amendment No. 2]

(a) The Certificate Holder shall report promptly to the Department the date that it began construction of the facility, as defined in OAR 345-001-0010. In reporting the beginning of construction, the Certificate Holder shall briefly describe all work on the site performed before beginning construction, including work performed before the Council issued the Site Certificate and work performed to construct the Port Westward to BPA Allston Substation Transmission Line, and shall state the cost of that work, pursuant to OAR 345-026-0048. If the Certificate Holder constructs the energy facility in phases, the Certificate Holder shall report the beginning of construction of each phase. [Amendment No. 1]

(b) If the Certificate Holder begins construction of the Port Westward to BPA Allston Substation Transmission Line, as defined in OAR 345-001-0010, prior to beginning construction of the energy facility, it shall promptly report to the Department the date it began construction of the transmission line.

(6) The Certificate Holder shall complete construction of the facility by May 8, 2015. The completion of construction date is the day by which (1) the facility is substantially complete as defined by the Certificate Holder's construction contract documents; (2) acceptance testing is satisfactorily completed; and, (3) the energy facility is ready to commence continuous operation consistent with the Site Certificate. Completion of construction of the Port Westward to BPA Allston Substation Transmission Line separately shall not satisfy this requirement. [Amendments No. 2, 6, 8 & 9]

(a) The Certificate Holder shall report promptly to the Department the date it completed construction of the facility. If the Certificate Holder constructs the energy facility in phases, the Certificate Holder shall report the date of completion of each phase. [Amendment No. 1]

(b) If the Certificate Holder completes construction of the Port Westward to BPA Allston Substation Transmission Line separately before completing construction of the facility, it shall promptly report that date to the Department.

(c) Separate completion of construction of Port Westward to BPA Allston Substation Transmission Line shall be the date that PGE makes it available to the Summit/Westward Project to transmit energy.

(7) The Certificate Holder shall begin construction of the BESS by [Insert Date 3 years from Effective Date]. [Amendment No. 11]

(8) The Certificate Holder shall compete construction of the BESS by [Insert Date 6 years from Effective Date]. [Amendment No. 11]

F.2 OTHER CONDITIONS BY RULE

Incident Reports

(1) With respect to the related or supporting natural gas pipelines, the Certificate Holder shall submit to the Department copies of all incident reports required under 49 CFR §192.709 that involve the pipeline.

Rights-of-Way

(2) Before beginning operation of the energy facility, the Certificate Holder shall submit to the Department a legal description of the permanent right-of-way where the Certificate Holder has built a pipeline or transmission line within an approved corridor. The site of the pipeline or transmission line subject to the Site Certificate is the area within the permanent right-of-way. However, if the Certificate Holder completes construction of the Port Westward to BPA Allston Substation Transmission Line before beginning construction of the energy facility, the Certificate Holder shall submit to the Department a legal description of the permanent right-of-way for that segment of that transmission line, notwithstanding OAR 345-027-0023(6).

Monitoring Programs

(3) If the Certificate Holder becomes aware of a significant environmental change or impact attributable to the facility, the Certificate Holder shall, as soon as possible, submit a written report to the Department describing the impact on the facility and its ability to comply with any affected Site Certificate conditions.

Compliance Plans

(4) Before beginning construction of the facility, the Certificate Holder shall implement a plan that verifies compliance with all Site Certificate terms and conditions and applicable statutes and rules. The Certificate Holder shall submit a copy of the plan to the Department. The Certificate Holder shall document the compliance plan and maintain it for inspection by the Department or the Council. However, if the Certificate Holder begins construction of the Port Westward to BPA Allston Substation Transmission Line before beginning construction of the energy facility, the applicable compliance plan shall relate to that phase of construction.

Reporting

(5) Within six months after beginning any construction, and every six months thereafter during construction of the energy facility and related or supporting facilities, the Certificate Holder shall submit a semi-annual construction progress report to the Council. In each construction progress report, the Certificate Holder shall describe any significant changes to major milestones for construction. When the reporting date coincides, the Certificate Holder may include the construction progress report within the annual report described in Condition F.2(6).

(6) The Certificate Holder shall, within 120 days after the end of each calendar year after beginning construction, submit an annual report to the Council that addresses the subjects listed in OAR 345-026-0080(2). The Council secretary and the Certificate Holder may, by mutual agreement, change the reporting date.

(7) To the extent that information required by OAR 345-026-0080(2) 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. The Council reserves the right to request full copies of such excerpted reports.

Schedule Modification

(8) The Certificate Holder shall promptly notify the Department of any changes in major milestones for construction, decommissioning, operation, or retirement schedules. Major milestones are those identified by the Certificate Holder in its construction, retirement or decommissioning plans.

Correspondence with Other State or Federal Agencies

(9) The Certificate Holder and the Department 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.

Notification of Incidents

(10) The Certificate Holder shall notify the Department 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.

G. GENERAL CONDITIONS

(1) The general arrangement of the Port Westward Generating Project shall be substantially as shown in the ASC.

(2) The Certificate Holder shall ensure that related or supporting facilities are constructed in the corridors described in this Order and as shown in ASC and in the manner described in this Order and the ASC.

(3) During construction and operation of the energy facility, the Certificate Holder shall house the combustion turbine in an enclosure that provides thermal insulation, acoustical attenuation, and fire extinguishing media containment and that would allow access for routine inspection and maintenance.

Successors and Assigns

(4) Before any transfer of ownership of the facility or ownership of the Certificate Holder, the Certificate Holder shall inform the Department of the proposed new owners. The requirements OAR 345-027-0100 shall apply to any transfer of ownership that requires a transfer of the Site Certificate.

Severability and Construction

(5) If any provision of this Site 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 Site Certificate did not contain the particular provision held to be invalid. In the event of a conflict between the conditions contained in the Site Certificate and the Council's Order, the conditions contained in this Site Certificate shall control.

Governing Law and Forum

(6) This Site Certificate shall be governed by the laws of the State of Oregon.

(7) Any litigation or arbitration arising out of this agreement shall be conducted in an appropriate forum in Oregon.

IN WITNESS WHEREOF, this Site Certificate has been executed by the State of Oregon, acting by and through its Energy Facility Siting Council, and Portland General Electric Company.

ENERGY FACILITY SITING COUNCIL

By: _____

~~W. Bryan Wolfe~~Barry Beyler, Chair Date

PORTLAND GENERAL ELECTRIC COMPANY

By: _____

Date

ATTACHMENT A MEMORANDUM OF UNDERSTANDING: MONETARY PATH PAYMENT REQUIREMENT

ATTACHMENT B WATER POLLUTION CONTROL FACILITIES PERMIT (B.1) AND ANALYSIS (B.2)

ATTACHMENT C REMOVAL/FILL PERMIT

ATTACHMENT D~~—~~___PGE REQUEST FOR AMENDMENT 7, REVISED EXHIBIT P.8.1 (as transmitted in November 19, 2009 letter Rick Tetzloff to Adam Bless "Port Westward Generating Project – Revisions to Request to Amend Site Certificate (Amendment 7) to address ODFW comments")

Attachment B: Reviewing Agency Comments on Request for Amendment 11

COLUMBIA COUNTY
Land Development Services

ST. HELENS, OR 97051
230 Strand St.
Direct (503) 397-1501
www.co.columbia.or.us

July 11, 2019

Maxwell Woods
Senior Policy Advisor
Energy Facility Siting Division
Oregon Department of Energy
550 Capitol Street NE, 1st Floor
Salem, OR 97301

RE: Columbia County Agency Comment for Amendment # 11 of the Site Certificate for the Port Westward Generating Project / PGE Battery Storage Project

Dear Mr. Woods,

This letter is a response to your previous email requesting agency comment on the application to add a 4-6 MW battery energy storage system to the Port Westward Generating Plant.

The subject property (Map/Taxlot 8415-00-00100) is zoned Resource Industrial Planned Development (RIPD) which is the appropriate zoning for Industrial uses such as large utility power generation facilities. This particular facility began commercial power generation in June of 2007 and has been in continuous operation ever since. Columbia County would treat the battery storage as a component of the previously approved primary use, which is a natural gas-fired power generation facility. The battery storage units will be located within the fence line and next to the existing electrical switch yard. This area is currently a flat, asphalt paved area and we expect no negative impacts to the overall operation of the facility or any adjacent properties.

The Columbia County Planning Department has reviewed the above mentioned application and finds that it includes accurate findings of fact to all relevant sections of the Columbia County Zoning Ordinance and the Columbia County Comprehensive Plan and we find no additional local criteria, state statute, or state planning goals that need to be addressed.

Thank you for the opportunity to review and comment. Feel free to contact me if you need any additional information or would like to discuss this matter further.

Cordially,

Matt Laird
Planning Manager

CLARK Christopher * ODOE

From: Sarah J Reif <Sarah.J.Reif@state.or.us>
Sent: Friday, July 26, 2019 11:51 AM
To: CLARK Christopher * ODOE; REIF Sarah J
Cc: WOODS Maxwell * ODOE
Subject: RE: Request for comment on preliminary Request for Amendment 11 of the Port Westward Generating Project Site Certificate

Hi Chris,

ODFW met with PGE to discuss these amendments back in February 2019. At that time, PGE proposed some changes to the seed mix. ODFW supports the proposed changes to the seed mix as proposed by PGE, to accommodate more variable (wet/dry) conditions. As for success criteria, ODFW finds the criteria originally established in the reveg plan may have been challenging to meet given the larger patterns of noxious weed abundance and spread on the larger landscape. To address this potential issue, ODFW recommended PGE establish paired monitoring plots outside the reveg area that could be used for comparison with the monitoring plots inside the reveg area. The intention would be to assess whether the reveg efforts were trending toward success, calibrated by the larger landscape forces. It is my understanding that we do not have those results yet, but that based on those results ODFW might recommend ODOE allow for adjustment of the existing success criteria. I was comfortable with the criteria living in the reveg plan as opposed to the condition of the site certificate, so that if they needed to change they could change within the attachment and not require a formal amendment.

To answer your remaining questions below, I do believe the methods and criteria in Attachment 4a align with what PGE and ODFW discussed with ODOE back in February, and that these will meet the fish and wildlife habitat standard.

Sarah Reif
Office: 503-947-6082
Cell: 503-991-3587

From: CLARK Christopher * ODOE <Christopher.Clark@oregon.gov>
Sent: Wednesday, July 10, 2019 4:02 PM
To: REIF Sarah J <Sarah.J.Reif@state.or.us>
Cc: WOODS Maxwell * ODOE <Maxwell.Woods@oregon.gov>
Subject: RE: Request for comment on preliminary Request for Amendment 11 of the Port Westward Generating Project Site Certificate

Hello Sarah,

I just wanted to follow up and see if you are planning on submitting comments on PGE's proposed amendments to the Port Westward Site Certificate and revegetation plan. We primarily just wanted to confirm that you had reviewed the changes and didn't have any objections.

Thank you,

Christopher M. Clark
Siting Policy Analyst & Rules Coordinator
550 Capitol St. NE | Salem, OR 97301
P: 503-373-1033
P (In Oregon): 800-221-8035

Stay connected!

From: CLARK Christopher * ODOE
Sent: Thursday, May 23, 2019 12:37 PM
To: Sarah Reif (Sarah.J.Reif@state.or.us) <Sarah.J.Reif@state.or.us>
Cc: WOODS Maxwell * ODOE <Maxwell.Woods@oregon.gov>
Subject: Request for comment on preliminary Request for Amendment 11 of the Port Westward Generating Project Site Certificate

Hello Sarah,

The Oregon Department of Energy would appreciate your review and comment on the preliminary Request for Amendment 11 of the Port Westward Generating Project Site Certificate. The Department received the preliminary request on April 23, 2019. The preliminary request seeks Council approval to add 4 to 6 megawatts of battery storage to the existing Port Westward facility, which would be constructed on and occupy approximately 100 x 90 feet within the facility's existing fenceline. The certificate holder has also proposed several amendments to the existing site certificate that are not specific to the proposed battery storage facility, including revisions to the site's revegetation plan and related site certificate conditions. The Department is currently reviewing the preliminary to determine whether the materials constitute a complete request under OAR 345-027-0063.

The preliminary request is available on our website at: https://www.oregon.gov/energy/facilities-safety/facilities/Pages/PWG.aspx.

We would like to request ODFW's review and comment on the preliminary request. In particular, we would appreciate your review of the proposed revegetation plan (Attachments 4a and 4b) and proposed changes to Section D.8 of the Site Certificate (Attachment 7) and comments on the following issues:

- Is the upland mix provided on page 3 of Attachment 4a of the preliminary request appropriate for restoration of the spoils disposal area and any potential reseeding of Unit 2 revegetation areas?
- Are the monitoring methods and schedule provided on page 3-4 of Attachment 4a of the preliminary request consistent with ODFW's expectations based on previous discussions with the applicant?
- Are the revegetation success criteria provided on page 5 of Attachment 4a of the preliminary request consistent with ODFW's expectations based on previous discussions with the applicant?

Note the proposed revegetation plan is in Part 1, starting at page 113 of the PDF, the proposed amendments to section D.8 of the site certificate are in Part 2, starting around page 60 of the PDF.

We also encouraged you to review and comment on any other information in Section 8.7 of the request, or other areas that may be of interest. Any comment you can provide by **June 7, 2019** would be appreciated. Please let us know if you need additional time.

Thank you, and please do not hesitate to contact me with any questions,

Christopher M. Clark
Siting Policy Analyst & Rules Coordinator
550 Capitol St. NE | Salem, OR 97301
P: 503-373-1033
P (In Oregon): 800-221-8035

Stay connected!

Attachment C: [Reserved for Draft Proposed Order Comments/Index]

Attachment D: Draft Amended Revegetation and Noxious Weed Control Plan

Style Definition: TOC 1: Font: Not Bold

Revegetation and ~~Invasive Species Monitoring~~Noxious Weed Control Plan
Port Westward Generating Project

Submitted by:

Portland General Electric

~~October 2006~~Revision 1, April 2019

TABLE OF CONTENTS

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1.0 INTRODUCTION

Portland General Electric Company (PGE) began commercial operation of Unit 1 of the Port Westward Generating Project (PGWP Unit1) in June 2007. Construction of PGWP Unit 2 began in May 2013 and the project started commercial operation on December 30, 2014. Major soil disturbance activities associated with plant site preparation and construction included rough grading, excavation, filling, stockpiling, and final grading. Following the completion of construction activity, erosion control and revegetation measures were conducted as required in the original site certificate (Unit 1) and tenth amended site certificate (Unit 2) issued by the Oregon Energy Facility Siting Council (OR-EFSC 2006, 2013) and consistent with the project Erosion and Sediment Control Plan and the original Revegetation and Invasive Species Monitoring Plan (RISMP, PGE 2006).

Revegetation and monitoring of temporary disturbance areas associated with PGWP Unit 1 was conducted in 2007 through 2011 (PGE 2011). Monitoring of PWGP Unit 2 temporary disturbance areas is in progress, with the initial five-year monitoring program to be completed in 2019 (PGE 2018).

Construction of PGWP Unit 2 began in May 2013 and the project started commercial operation on December 30, 2014. Major soil disturbance activities associated with plant site preparation and construction included rough grading, excavation, filling, stockpiling, and final grading. Following the completion of construction activity, erosion control and revegetation measures were conducted as required in the tenth Amended Site Certificate issued by the Oregon Energy Facility Siting Council (OR-EFSC 2013) and consistent with the project's Erosion and Sediment Control Plan (Black and Veatch 2013) and the Revegetation and Invasive Species Monitoring Plan (RISMP, PGE 2006).
~~Portland General Electric is scheduled to complete construction of the Port Westward Generating Project by March 2007. Construction site preparation activities included installing stone columns, clearing and grubbing, and excavation work. Subsequent construction and site stabilization activities include constructing new structures and equipment, installing buried water and gas lines, regrading the site, installing a plant access road, seeding soil disturbance areas outside of the power block area, and putting down aggregate surfacing inside the power block area. Soil disturbing activities include rough grading, excavation, filling, stockpiling, and final grading. The above construction activities, including equipment staging areas, construction trailers and temporary parking areas occur over approximately 20 acres at the immediate plant construction site. Potential soil disturbance areas also include approximately 14 acres of pipeline corridor, and a 13.5 acre spoils stockpiling and disposal site.~~

~~The Port Westward to Trojan Transmission Line portion of the Project will be completed by October 31, 2006. Transmission line construction consisted of right-of-way clearance, erecting steel transmission towers on concrete piers, and stringing conductors between towers. Ground-disturbing construction activities consisted of minor leveling, foundation excavation, concrete placement, pulling of conductor wire, and associated construction vehicle disturbance and staging of equipment/materials. Total work area along the right-of-way, including soil disturbance areas, staging areas and work areas, is estimated to be 24 acres, distributed among 103 tower foundation sites. There also were some limited soil disturbance impacts and vegetation~~

~~clearing in riparian areas associated with right-of-way clearance and temporary stream crossings for construction vehicles.~~

~~During all construction activity, PGE implemented mitigation measures as required by the Project Site Certificate issued by the Oregon Facility Siting Council and as described in the Generating Plant and Transmission Line Sediment and Erosion Control Plans. The Project Site Certificate includes specific measures for revegetation of soil and riparian disturbance areas following completion of the Project. The Site Certificate also requires follow-up monitoring of soil and riparian disturbance areas for revegetation success, soil erosion issues, and invasive plant species.~~

This revised revegetation monitoring plan ~~This Revegetation and Invasive Species Monitoring Plan~~ will apply to completion of revegetation monitoring for Unit 2 construction as well as revegetation and monitoring of any additional temporary disturbance areas that result from construction of the Port Westward Battery Storage project (Amendment 11)~~covers the Port Westward Generating Project, including the generating plant construction site, associated pipeline construction, and the Port Westward to Trojan Transmission line.~~ The plan ~~reviews revegetation measures conducted to date,~~ specifies methods and schedule for evaluating the success of revegetation measures and implementing follow-up remedial measures (reseeding~~,~~ ~~replanting of native woody species,~~ and invasive species control) as necessary, and details revegetation success criteria and reporting requirements. ~~As required by the Site Certificate,~~ T~~t~~he plan is being submitted for approval by the Oregon Department of Energy (Department) as required by the Site Certificate,. ~~prior to commencement of monitoring work.~~

2.0 REVEGETATION MEASURES

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Following construction, PGE will implement~~ed~~ the revegetation measures stipulated in the Site Certificate. As appropriate at specific locations, revegetation measures include~~d~~:

- Reseeding of all soil disturbance areas to restore vegetation;
- Application of mulch and straw wattles to prevent soil erosion during vegetation re-establishment.~~;~~
- ~~Revegetation of disturbed riparian areas with appropriate plant species;~~
- ~~Planting of native woody species (according to the Typical Re-vegetation Plan, ASC, Exhibit Q, Page Q-6.1) in riparian shrub and forest habitat where canopy cover of less than 25 percent resulted from construction impacts.~~

PGE plans to use the following seed mix for revegetation of any upland disturbance areas associated with the battery storage project or for any necessary follow-up seedings of the Unit 2 revegetation areas. This seed mix may be changed with concurrence of ~~Prior to reseeding disturbance areas, PGE obtained~~ Oregon Department of Fish and Wildlife (ODFW) and the Department. ~~concurrence for the use of the following seed mixes as appropriate for each disturbance site:~~

~~Riparian Area Mix~~Upland Mix (50% grasses, 35% perennial flowers, 15% annual flowers)

California Brome - *Bromus carinatus*
California oatgrass (*Danthonia californica*)
Red fescue (*Festuca rubra*)
Streambank Lupine - *Lupinus rivularis*
California Poppy - *Eschscholzia californica*
Farewell to Spring - *Clarkia amoena*
Western Yarrow - *Achillea millefolium*
Lance Self-heal - *Prunella vulgaris v. lanceolata*
Baby Blue Eyes - *Nemophila menziesii*

~~46% Blue Wildrye~~
~~38% Native Red Fescue~~
~~12% Tufted Hairgrass~~
~~2% Western Mannagrass~~
~~2% American Sloughgrass~~

~~40% Delaware Dwarf Perennial Ryegrass~~
~~20% Creeping Red Fescue~~
~~20% Annual Ryegrass~~
~~10% Highland Bentgrass~~
~~10% New Zealand White Clover~~

~~Riparian and/or upland mix~~
~~60% Blue Wildrye~~
~~30% Native Red Fescue~~
~~10% California Brome~~

~~Pasture mix~~
~~30% Orchardgrass~~
~~30% Perennial Ryegrass~~
~~20% Bronson Tall Fescue~~
~~10% Annual Ryegrass~~
~~5% Tuuka Timothy~~
~~5% Kentucky Bluegrass~~

~~Erosion Control Mix~~

3.0 MONITORING METHODS AND SCHEDULE

~~During the 12 months following completion of construction for each project phase (i.e. transmission line and generating plant), at least two surveys will be conducted of all construction disturbance areas to evaluate the success of revegetation measures and identify any soil erosion concerns.~~ Annual surveys will be conducted for a period of five years to monitor revegetation success and invasive species control needs at ~~the plant construction site and at riparian areas disturbed during transmission line construction.~~all temporary disturbance areas impacted by project construction. The five-year monitoring period for Unit 2 disturbance areas will be completed in 2019, after which PGE will consult with ODFW and ODOE regarding success criteria (See Section 5.0).

~~3.1 Initial Monitoring Survey (January/February 2007)~~

~~Following approval of this plan by the Department, PGE will conduct an initial monitoring survey of transmission line construction disturbance areas and any soil disturbance areas at the generating plant site where construction has been completed to date.~~ All revegetation~~construction~~ areas will be visually surveyed by a qualified PGE biologist. During ~~the first~~each annual monitoring visit, the surveyor will collect the following information:

Commented [AB1]: Possibly include more diverse mix with input from seed suppliers informed by site conditions.

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Commented [AB2]: Seed mix subject to change following input from seed suppliers and approval by ODFW/ODOE.

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- Confirmation that all areas requiring revegetation have been seeded;
- Success of vegetation establishment as measured by:~~,~~

~~a)~~ Percent ~~total~~ vegetative cover by species; percent bare soil; and percent other ground covers (i.e., gravel or litter) (ocular estimate using 10, randomly-located, $1m^2$ sampling quadrats in each revegetation area). Paired plots may also be used to compare sampling results to vegetation in nearby undisturbed areas;~~,~~

~~b) Percent bare soil (ocular estimate);~~

- Presence of invasive plant species (species listed as noxious under the Oregon Department of Agriculture Noxious Weed Control Program), and density estimates by species if present (in sampling quadrats and overall ocular estimated by revegetation area);
- Presence of erosion problems that require further mitigation measures.~~; and,~~
- ~~Status of native woody species plantings in riparian corridors,~~

~~a) Confirmation of adequate initial planting density,~~

~~b) Percent survival of planted native woody species.~~

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~~3.2 Second Monitoring Survey (May-June 2007)~~

~~All construction disturbance areas will be surveyed in spring 2007 to confirm vegetation establishment and note any areas that require further measures. Data collection will consist of the same information collected during the initial survey. This survey will also serve as the first of five annual monitoring surveys for revegetation success and invasive plant species in riparian revegetation areas (annual surveys described below).~~

~~3.3 Third Monitoring Survey (as required)~~

~~This monitoring survey will be conducted at all areas where less than two surveys have been conducted to date (such as generation plant areas that were not covered in the November-December 2006 surveys), and at any sites where ongoing problems exist (i.e., soil erosion problems, significant areas of bare soil where seeded vegetation failed to establish, less than 80 percent survival of planted native woody species in riparian areas). This survey will focus on ensuring that all sites have been properly stabilized and revegetated prior to the 2007-2008 rainy season.~~

~~3.4 Annual Monitoring Surveys~~

~~Starting in 2007, PGE will conduct annual surveys for five years. Surveys will be conducted in the spring (May/June) of each year. The purpose of the surveys will be to:~~

~~1) Monitor the success of riparian area revegetation efforts; and,~~

~~2) Monitor for the presence of invasive plant species in 1) riparian areas and wetlands along the transmission line right-of-way, and 2) in areas temporarily disturbed by construction of the~~

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~~raw water, gas, and process water discharge lines, in the temporary construction staging and laydown area northwest of the energy facility site, and in the soils disposal site.~~

~~Annual surveys will be conducted by a qualified PGE biologist, and the following information will be collected:~~

- ~~Percent survival of planted native woody species;~~
- ~~Presence of erosion problems that require further mitigation measures; and,~~
- ~~Presence of invasive plant species and density estimates by species if present.~~

4.0 FOLLOW-UP RESTORATION MEASURES

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Following each of the surveys described above, PGE will conduct follow-up measures as needed to address remaining soil impacts and revegetation requirements not achieved through initial plantings. Such follow-up measures may include:

- Reseeding of select areas where significant areas of bare soil remain after establishment of initial seeding;
- ~~Planting of additional native woody species in riparian revegetation areas where an 80 percent survival was not achieved; and,~~
- Control of invasive plant species by qualified personnel using appropriate methods for the target species (i.e. herbicides applied per label requirements if herbicides required).

5.0 REVEGETATION SUCCESS CRITERIA

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Revegetation will generally be considered successful when the revegetated areas support non-noxious plant communities that are at a minimum similar in vegetation percent cover and erosion potential comparable to surrounding undisturbed areas. When the site certificate holder determines that an area of the project has been successfully restored by satisfying all success criteria, this will be stated in the annual revegetation report. If ODFW and the Department concur, the site certificate holder will conclude that it has no further obligation to perform revegetation activities in that area of the project.

The goal for each soil disturbance site will be a minimum of 80 percent vegetation cover (of seeded vegetation and desirable, naturally-recruiting species and excluding invasive plant/noxious weed cover) and no ongoing erosion issues. Reseeding or replanting efforts will occur, in consultation with ODFW and the Department, in any area where monitoring identifies a restoration failure.

Commented [AB4]: Condition D.8(19) included here. Remove from Site Cert.

Commented [AB5]: D.8(24) included here and in last sentence of Section 6 below. Remove from Site Cert.

The following criteria will be used to determine success of revegetation efforts:

1. The vegetation percent cover by native species and desirable non-native species (i.e., non-noxious weeds, both seeded and naturally recruited) is 80 percent or more, or the native species component is not significantly less than the native species percent cover of surrounding undisturbed areas.
2. Noxious weeds are absent or constitute only a small percentage (<5%) of vegetation otherwise dominated by native or desirable non-native species.
3. The percentage of bare soil (excluding rocky areas) in the sample plot is <10%, or not

significantly greater than the percentage of bare soil in surrounding undisturbed areas.

4. Vegetation percent cover goals may be adjusted to match the typical percent cover in nearby undisturbed areas as measured with paired monitoring plots.

5.06.0 REPORTING SCHEDULE

Beginning in 2007 and continuing through 2010, Within one year after completion of construction of any phase of the facility PGE shall provide a summary report to ODFW and the Department that identifies the revegetation actions it took and the results of revegetation monitoring conducted to that time. PGE will submit an annual report to ODFW and the Department by December 31 of each year during the five-year monitoring period required for each revegetation area. In 2011, tThe final annual report will be submitted within three months of the final annual monitoring survey, as required in the Site Certificate. The Aannual reports will identify revegetation actions taken in construction disturbance areas at the Port Westward Generating Project, the results of vegetation monitoring, and invasive species control measures implemented to date. The final annual report will document achievement of success criteria, or, if criteria have not been met, propose additional mitigation and monitoring measures to be implemented.

Commented [AB6]: D.8(22) included here. Remove from Site Cert.

Commented [AB7]: D.8(21) included here. Remove from Site Cert.

Commented [AB8]: D.8(23) included hear. Remove from Site Cert.

7.0 AMENDMENT OF PLAN

This Plan may be amended from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council ("Council"). Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this Plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of this Plan agreed to by the Department.

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