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**BEFORE THE ENERGY FACILITY SITING COUNCIL
OF THE STATE OF OREGON**

IN THE MATTER OF THE SITE CERTIFICATE FOR)
THE PORT WESTWARD GENERATING PROJECT) PROPOSED ORDER
REQUEST FOR AMENDMENT NO. SEVEN)

OREGON DEPARTMENT OF ENERGY
January 13, 2010

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**PORT WESTWARD GENERATING PROJECT
SITE CERTIFICATE AMENDMENT #7
PROPOSED ORDER**

I. SUMMARY OF THE REQUEST FOR AMENDMENT

On September 18, 2009, Portland General Electric Company (“PGE” or the “Certificate Holder”) submitted to the Oregon Department of Energy (“Department”) its Request for Seventh Amendment to the Site Certificate for the Port Westward Generating Project (“PWGP” or the “Project”). The principal modifications that PGE requested are:

- (1) Authorization to construct and operate Unit 2 of the PWGP (PW2 or Unit 2) as multiple dual fuel reciprocating engine-generator sets and/or aeroderivative combustion turbine generators with a combined nominal generating capacity of up to 200 megawatts (MW).
- (2) Expansion of the facility site by 8.5 acres to accommodate Unit 2.

The Certificate Holder also included recommendations for proposed new, revised, or deleted Site Certificate Conditions, pursuant to OAR-345-027-0060(d).

A. Name and Address of the Certificate Holder

Portland General Electric Company
121 S.W. Salmon Street
Portland, OR 97204

The individual responsible for submitting the request:

Rick Tetzloff
Portland General Electric Company
121 SW Salmon Street, 3WTC-BR03
Portland, OR 97204
503-464-8508

B. Description of the Facility

The Council granted the Site Certificate for the facility on November 8, 2002, and has subsequently approved six amendments to the Site Certificate. This amendment, if granted, will be amendment #7. The Site Certificate authorized a 650-MW natural-gas-fired, combined-cycle generating facility. The facility is currently in operation in Columbia County, Oregon, about seven miles by road northeast of the City of Clatskanie. PGE completed construction of the 425-MW Unit 1 baseload component in 2007.

II. DESCRIPTION OF THE PROPOSED AMENDMENT

OAR 345-027-0060(1)(c) requires that an amendment request include “a detailed description of the proposed change and certificate holder’s analysis of the proposed change under the criteria of OAR 345-027-0050(1).” The proposed changes to the energy facility include the following.

A. Summary of Proposed Changes to Energy Facility

- (1) Unit 2 was originally certificated as a second baseload natural gas-fired combustion turbine combined cycle unit. With this amendment #7, PGE is proposing to construct Unit 2 as reciprocating engine-generator sets and/or aeroderivative combustion turbine generators in order to produce on-demand power in response to natural variability and uncertainty associated with expanded renewable energy sources in the Northwest.¹
- (2) In order to accommodate the proposed Unit 2, the facility site boundary would be expanded by 8.5 acres. This intended area of permanent disturbance is land that was temporarily disturbed during construction of Unit 1. The Certificate Holder has proposed a habitat mitigation area of approximately equal size to the area of permanent disturbance adjacent to existing conservation easements.
- (3) PGE also requests a transfer of water from its existing water right for the Trojan plant to the Port Westward intake. The transfer would not involve physical change to intake structures or any other equipment. The point of diversion for the water would be changed from Trojan to Port Westward. The use of water under PGE's existing water right for Trojan would eliminate the need for PGE's water use agreement with the Port of St. Helens. Pursuant to ORS 469.503(3), the Council must determine that "the facility complies with all other Oregon statutes and administrative rules applicable to the facility." The analysis of compliance for the water right transfer with administrative rules of the Water Resources Department (WRD) appears in section V.N.5 of this order.

B. Summary of Proposed Changes to Site Certificate Conditions

The Certificate Holder proposed the following changes to Site Certificate conditions that are related to new or modified facilities:

- (1) Deletion of Condition D.2(7) requiring a copy of the water use agreement between PGE and the Port of St. Helens. The request for amendment #7 contains a request to the Oregon Water Resource Department (OWRD) for a permanent transfer of water rights from PGE's decommissioned Trojan Power Plant (Certificate No. 73396) to PWGP, eliminating the need for PGE's water use agreement with the City of St. Helens.
- (2) Adjusting the amount of bond or letter of credit in Condition D.3(5) to reflect the facility retirement and site restoration costs associated with Unit 1 and the proposed Unit 2. The Certificate Holder also requests a revision to the language of Condition D.3(5) requiring a unit-cost based approach to financial assurance cost estimating

¹ PGE also noted in its amendment request that it would use 30% aqueous ammonia rather than the 20% described in the original application for site certificate. However, the change does not require any physical changes to the energy facility and does not affect any condition or standard.

(as the final configuration of the facility has not been selected), and providing for Department review of the retirement cost estimate prior to construction of Unit 2 and the submittal of the required bond or letter of credit.

- (3) Addition of a new Condition D.8(25) applicable to a conservation easement and mitigation requirement for habitat mitigation associated with Unit 2.
- (4) The Final Order on Amendment #3 (January 28, 2005) contained Condition D.8(7) requiring PGE to monitor the impact of the operation of the energy facility on bald eagles that had built a nest within one-half mile of the energy facility site after the Council granted the Site Certificate. The condition required PGE to provide mitigation measures to meet the goals of Habitat Category 2 if monitoring indicated that the operation of the energy facility affected the birds. With this request for amendment #7, PGE requests the deletion of Condition D.8(7), citing the results of five years of monitoring spanning Unit 1 construction and operation. The Certificate Holder also requests a modification of Condition D.8(8) to focus on nests of sensitive, threatened, or endangered species within ¼ mile of the facility (the bald eagle was removed from the federal list of endangered species in 2007).
- (5) Relating to Proposed Change (1) above, PGE requests a new Condition D.13(11), requiring the Certificate Holder to obtain a permanent water right transfer from OWRD in the form approved by the Council prior to beginning operation of Unit 2.
- (6) Amendment of Condition E.1.a(4) and addition of a new Condition E.1.a(6) to clarify noise monitoring associated with Unit 2.
- (7) PGE requests new conditions in section D.15, specifying the procedure for calculating carbon dioxide offset payments and the procedure for reporting actual carbon dioxide emissions from Unit 2.

III. PROCEDURAL HISTORY

A. Department of Energy Review Steps

1. Amendment Request Submittal

PGE submitted the Request for Amendment #7 to the Site Certificate for the Port Westward Generating Project on September 18, 2009. The Department posted a copy of the amendment request on its website, and arranged for a copy to be placed in the Clatskanie Public Library for public review.

2. Review by Other Agencies, Local Governments, and Tribes

The Department, pursuant to OAR 345-027-0070(1)(a), sent a memo to potentially affected agencies, local governments, and tribes on September 21, 2009 notifying them of PGE's request for amendment #7, and requesting comments by October 21, 2009. The Department posted a copy of PGE's request for amendment #7 on its web site. The Department sent the request to the following agencies, local governments, and tribes:

City of Clatskanie (Mayor's Office)	Dept. of Geology and Mineral Industries
Columbia County	Dept. of Land Conservation and Development
Columbia County Land Use	Department of State Lands
Confederated Tribes of the Grand Ronde	Northwest Power Planning Council

Confederated Tribes of the Siletz
Dept. of Agriculture
Dept. of Environmental Quality
Dept. of Fish and Wildlife
Dept. of Forestry

Office of the State Fire Marshall
Public Utilities Commission
State Historic Preservation Office
Water Resources Department

3. *Replies*

Oregon Department of Fish and Wildlife (ODFW) sent written comments on October 22, 2009. ODFW's comments are summarized and addressed in detail in sections V.H and V.I of this order.

The Columbia County Commissioners also commented in writing on October 23, 2009, regarding road impacts in the Port Westward Industrial Area. The County's comments are relevant to EFSC's Public Service standard and are addressed at section V.M of this order.

4. *Initial Public Notice*

On September 21, 2009, the Department mailed a notice of the request for amendment to persons on the Council's general mailing list and its special mailing list for the Project, pursuant to OAR 345-027-0070(1)(b). The notice asked for comments to the Department by October 21, 2009.

5. *Public Comments on the Request*

Columbia Riverkeepers (CRK) sent written comments on October 21, 2009. In its comments, CRK stated that PGE should be more clear about the final configuration of Unit 2. CRK expressed concern that PGE would buy fuel in the form of LNG from the proposed Bradwood Landing LNG terminal. CRK raised a concern over gas quality issues with LNG and life cycle carbon dioxide emissions (emissions from production and transportation of gas) from LNG. CRK also stated that PGE should meet current carbon dioxide standards (the standards in effect in October 2009) rather than proposed new standards.² CRK stated that the conservation easement proposed by PGE did not meet the ODFW habitat mitigation goal for the 8.5 acres land added to the site. CRK stated that the analysis of soil impacts should also include the 8.5 acres of new land. CRK also raised concerns generally about cumulative airshed and watershed impacts from industrial development along the lower Columbia River, both in Oregon and Washington. Finally, CRK noted the concerns about noise and light impacts on residents of Cowlitz County, Washington.

CRK's comments regarding the Habitat standard are consistent with ODFW's comments and are addressed in the discussion of that standard. Similarly, the comments regarding

² In the Sept. 2009 secretary of state bulletin, ODOE announced a proposed rule amendment for CO₂ emissions for non base load power plants. The new CO₂ rule was subsequently adopted by the Council on November 20, 2009. The rules adopted on November 20, 2009 apply to Amendment 7.

the Soil standard are also addressed in the section of this order that discusses that standard. CRK concerns regarding general cumulative impacts of industrial development on the airshed and watershed along the lower Columbia are considered by the Department of Environmental Quality as part of its permitting authority under the federal Clean Air Act and Clean Water Act. These are federal permits and are outside the scope of EFSC jurisdiction.

PGE responded to CRK comments in writing.³ Regarding the final configuration of Unit 2, PGE stated that it analyzed compliance with EFSC standards over the full range of proposed designs. The Department concurs because the analysis of compliance with EFSC standards in section V of this order is based on conservative assumptions about aspects such as retirement cost, noise, and carbon dioxide emissions. Moreover, proposed conditions require PGE to specify final design prior to start of construction so that the retirement surety, carbon dioxide offset requirement and noise testing can be specified.

Regarding gas quality issues, PGE noted that its air emissions must meet DEQ standards, whatever fuel source is used. The Council has no authority over where PGE buys its fuel as long as EFSC standards are met. Regarding carbon dioxide emissions based on life cycle analysis, the Council's rules fix the calculated carbon dioxide emissions at 117 lb./MMBTU of fuel burned. Consideration of life cycle emissions would require an extensive rulemaking that is not proposed at this time.

Regarding the applicability of new CO₂ rules, PGE noted in its reply:

*“***Pursuant to OAR 345-027-0070(10), the Council in making a decision to grant or deny issuance of an amended site certificate must apply the administrative rules “in effect on the date the Council makes its decision.” PGE petitioned the Siting Council to amend portions of two rules regarding the Council’s standards for net carbon dioxide emissions from non-baseload power plants. The Council approved the petition and authorized a rulemaking proceeding. The rule-making hearing has occurred and Columbia Riverkeeper submitted comments. If the Council amends the rules prior to issuing a final order on PGE’s Amendment Request, the amended rules must be applied.”*

In summary, the Department recommends the Council find that concerns raised in CRK comments are addressed by PGE's written response of November 5, 2009 and in the sections of this order that address specific EFSC standards.

B. Council Review Steps

The Department briefed the Council on PGE's amendment request at its regular public meeting on November 20, 2009 in The Dalles, Oregon. The Council had the opportunity to ask questions about the project of staff and PGE.

³ PGE letter Rick Tetzloff to Adam Bless, November 5, 2009

IV. PROPOSED CHANGES TO SITE CERTIFICATE

Under OAR 345-027-0050, a Site Certificate amendment request is required if a Certificate Holder proposes to change the site boundary or otherwise to design, construct, operate or retire a facility in a manner different from the description in the Site Certificate and the proposed change meets one of three criteria in section (1) of OAR 345-027-0050. PGE's proposed changes trigger a Site Certificate amendment under section 1(c):

1(c) *“Could require a new condition or a change to a condition in the site certificate.”* As shown below in Section IV, PGE has requested deletion of certain conditions, and changes to other conditions, in order to accommodate the design of PWGP Unit 2.

A. Site Certificate Holder's Proposed Changes

OAR 345-027-0060(1)(d) requires that a Certificate Holder include in a request for an amendment to a Site Certificate *“The specific language of the site certificate, including affected conditions, that the certificate holder proposes to change, add or delete by an amendment.”* PGE's proposed changes to the Site Certificate are summarized below; where changes are self-evident, there is no discussion. Page numbers refer to the Sixth Amended Site Certificate.

1. Section C, Site Descriptions

Page 3-7, Section C.1.a

The description of major structures and equipment would be revised to reflect a 650-MW facility comprised of base load generation and non-base load generation, and the existing PW1 components and proposed PW2 components. Descriptions of output, fuel use, water use, and wastewater for the facility would be changed to reflect PW1 and PW2. The description of water use would reflect permanent water right transfers obtained for PW1 and planned for PW2.

Page 8, Section C.1.b

The description of related or supporting facilities would be amended to reflect the increase in maximum pressure on the related and supporting natural gas pipeline from 520 to 1000 psig.

Page 10, Section C.2.a

The description of the energy facility site would be amended to reflect the expanded site boundary necessary to construct and operate PW2.

2. Section D, Council Siting Standards [Conditions]

a. Organizational Expertise

Page 14, Condition D.2(7)

PGE requested the deletion of Condition D.2(7) requiring documentation of an agreement between the certificate holder and the Port of St. Helens for water use. PGE plans to obtain a permanent water right transfer from the Oregon Water Resources Department for PW2 (see Condition D.13(11) below).

- b. *Retirement and Financial Assurance*
Page 15, Condition D.3(5)
PGE requested a change to the amount of the bond or letter of credit for PW1 and provided its estimate of the amount for PW2. The Department has developed an independent updated site restoration cost estimate for PW1 and new estimate for PW2 and its recommendations are included in this order at Section V.F.
- c. *Fish and Wildlife Habitat*
Page 23, Condition D.8(7)
PGE requested the deletion of Condition D.8(7)(a-f) requiring monitoring of and mitigation actions for the nesting habitat for bald eagles on Crims Island. PGE contends that 5 years of monitoring the eagles during PW1 construction and operation suggests no effects on bald eagle nesting behavior or fledgling success. Bald eagles were removed from the federal Endangered Species List in 2007.
Page 24, Condition D.8(8)
PGE requested conditions to conduct pre-construction surveys of sensitive, threatened, or endangered raptor species within ¼ mile of the facility site, establishing construction buffers around identified raptor nests during the breeding season, and deleting language requiring mitigation for unavoidable nest impacts.
Page 27, Condition D.8(25)
PGE requested the insertion of Condition D.8(25), requiring mitigation for impacts to the 8.5 acres of non-native grassland required for the PW2 expansion to the facility. PGE proposes to provide a copy of the conservation easement with the landowner of the mitigation area prior to construction of PW2.
- d. *Public Services*
Page 32, Condition D.13(11)
PGE requested the insertion of Condition D.13(11), documenting a permanent water right transfer from the Oregon Water Resources Department for water use at PW2.
- e. *Carbon Dioxide Standard*
Page 35, Condition D.15(3)
PGE requested submitting monetary path payment requirement calculations based on PW1 and PW2 design 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.
Page 36, Condition D.15(4)
PGE requested revision to Condition D.15(4), requiring PGE to provide final design parameters for Unit 2 including heat rate and power output, expected hours of operation, and specifications for initial operational heat rate testing.
Page 37, Condition D.15(5)

PGE requested a revision to Condition D.15(5), clarifying the requirement for the 100-hr heat rate test at full power with and without power augmentation technologies for PW1.

Page 38, Condition D.15(7)

PGE requested a revision to the language of Condition D.15(7), reflecting the monetary path payment requirement calculations for PW1 to be based on emissions data from PW1; and calculations for PW2 to be based on separate emissions requirements and data from PW2.

Page 41, Condition D.15(8)

PGE requested revised language to Condition D.15(8) reflecting the PW1 and PW2 generating units.

3. *Section E, Other Applicable Regulatory Requirements*

a. *Noise*

Page 42, Condition E.1.a(4)

PGE requested a revision to Condition E.1.a(4), reflecting noise monitoring and mitigation action requirements for PW2.

Page 43, Condition E.1.a(6)

PGE requested insertion of Condition E.1.a(6), refining noise monitoring at certain receptor locations in order to determine if operation of the nearby Cascade Grain (or other developments, exclusive of the generating facility) increases the L50 noise levels above 33 dBA.

OAR 345-027-0060(1)(g) requires “*for an amendment to change the site boundary or to extend the deadlines for beginning or completing construction of the facility, an updated list of the owners of property located within or adjacent to the site of the facility, as described in OAR 345-021-0010(1)(f).*” The Certificate Holder provided an updated list of property owners along the related and supporting facility transmission lines as part of its amendment request. This seventh amendment to the facility Site Certificate would change the site boundary and permanent footprint of the PWGP facility, however the energy facility site would still be enclosed within an 852-acre parcel owned by the Port of St. Helens and leased to the Certificate Holder under a 99-year term.

B. Department of Energy’s Proposed Changes

The Department recommends that the Council adopt the amendments that PGE requested pertaining to description and location of the facility, making certain changes to the proposed conditions to clarify or expand the intent of conditions. Staff recommends that the Council adopt PGE’s proposed conditions generally, but with certain changes to conditions related to the Retirement and Financial Assurance Standard, the Fish and Wildlife Habitat Standard, the Threatened and Endangered Species Standard, and the Noise standard. These changes address concerns that arose during agency review and are discussed in detail in Section V of this order that addresses those standards. The Department’s complete recommended changes to the Site Certificate are shown in Attachment 1 to this Proposed Order.

V. COMPLIANCE WITH SITING STANDARDS

In addressing the standards set forth in this section, the Council assesses the impacts of the changes proposed in the amendment request and the compliance with applicable standards, pursuant to OAR 345-027-0070(10).

A. Organizational Expertise Standard, OAR 345-022-0010

This standard has four paragraphs. The first two paragraphs, -0010(1) and -0010(2), relate to application qualifications and capability; the final two paragraphs, -0010(3) and -0010(4), relate to third-party permits.

1. Applicant Qualification and Capability, OAR 345-022-0010(1)

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. Applicant Qualification and Capability OAR 345-022-0010(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.

Discussion. The proposed changes to the facility are within the scope of PGE's overall responsibilities to construct, operate, and retire the facility. The findings in the Final Orders apply, and Site Certificate Conditions D.2(1-9) are sufficient to maintain the facility's compliance with the Organizational Expertise Standard.

Conclusion. The Department recommends the Council find that this amendment will not impact PGE's qualifications as the Certificate Holder. The Department recommends the Council find that the Certificate Holder meets the requirements of OAR 345-022-0010(1). OAR 345-022-0010(2) is not addressed herein because the Certificate Holder has not stated that it proposes to design or operate the facility according to an ISO 9000 or ISO 14000 program.

3. Third-Party Services and Permits, OAR 345-022-0010(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. *Third-Party Services and Permits, OAR 345-022-0010(4)*

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

Discussion. The modifications to the facility proposed in PGE's request do not require any additional third party permits. PGE requested that the Council amend the Site Certificate to allow the Certificate Holder to use additional water under the existing Trojan water right, Certificate 73396/81969, if the Oregon Water Resources Department (WRD) issues a permit for the transfer of that water right. The transfer must meet WRD rules at OAR Chapter 690 Division 380. Analysis of compliance with WRD rules is part of the EFSC General Standard of Review, OAR 345-022-0000, and appears in section V.N of this order. This transfer would eliminate a third party permit, because it would eliminate the need for PGE's water use agreement with the Port of St. Helens. For this reason, the certificate holder requested deletion of Condition D.2(7).

PGE will continue to rely on the Port of St. Helens for wastewater discharge under the Port's NPDES wastewater discharge permit (a federally delegated permit administered by DEQ). The Port has provided PGE with a letter confirming that any increase in discharge requirements for Unit 2 is within the Port's permitted capacity.

Conclusion. The Department recommends the Council find that the request will not affect the findings in the Final Orders or conditions in the Site Certificate relating to acquiring third party permits or contracts. The Department further recommends the Council approve the deletion of Condition D.2(7) in its Seventh Amended Site Certificate. The Department recommends the Council find that the Certificate Holder meets the requirements of OAR 345-022-0010(3) and OAR 345-022-0010(4).

B. Structural Standard, OAR 345-022-0020

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

(a) The applicant, through appropriate site-specific study, has adequately characterized the site as to seismic zone and expected ground motion and ground failure, taking into account amplification, during the maximum credible and maximum probable seismic events; and

(b) The applicant can design, engineer, and construct the facility to avoid dangers to human safety presented by seismic hazards

affecting the site that are expected to result from all maximum probable seismic events. As used in this rule "seismic hazard" includes ground shaking, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement, and subsidence;

- (c) The applicant, through appropriate site-specific study, has adequately characterized the potential geological and soils hazards of the site and its vicinity that could, in the absence of a seismic event, adversely affect, or be aggravated by, the construction and operation of the proposed facility; and*
- (d) The applicant can design, engineer and construct the facility to avoid dangers to human safety presented by the hazards identified in subsection (c).*

Discussion. Exhibit H (Geology) and Exhibit I (Soil Conditions) of the application for Site Certificate provided information relating to seismic, geologic, and soils hazards. The new equipment and facilities associated with this amendment request will be located within the same Seismic Zones analyzed therein.

In the Final Order approving the Site Certificate, Section D.5, the Council found that the applicant met the structural standard, with eight conditions set forth in Section D.5 of the Site Certificate. The conditions required detailed seismic hazard evaluations and geotechnical investigations prior to beginning construction of the facility. The fifth amended Site Certificate added Condition D.5(9), requiring construction and operation of a second gas supply line be designed to accommodate different settlement or seismic-induced deformation, particularly at the pipeline junction. The Site Certificate conditions requiring additional investigations and reports prior to construction will apply equally to the new PW2 facilities proposed in the seventh amendment request. Therefore, no revisions to the conditions are necessary to maintain compliance with the Structural Standard.

Conclusion. The Department recommends the Council find that the findings in the Final Orders regarding the Structural Standard apply to this request, and that the proposed changes to the facility meet the requirements of OAR 345-022-0020.

C. Soil Protection Standard, OAR 345-022-0022

To issue a site certificate, the Council must find that the design, construction, operation and retirement 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.

Discussion. Because the structures proposed in this amendment request are located either within or in the near vicinity of the original facility site depicted in the ASC, and therefore on the same types of soils, the Council's findings extend equally to these new structures.

The ten conditions in Section D.6 of the Site Certificate require the Certificate Holder to employ soil erosion and sediment runoff control measures during any soil disturbing activities; use native seed mixes to restore vegetation to the extent practicable and landscape disturbed portions of the site upon completion of soil disturbing activities; protect soil from chemical spills on site; and minimize drift from cooling towers. These conditions will regulate construction of the new facilities proposed in this amendment request and the use and restoration of the additional laydown area and spoils disposal area.

In written comments on October 21, 2009, CRK stated that the addition of 8.5 acres to the energy facility site should be evaluated as a significant change to the Site Certificate. However, the EFSC soil protection standard takes mitigation into account. The soils in the area were characterized in the original application for Site Certificate. The 8.5 acre area proposed for Unit 2 was originally evaluated for temporary disturbance. The original Final Order states that the soils are composed of “excessively drained” fill material. The Final Order also describes how Columbia County created the Rural Industrial Planned Development (RIPD) zone through the Goal 3 exception process. That exception, and the resulting RIPD zone, demonstrates that the county’s Land Use plan calls for industrial development on the Port Westward Industrial Area. There is no intent that the soils be permanently precluded from development. As stated in the amendment request, the 8.5 acres are currently highly disturbed and are vegetated in non native grasses and weeds. The Council, in approving the original Site Certificate, based its finding of compliance on erosion control and sediment control mitigation measures consistent with the requirements for DEQ permits that are required under the federal Clean Water Act. Those conditions remain in effect. A Council finding that those conditions provide sufficient mitigation to meet the Soils Standard is consistent with the original Final Order approving the Site Certificate.

Conclusion. The Department recommends the Council find that the findings in the Final Orders regarding the Soil Protection Standard apply to this request, and that proposed changes to the facility meet the requirements of OAR 345-022-0022.

D. Land Use Standard, 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 Department recommends the Council find 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).****

Discussion. In its Final Order approving the Site Certificate, the Council found that the Port Westward energy facility was located entirely in the RIPD zone in Columbia County. The Council found that the PWGP complied with Columbia County's applicable substantive criteria for that zone. This finding was reaffirmed in subsequent amendments, including Amendment #2 in September 2004, which extended the deadline for construction and served as a reevaluation of compliance with all EFSC standards. Amendment #6, in May 2009, extended the construction deadline for Unit 2 and again served to reopen consideration of compliance with all EFSC standards. In its request for Amendment #6, PGE documented correspondence with Columbia County's land use planning department, listing all comprehensive plan and zoning ordinance changes since the Site Certificate was originally issued. In its Order approving Amendment #6 the Council found that none of the changes to Columbia County's acknowledged land use plan and zoning ordinance applied to PWGP.

The proposed Unit 2 would occupy an additional 8.5 acres. The land is adjacent to the original site and was evaluated in the original Final Order for temporary use during construction. The land is in the same RIPD zone as the original site, and all findings and conditions applied in the original site would apply to the newly added area for Unit 2.

PGE contacted the county's planning department and found that the only ordinances changed since the approval of Amendment 6 are changes to the Airport zone and a change applicable to lot line adjustments in platted areas. Neither change applies to the PWGP. The County did raise concerns over its continuing ability to maintain the roads used for construction, but those concerns are addressed in this order under the Public Services Standard. Therefore there are no applicable changes to the county's substantive land use criteria that affect this request for amendment.

The Department recommends that the Council find that the proposed changes are consistent with the findings in the Final Orders. The Department recommends the Council find that the conclusions in the Final Orders apply equally to the new or modified facilities in the amendment request.

Conclusion. The Department recommends the Council find that the proposed changes to the facility meet the requirements of OAR 345-022-0030. No new or modified conditions are required.

E. Protected Area Standard, 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. Cross-references in this rule to federal or state statutes or regulations are to the version of the statutes or regulations in effect as of May 11, 2007:****

Discussion. In its Final Order approving the Site Certificate, the Council found that the PWGP met the Protected Area standard as in effect in November 2002. Since that time, no new protected areas have been designated within the analysis area. Crim’s Island, located approximately 0.3 miles east of the energy facility site, has been added to the Julia Butler Hansen National Wildlife Refuge. However, in its comments on this amendment request, ODFW stated that its major concern was the impact on eagles nesting at Crim’s Island. Conditions to address this concern are proposed in the discussion of the EFSC Habitat and Threatened and Endangered Species standards. The new above-ground structures proposed by PGE would be similar in type and much smaller than those constructed for Unit 1. Therefore, the findings in the Final Orders apply to the structures proposed for Unit 2. The Department recommends the Council find that the findings in the Final Orders are sufficient to demonstrate compliance with the Protected Areas Standard.

Conclusion. The Department recommends the Council find that the proposed changes to the facility meet the requirements of OAR 345-022-0040.

F. Retirement and Financial Assurance Standard, 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.*

Discussion. In the Final Order for the Port Westward Generating Project, dated November 8, 2002, the Council found that the applicant demonstrated that it could adequately restore the site to a useful, non-hazardous condition following facility retirement. The Site Certificate required that the Certificate Holder submit a bond or letter of credit in the amount of \$8,640,000 (in 2nd Quarter 2002 dollars) to the State of Oregon prior to

beginning construction of the facility. In the Final Order for the First Amended Site Certificate, issued December 5, 2003, the Council modified the conditions to provide that if the Certificate Holder were to develop the energy facility in phases, the Certificate Holder would be required to submit a bond or letter of credit in the amount of \$4,700,000 (in 2nd Quarter 2002 dollars) before beginning construction of Unit 1 and to increase the bond or letter of credit to \$8,640,000 (in 2nd Quarter 2002 dollars) before proceeding with construction of Unit 2. In the Final Order for the Third Amended Site Certificate, issued January 28, 2005, the Council found that the financial assurance amount applicable to Unit 1 could be reduced to \$3,698,000 (in 4th Quarter 2004 dollars) and the financial assurance amount applicable to the combination of Units 1 and 2 could be reduced to \$4,938,800 (in 4th Quarter 2004 dollars).

With its application for the Third Amended Site Certificate, the Certificate Holder provided site restoration cost estimates for Units 1 and 2 based on the proposed configuration of the two phases of the facility. With its application for the Seventh Amended Site Certificate, the Certificate Holder provided a revised site restoration cost estimate for Unit 1 based on the actual facility configuration and a new site restoration cost estimate for Unit 2 based on the estimated maximum cost of site restoration for all possible facility configurations for the second phase of construction. Based on information included in PGE's application for the Seventh Amended Site Certificate, the site restoration cost estimate for Unit 1 would be \$3,416,236 (in 1st Quarter 2010 dollars), and the site restoration cost estimate for the combination of Units 1 and 2 would be \$6,565,613 (in 1st Quarter 2010 dollars).⁴

The Certificate Holder has yet to determine the final configuration for the second phase of construction. Unit 2 could consist of approximately 200 MW of multiple reciprocating engine-generator sets, each capable of producing from 6 to 20 megawatts; two 100-megawatt aeroderivative combustion turbine generators; or a combination of approximately 100 MW of reciprocating engine-generator sets and one aeroderivative combustion turbine generator. For purposes of this order, the site restoration cost estimate applicable to the second phase of construction has been based on the estimated cost of facility retirement and site restoration for a facility consisting of twelve reciprocating engine-generators, the configuration likely to represent the most costly facility retirement and site restoration effort. The Department recommends that the Council include in the Site Certificate a condition requiring the certificate holder to apply the Department's Facility Retirement Cost Estimating Guide to prepare a site restoration cost estimate for the second phase of construction, subject to approval by the Department, and increase the financial assurance amount applicable to the Port Westward Generating Project accordingly prior to beginning construction of Unit 2.

⁴ ODOE requested additional switchyard and transmission line data in its RAI#1. See John Larson memo to Kara Warner, October 22, 2009. PGE supplied revised values for Exhibit W, which form the basis for these calculations. See Rick Tetzloff email to Adam Bless dated December 2, 2009.

In addition to the direct costs for retirement, the Council includes in the financial assurance requirement a 20-percent contingency to address future developments, a 10-percent contingency to cover administrative costs to be borne by the State of Oregon in the event it must oversee the facility retirement and site restoration effort, and a \$500,000 contingency for hazardous materials management. After adding these contingencies to the direct costs, the rounded financial assurance amount applicable to Unit 1 would be \$5,201,000 (in 1st Quarter 2010 dollars), and the rounded financial assurance amount applicable to the combination of Units 1 and 2 would be \$9,035,000⁵ (in 1st Quarter 2010 dollars).

The Department recommends that the Council find that the financial assurance amount applicable to Unit 1 is \$5,201,000 (in 1st Quarter 2010 dollars) and the financial assurance amount applicable to the combination of Units 1 and 2 is \$9,035,000 (in 1st Quarter 2010 dollars). The Department also recommends that the Council find that the findings in the Final Orders regarding PGE's ability to 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 apply to this request.

The Department recommends that the Council amend Condition D.3(5) as follows:

- (5) ~~Before beginning construction of the energy facility, the~~The Certificate Holder shall submit to the State of Oregon, through the Council, a bond or letter of credit in the amount ~~of \$4,938,800 (in 2004 dollars as of the fourth quarter)~~described below, naming the State of Oregon, acting by and through the Council, as beneficiary or payee. ~~[Amendment No. 3]~~[Amendments No. 3 & 7]
- (a) ~~If the Certificate Holder develops the energy facility in phases, then before~~Before beginning construction of ~~Phase~~Unit 1, the Certificate Holder ~~shall submit~~submitted a bond or letter of credit in the amount of \$3,698,000 (in 2004 dollars as of the fourth quarter). ~~Before beginning construction of Phase 2,~~Upon execution of the Seventh Amended Site Certificate, the Certificate Holder ~~shall increase~~shall adjust the amount of ~~such~~the bond or letter of credit to ~~\$4,938,800~~5,201,000 (in 1st Quarter 2010 dollars). ~~[Amendments No. 1 & 3]~~[Amendments No. 1, 3 & 7]
- ~~(b) — [Deleted]. [Amendment No. 3]~~
- (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 Estimating Guide⁶ subject to review and approval by the Department. [Amendments No. 3 & 7]

⁵ See John Larson email to Adam Bless 12-29-2009 "Retirement Surety for PWGP Unit 1"

⁶ The Department's Facility Retirement Cost Estimating Guide is available from the Oregon Department of Energy

- (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 ~~2004 dollars (or 2002 dollars or 2009 dollars in the case of the rate applicable to carbon dioxide emissions monetary path payment requirements)~~ 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) shall be made 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")⁷. If at any time the Index is no longer published, the Council shall select a comparable calculation of 2002 and 2010 dollars. [Amendments No. 3, 6 and 7]
- (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.

Conclusion. The Department recommends that the Council find that subject to the conditions contained in the Final Orders, as amended in this Order, the Certificate Holder meets the requirements of OAR 345-022-0050.

G. Fish and Wildlife Habitat Standard, OAR 345-022-0060

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

Discussion. The Certificate Holder requested that the condition requiring monitoring of the Crims Island bald eagle nest be modified to reflect the previous five (5) years of monitoring and inferred lack of impacts to the breeding pair. After consultation with the Department and with the Oregon Department of Fish and Wildlife (ODFW), the Certificate Holder suggested modified Conditions D.8(7) and D.8(8) reflecting agreements with respect to monitoring of wildlife species.

⁷ The Index is found on line at <http://www.oregon.gov/DAS/OEA/docs/economic/econdata/other-quarterly.xls>

For development of PW2, the Certificate Holder identified a permanent impact to 8.5 acres of Habitat Category 4 non-native grassland habitat, and proposed mitigation for this impact would be provided by a protective easement, habitat enhancement, and invasive plant control on at least 8.5 acres of existing wetland habitat located within the Port Westward Industrial Park. Habitat enhancement in the mitigation area would include management of invasive weeds, and tree and shrub species planted from an ODFW-approved list as desirable for Columbian white-tailed deer habitat.⁸

No other impacts to fish and wildlife habitats or species were identified to be associated with construction or operation of PW2. The Certificate Holder therefore requested elimination or modifications to conditions in section D.8 of the sixth amended Site Certificate (2009):

~~(7) — Should operation of the energy facility diminish the quality of nesting habitat for bald eagles on Crims Island, the Certificate Holder shall mitigate that impact in order to provide no net loss of habitat, plus a net benefit of habitat quality.~~

~~(a) — The Certificate Holder shall mitigate to compensate for any loss in habitat quality if, within three complete bald eagle breeding seasons after beginning commercial operation of the energy facility, studies indicate that there has been a negative impact to habitat quality at the bald eagle nest site.~~

~~(b) — The Certificate Holder shall collect and provide accurate and timely information to the Department and ODFW on the status (e.g., active or inactive; successful or unsuccessful) of the bald eagle nest site throughout three complete bald eagle breeding seasons after beginning commercial operation of the energy facility.~~

~~(c) — The Certificate Holder shall consult with the Department and ODFW to develop a standardized set of procedures for 1) monitoring the nest site, 2) ensuring that the data collected are sufficient for assessing any impact to habitat quality, and 3) ensuring that the data are reported in a timely manner.~~

~~(d) — The Certificate Holder, in consultation with the Department and ODFW, shall use the monitoring data to assess whether an impact to habitat quality has occurred.~~

⁸ PGE's Request for Amendment 7 proposed a conservation easement. ODFW, in its comments on the amendment request, noted that a conservation easement was not sufficient to meet ODFW mitigation. In revised Exhibits P and Q to the request for amendment, PGE proposed enhancements in consultation with ODFW. See November 19, 2009 PGE letter from Rick Tetzloff to Adam Bless "Port Westward Generating Project – Revisions to Request to Amend Site Certificate (Amendment 7) to address ODFW comments". The revised section P.8.1 shall be an attachment to the site certificate.

~~(e) — If the Department, in consultation with ODFW, determines that a negative impact to habitat quality has occurred as a result of operating the energy facility during the monitoring period, the Certificate Holder shall consult with the Department and ODFW to develop an appropriate mitigation strategy to meet the mitigation goal for Habitat Category 2.~~

~~(f) — The Certificate Holder shall fund and implement the mitigation strategy within two years of the Department’s determination that a negative impact to the habitat quality for the nesting bald eagles has occurred from operation of the energy facility. [Amendments No. 1 & 3]~~

(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 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 protected bird nests. Construction personnel will be trained regarding avian awareness issues and reporting of protected 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 protected bird nests found within the construction disturbance area.

~~Before beginning construction of the facility, the Certificate Holder shall conduct pre-construction surveys within the analysis area and establish construction buffers around raptor nests during the nesting season, as approved by ODFW. If it is not practical for the Certificate Holder to avoid the nests of non-listed, threatened or endangered raptor species, the Certificate Holder shall implement in a timely manner a mitigation project approved by ODFW that meets the requirements of the Habitat Mitigation policy for “no net loss” appropriate to the Habitat Category. An exception to this is the artificial nesting platform located adjacent to the energy facility site that was installed by Clatskanie PUD to deter ospreys from nesting on a nearby PUD power pole. Protection buffers or other restrictions and mitigation do~~

~~not apply to this artificial nesting site and are not required by ODFW. [Amendment No. 3]~~[\[Amendment No. 7\]](#)

(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 revised Exhibit P, Section P.8.1, of Certificate Holder's Request for Amendment No. 7⁹, and by mulching the areas with straw. ~~The Certificate Holder shall obtain ODFW and Department concurrence before changing the proposed seed mix.~~ [Amendment No. 7]

(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. 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]

After consultation with ODFW, the Department recommends that the Council amend the conditions in section D.8 of the site certificate as requested in section P.8 of PGE's request for amendment, revised version as submitted on November 19, 2009.

Conclusion. The Department recommends the Council find that with the amended conditions shown in section V.G of this order, the proposed changes to the facility meet the requirements of OAR 345-022-0060.

H. Threatened and Endangered Species Standard, 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, operation and retirement 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*

⁹ Exhibit P in this condition is the revised Exhibit P submitted in PGE's 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 Exhibit P.8.1 is Attachment 3 of this order and will be an attachment to the site certificate.

- (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, operation and retirement 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.*

Discussion. The two listed species identified in the vicinity of the facility are the bald eagle and the Columbian white-tailed deer. However, as described in Exhibit Q of the Request for Amendment #7, no adverse effects to bald eagles or Columbia white-tailed deer are anticipated as a result of construction or operation of PW2.

The proposed monitoring of resident bald eagles is addressed in section V.G of this Order. As no impacts to Columbian white-tailed deer habitat are anticipated for the development of PW2, no additional mitigation specific to white-tailed deer is proposed for the development of PW2. However, as described in section V.G of this Order, a conservation easement and habitat enhancement of at least 8.5 acres of emergent wetland habitat will be established for PW2 to provide mitigation for impacts from the development of PW2 to Habitat Category 4 non-native grassland. This conservation easement and habitat enhancement also ensures that the habitat would be available for Columbian white-tailed deer use for the lifespan of the project; and would have a positive impact on the long-term availability of deer habitat.

The Certificate Holder did not request and the Department does not recommend modifications to conditions in section D.9 of the Site Certificate.

Conclusion. The Department recommends the Council find that the proposed changes to the facility meet the requirements of OAR 345-022-0070.

I. Scenic and Aesthetic Values Standard, OAR 345-022-0080

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

Discussion. The impact of the facility on scenic and aesthetic values was addressed in Exhibit R of the ASC, and the additional structures proposed by PGE are within the analysis area considered therein. In Section D.10 of the Final Order of November 8, 2002, the Council concluded that, with the imposition of the seven conditions set forth in Section D.10 of the Site Certificate, the energy facility would meet the Scenic and Aesthetic

Values Standard. These conditions require the Certificate Holder to remove construction equipment following use; control dust during construction; shield lights to minimize off-site glare; submit a lighting plan to Columbia County prior to construction; use low-glare paint colors; and revegetate any undeveloped areas disturbed by the construction of related and supporting pipelines.

Federal land management plans: There are no applicable federal land management plans applicable to the areas of the proposed facility modifications.

Local land use plans: As discussed in the Final Order of November 8, 2002, the Columbia County Comprehensive Plan identifies one scenic resource within the analysis area that could be affected by the proposed facility, i.e., U.S. Highway 30 between Deer Island and Rainier, Oregon. The modifications proposed in this request do not alter the impacts of the transmission line in the vicinity of that scenic resource.

Key observation points: The ASC used key observation points (“KOPs”) as an approach to analyzing visual impacts of the energy facility and its related or supporting facilities. KOPs are public viewing locations identified as most representative of visually sensitive locations for viewing the proposed energy facility. KOPs are attractants for drawing the viewer and focusing attention on a view or vista.

For the energy facility site, the KOPs described in the Final Orders occur along Mayger Road and Kallunki Road on the Oregon side of the Columbia River. KOPs on the Washington side of the Columbia River occur along State Route 4. The new structures proposed in this amendment request are not larger than those described in the original 2002 Final Order, and would not create a significantly different visual impact. Therefore the proposed unit 2 does not affect the Council’s prior findings of compliance with the Scenic and Aesthetic Values Standard.

The Department recommends the Council find that the facilities proposed in Amendment #7 comply with the Scenic and Aesthetic Values Standard, and no additional conditions beyond those currently set forth in Section D.10 are necessary.

Conclusion. The Department recommends the Council find that the proposed changes to the facility meet the requirements of OAR 345-022-0080.

J. Historic, Cultural, and Archeological Resources Standard, 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, operation and retirement 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). * * **

Discussion. Historic, cultural and archaeological resources within the vicinity of the energy facility area were addressed in Exhibit S of the ASC. In Section D.11 of the Final Order, the Council found that, with the imposition of the conditions in Section D.11 of the Site Certificate, the construction of the energy facility and its related or supporting facilities would have no effect on identified cultural resources.

Condition D.11(2) of the Site Certificate requires that construction workers be trained by a qualified individual in the identification of cultural materials. Condition D.11(3) requires PGE to stop all ground disturbing activities if artifacts or cultural materials are discovered. The condition further provides for inspection by a qualified archeologist, a report to the State Historic Preservation Officer (SHPO), and measures to protect materials that are found. Conditions (4) and (5) of this section of the Site Certificate provide for notification to and observation by the potentially interested tribes. These conditions were found by the Council to provide adequate protection to archeological objects that may be in the energy facility site.

The proposed Unit 2 construction is similar in type and scope to what was originally analyzed in the original Final Order. Therefore the above conditions provide the same adequate protection to any archeological objects that may be in the proposed Unit 2 site.

Conclusion. The Department recommends the Council find that the proposed changes to the facility meet the requirements of OAR 345-022-0090.

K. Recreation Standard, 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.*

Discussion. Recreational facilities and opportunities were described in Exhibit T of the ASC. The new or modified facilities proposed in this amendment request would be within the 5-mile analysis area described therein. In Section D.12 of the Final Order of November 8, 2002, the Council found that the energy facility would not adversely affect

recreational opportunities within a five-mile analysis area around the energy facility site and the transmission corridor.

The proposed construction of Unit 2 and the 8.5 acres expansion of the energy facility site will not result in additional impacts to the recreational opportunities that were considered in the 2002 Final Order. The Site Certificate currently contains no conditions related to the Recreation Standard, and no new conditions are necessary to address the facility changes proposed in Amendment #7.

Conclusion. The Department recommends the Council find that the proposed changes to the facility meet the requirements of OAR 345-022-0100.

L. Public Services Standard, 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.****

Discussion. All of the proposed new or modified aspects of the facility would be within the public services analysis area in Exhibit U of the ASC. In Section D.13 of the Final Order of November 8, 2002, the Council found that, with the imposition of the ten conditions of approval set forth in Section D.13 of the Site Certificate, the facility would not adversely affect the listed public services.

The findings of compliance with the Public Services Standard were based partly on the Transportation Improvement Agreement which PGE entered into with Columbia County. The agreement provided for PGE and two other energy developers in the Port Westward Industrial Area to provide partial funding for road improvements at Port Westward as needed to accommodate the construction traffic. The two other developers were Summit Westward LLC and Cascade Grain. Summit Westward received a Site Certificate but never began construction, and in 2006 allowed its Site Certificate to expire. Cascade Grain constructed an ethanol production plant that was not under EFSC jurisdiction and operated only briefly beginning in June 2008.

In view of the developments regarding Summit Westward and Cascade Grain, Columbia County commented on PGE's Application for Amendment #7 in a letter dated October 23, 2009. The County requests that Condition D.13(2) of the Site Certificate be modified with the following language:

~~(2) The Certificate Holder shall pay to Columbia County or its designee the appropriate Transportation Improvement Contribution ("TIC") set forth in Section~~

~~2.1 of the Agreement between Columbia County and Portland General Electric Company dated June 5, 2002 (“Agreement”).~~

(2): The Certificate Holder shall conduct a new Traffic Impact Analysis Study according to parameters agreed to by Columbia County and the Certificate Holder within 6 months from the date of issuance of Amendment 7 to PGE’s Site Certificate, and 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 the new Traffic Impact Analysis Study. [Amendment 7]

ODOE transmitted Columbia County’s comments to PGE in a letter on October 30, 2009. In its response to these comments, PGE stated that it was meeting separately with the county and was working towards an agreement regarding the parameters of the requested traffic study. On November 4, 2009 PGE transmitted to ODOE its proposed scope for the Traffic Impact Analysis. The final details of the traffic impact analysis will be worked out between PGE and the County.

The Department recommends the Council find that the revised Condition D.13(2) requested by Columbia County should be incorporated into the Site Certificate as a basis for compliance with the Public Services Standard.

Conclusion. The Department recommends the Council find that the proposed changes to the facility meet the requirements of OAR 345-022-0110, subject to the revised Condition D.13(2) requested by Columbia County in its October 23, 2009 letter to ODOE.

M. Waste Minimization Standard, 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, operation, and retirement 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.*

Discussion. The Waste Minimization Standard was addressed in Exhibit V of the ASC and in Section D.14 of the Final Order of November 8, 2004. The Council imposed five conditions in Section D.14 of the Site Certificate to ensure compliance with the waste minimization standard.

The proposed amendments would not alter the Certificate Holder's solid waste and wastewater generation and disposal plans. The reconfiguration of Unit 2 will not result in the generation of new types of waste and does not alter the Council's prior findings with respect to the Waste Minimization Standard. Therefore, The Department recommends the Council find that the original findings are sufficient to demonstrate compliance with the Waste Minimization Standard and no additional conditions are necessary to maintain compliance.

Conclusion. The Department recommends the Council find that the proposed changes to the facility meet the requirements of OAR 345-022-0120.

N. Compliance with General Standard of Review under OAR 345-022-0000

1. Noise Standards of DEQ at OAR 340-035-0035

The Council applies and enforces the Department of Environmental Quality ("DEQ") noise standards for energy facilities under its jurisdiction. In Section E.1.a of the Final Order, the Council found that the PWGP energy facility would meet the DEQ noise standards for a noise source located on a "previously unused industrial site" (OAR 340-035-0035(1)(b)(B)(i)), the standards applicable to the facility. According to those regulations:

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. OAR 340-035-0035(1)(b)(B)(i).

The Council found that this requirement would apply to the noise generated by any and all equipment placed on the PWGP site after the approval of the initial Site Certificate in 2002.

Discussion. Amendment #7 to the PWGP Site Certificate requests a change to that portion of the project originally referred to as the Unit 2 power production facility (PW2). For the PWGP Amendment #7 application, PGE has elected to basically revise the original noise study predictions to address the noise that will radiate from the PWGP site with PW2 operating as a non-base load gas fired power plant with equipment that will be different from that described in the Site Certificate for the PWGP site. In addition, the PWGP site amendment is calling for an 8.5 acre expansion of the site to accommodate the re-configured PW2 equipment. The Certificate Holder agrees that the total noise radiating from the operation of power plant Unit 1 (PW1) and PW2 will continue to be regulated as a single noise source under the DEQ noise regulations and they have provided data to address the combined noise radiating from PW1 and PW2.

Noise will radiate from PW1 and the proposed re-configured PW2 equipment to residences located in Oregon and across the river in Washington. The Council applied the DEQ

regulations to evaluate the noise radiating from the original PWGP because it would be located in Oregon. However, because the energy facility would also radiate noise to residences located in Washington, PGE has voluntarily predicted noise levels at those residences as well. In Oregon, PGE compared the noise radiating from the energy facility with the limits specified in the DEQ noise regulation (OAR 340-035-0035). In Washington, PGE compared the noise radiating from the energy facility with the limits specified in the DEQ noise regulation and the limits specified in the Washington Department of Ecology (“DOE”) noise regulation (WAC 173-60-040)¹⁰.

Operation Noise. The Department consulted with Mr. Kerrie G. Standlee, P.E., an acoustical engineer with Daly-Standlee & Associates, Inc., who reviewed the noise analysis provide by PGE for the PWGP with the re-configured PW2. The Department, through Mr. Standlee, confirmed that, with the proposed re-configuration of PW2, the total predicted future noise produced by the energy facility will comply with the DEQ noise standard, OAR 340-035-0035(1)(b)(B)(i).

Originally, PW2 was to be constructed with a combustion turbine generator, a heat recovery steam generator (HRSG) and a steam turbine generator. The proposed modifications to the PW2 would include the use of multiple natural gas fired reciprocating engine generators and/or aeroderivative combustion turbine generators (CTGs) that have a total nominal generating capacity of 200 MW. PW2 would be designed to provide peaking capacity and intermediate energy load service as well as ancillary services needed for load-following and wind energy integration into the system.

Noise sources at the modified PW2 would depend on the final design selected for the facility but it could include up to 200 MW of multiple reciprocating engines (Wartsila 18V50DF or comparable engines 6 to 20 MW in size) located within a building along with their associated exhaust stacks, SCR, oxidation catalysts, generator vents and intake air vents if gas fired reciprocating engine generators are used to provide the total power for PW2. If CTGs are used to generate the total power for PW2, noise sources could include two (2) combustion turbine generator packages (General Electric LMS100 or comparable engines) with their associated air inlet vents, SCR, oxidation catalysts, and exhaust stacks. If a combination of reciprocating engine generators and combustion turbine generators are used in the PW2 layout, noise sources could include up to 100 MW of multiple reciprocating engines with their associated exhaust stacks, SCR, oxidation catalysts, generator vents and intake air vents and one combustion turbine generator package with its associated air inlet vent, SCR, oxidation catalyst, and exhaust stack. With all three generating scenarios, there would be up to two (2) step-up transformers and three (3) cooling tower cells added to what is already present at the PWGP site.

In the Amendment #7 noise analysis, PGE predicted the noise that would radiate from the PWGP to four of the residential receivers included in the original PWGP Site Certificate

¹⁰ Unlike the Oregon DEQ standards, the Washington standard does not have an ambient degradation rule. For Port Westward the Oregon DEQ ambient degradation rule is more limiting than the absolute levels in the Washington rule or Table 8 of the Oregon rule.

Application noise analysis (Receiver Sites 1, 2, 5 and 6). Predictions were not made for residential Receiver Site 4 because that site was found to be too far away from the facility to be of concern during the original study. Instead, PGE included predictions for an alternate site located closer to the PWGP, Receiver Site 7, in response to comments submitted to the Department by Washington residents during the review of the PGE's application for Amendment #6. PGE indicated Receiver Site 7, located at 233 Eagle Crest Drive, Longview, Washington, was considered representative of the residential sites in Washington located within one mile of the plant site.

To predict the noise levels that would radiate from the PWGP to the residential receivers, PGE predicted the noise levels that radiate from each of the three PW2 scenarios (the 200 MW reciprocating engine power scenario, the 100 MW reciprocating engine and 100 MW CTG power scenario, and the 200 MW CTG power scenario) and logarithmically added them to the noise levels measured at the receivers during a PW1 noise level compliance measurement when the PW1 facility was in operation without PGE's Beaver Plant. PW1 noise levels were not measured at Receiver 7 during the compliance measurements so they were estimated for this analysis using the results of PGE property line measurements made during the PW1 compliance measurements. PGE indicates that they will confirm the PW1 noise level estimate at Receiver 7 prior to the final design of PW2 and propose mitigation measures as necessary, to ensure the overall PWGP noise levels (PW1 and PW2 noise levels) will remain in compliance with the original Site Certificate. The Department recommends the Council find that confirmation of PW1 noise levels at Receiver 7 is a commitment by the Certificate Holder and should be a condition of the site certificate.

The results of the predictions made for the PWGP with the three PW2 equipment scenarios are presented in Table N-1. The table also presents the lowest ambient hourly L₅₀ noise levels found at each residence during the original PWGP noise study.

**Table N-1
Predicted Total PWGP Hourly L₅₀ Noise Levels at Residential Receivers
with Three (3) PW2 Equipment Scenarios**

Location	Ambient Hourly L₅₀ Noise Level (dBA)	PWGP Noise Level with PW2 Scenario 1 (dBA)	PWGP Noise Level with PW2 Scenario 2 (dBA)	PWGP Noise Level with PW2 Scenario 3 (dBA)
1	40 ¹	39	39	39
2	33 ¹	40	40	42
5	41 ¹	41	42	42
6	34 ¹	40	41	41
7	38 ²	43	45	45

Note 1: Noise level measured in 2001 as part of the Environmental Noise Assessment Report for the PWGP Site Certificate Application. These levels were found with PGE's Beaver Plant in operation.

Note 2: Noise level measured in 2001 as part of the Environmental Noise Assessment Report for the Summit/Westward Site Certificate Application. This level was measured with PGE's Beaver Plant in operation.

Based on the prediction results, the future hourly L_{50} noise level at Site 1 in Oregon would be about the same as that currently found with PGE’s Beaver Plant in operation. Because Beaver is a base load plant and was already in operation before the siting of PWGP, ambient noise measurements were taken with Beaver operating. However the adjacent Cascade Grain facility was not included in any assessment of ambient noise at the noise sensitive receptors for PWGP.¹¹

The future hourly L_{50} noise level at Site 2 would be about 7 to 9 dBA higher than that currently found at the site with PGE’s Beaver Plant in operation depending on the equipment scenario used for PW2.

In Washington, the noise radiating from the proposed energy facility would have little influence on the noise found at Site 5 with PGE’s Beaver Plant in operation (the level would be 0 to 1 dB higher depending on which equipment scenario was used for PW2). Future noise at sites 6 and 7 would be about 5 to 7 dBA higher than that currently found with PGE’s Beaver Plant in operation depending on the equipment scenario used for PW2.

Because PGE could operate the energy facility on a 24-hour basis, the noise radiating from the proposed energy facility must comply with nighttime noise limits as well as daytime noise limits. With the consideration of the ambient degradation rule noise limit and the nighttime maximum hourly noise limits, the noise from the proposed energy facility would be limited to an hourly L_{50} level as shown in Table N-2.

**Table N-2
DEQ Hourly L_{50} Criteria**

Site	DEQ Hourly L_{50} Criteria
1	50
2	43
5	50
6	44
7	48

The noise radiating from the proposed energy facility would, generally speaking, be relatively constant during an hour. As a result, the hourly L_{01} , the hourly L_{10} and the hourly L_{50} noise level radiating from the facility would be about the same. Because the hourly L_{50} noise level criterion is the lowest criterion of the three hourly statistical level criteria, the hourly L_{50} criterion would be the most limiting criterion of the three in this case. PGE predicts the hourly L_{50} noise level radiating from the facility would be significantly below that allowed at each receiver. Thus, since the noise radiating from the

¹¹ Cascade Grain entered bankruptcy in 2009 and will likely change names. In this order “Cascade Grain” means the ethanol plant located at the Port Westward Industrial Area and includes any successor entity operating an ethanol plant at that location.

facility is relatively constant in level, the hourly L₁₀ and L₀₁ noise levels radiating from the facility would also likely be significantly below the level allowed by the DEQ regulation. Therefore, the Council can find that PGE would comply with the hourly L₅₀, L₁₀ and L₀₁ noise limits at all sites in Oregon and Washington.

The findings of the Council would be based on predictions. The Department recommends tests be required to ensure the noise levels at each receiver actually comply with the noise standard. The Department recommends the Council require the certificate holder to conduct a compliance test within the first six months of operation of the second phase of the energy facility. The purpose of the test would be to ensure the noise from the PWGP operation will not increase the ambient noise at any residence by more than 10 dBA nor exceed the DEQ maximum nighttime hourly L₅₀ noise limit. DEQ rules specify the testing protocol. A six-month window for testing is necessary to allow the test to be conducted under appropriate atmospheric conditions. If the energy facility demonstrates compliance with the DEQ standard under the appropriate testing conditions, there is no need for subsequent tests.

Prior to the development of the PWGP energy facility's PW1, ambient noise at residences in Oregon nearest the proposed energy facility was mainly a result of the noise radiating from PGE's Beaver Plant during daytime and nighttime hours. At times during the day, the noise at the residences is influenced by intermittent traffic on local roads. Prior to the development of the PWGP energy facility's PW1, ambient noise at residences in Washington nearest the proposed energy facility was mainly a result of a combination of traffic on SR 4 and PGE's Beaver Plant during the daytime hours. At night, the ambient noise at those receivers was mainly a result of the Beaver plant noise. Since the PWGP can operate with or without the operation of the Beaver Plant, it is recommended that any condition for noise testing after the construction of the PW2 allow for measurements with or without the operation of the Beaver Plant.

Construction. Construction of the energy facility should produce noise levels similar to those from any large construction project. Construction of the energy facility would involve the operation of construction equipment, including light and heavy trucks, backhoes, bulldozers, graders, cranes, air compressors, welding machines, and power hand tools. The DEQ noise standard exempts noise that originates from construction activities. However, to reduce noise impacts on nearby residences during construction of the energy facility, PGE would schedule most construction work for daylight hours when people are generally less sensitive to noise.

To find that the noise levels generated by the PWGP will comply with the DEQ noise regulations with the modified PW2 equipment the Department recommends the Council adopt conditions in the Site Certificate. The original Site Certificate includes 5 conditions that apply to the entire energy facility. These conditions address timing of construction during daylight hours, use of exhaust mufflers on combustion powered construction equipment, establishment of a complaint response system, operational testing at noise sensitive residences, and silencers on short duration noise sources such as steam vents. All of these conditions continue to apply during construction and operation of Unit 2.

Site Certificate Holder's Requested Operational Noise Monitoring Requirements for Unit 2. In its amendment request, PGE requested the following modification of Condition E.1.a(4) of the Site Certificate:

(4) Within six months after the start of commercial operation of ~~the energy facility, Unit 2,~~ 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.~~ The measurements shall be made during late-night hours when the ambient noise levels are lowest and weather conditions are generally best for sound propagation in the environment. Measurements shall be made only when the wind is either calm or when the wind is less than five miles per hour from the north or west. The energy facility shall be operating in a typical operations mode that produces maximum noise levels.

- (a) ~~(a)~~—The specialist shall measure noise levels at sites (1), (2), (5), (6) and ~~(6)(7)~~, as described in Exhibit X of the ASC and this Amendment, to determine if ~~actual~~ noise levels attributable to the energy facility are within the levels specified in the applicable noise regulations ~~in~~of OAR 345-035-0035(1)(b)(B)(i).
- (b) ~~(b)~~—The Certificate Holder shall report the results of the noise evaluation to the Department.
- (c) ~~(c)~~—If actual noise levels of the energy facility 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) ~~(d)~~—If initial measurements show that actual noise levels from the energy facility increase the 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.

If initial measurements show that the actual noise levels are elevated by the operation of Cascade Grain or other developments, exclusive of the energy facility, the Certificate Holder shall repeat the process outlined in subsections (a) and (b) at the affected sites when operation of Cascade Grain or other developments are not occurring or minimal. The Certificate Holder shall make reasonable efforts to complete these measurements within six months after completion of the initial measurements. The Council acknowledges the Certificate Holder does not have control over the operation of Cascade Grain or other developments and extensions to the six month timeframe may be necessary. If measurements cannot reasonably be conducted while operations from Cascade Grain or other developments are minimal, a combination of measurements and modeling may be necessary to

demonstrate the energy facility is within the levels specified in the applicable noise regulations of OAR 345-035-0035(1)(b)(B)(i). [Amendment No. 7]

Department's Recommended Noise Monitoring Conditions for Unit 2. On review of PGE's amendment request, the Department recommends alternate condition language for the operational testing of Unit 2, and alternate language to address the uncertainty about Cascade Grain operations. The alternate language is a less prescriptive way to address the concern about Cascade Grain or other industrial developments in the Port Westward Industrial Area that are outside EFSC jurisdiction.

PGE also stated that it will confirm the PW1 noise level estimate at Receiver 7 prior to the final design of PW2 and propose mitigation measures as necessary. The Department recommends the Council find that PGE's statement regarding confirmation of PW1 noise level at Receiver 7 is a commitment and shall be added as a site certificate condition under OAR 345-027-0020(10).

The Department recommends the Council find that the existing conditions (1) through (5) shall remain in place, and the following three conditions shall be added to section E.1.a of the Site Certificate to address noise from operation of Unit 2.

(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 Proposed Order on Port Westward Amendment 7. [Amendment 7]

(7) Within six months after the start of commercial operation of PW2 equipment, 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 Proposed 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 Office.

(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 L₅₀ 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 7]

(8) 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 7]

Conclusion. The Department recommends the Council find that with the three new conditions above, the proposed changes to the facility under Amendment #7 meet the Department of Environmental Quality noise standard, OAR 340-035-0035(1)(b)(B)(i).

2. *Wetlands*

Pursuant to OAR 345-022-0000, the Council must determine compliance with applicable statutes, ORS 196.800-.990, and applicable Department of State Lands (“DSL”) regulations, OAR 141-085-0005 *et seq.* relating to fill and other operations taking place within wetlands. These regulations require persons to obtain a removal/fill permit if more than 50 cubic yards of material will be removed or altered within “waters of the state.” The overall standard to be considered in granting a removal/fill permit is whether the proposed activity would not “unreasonably interfere with the paramount policy of this state to preserve the use of its waters for navigation, fishing and public recreation.” ORS 196.825(2).

Discussion. The proposed reconfiguration of PW2, and the expansion of the energy facility site by 8.5 acres, will not result in any impacts to jurisdictional wetlands. Section E.1.b of the Site Certificate contains three conditions related to wetlands and the DSL removal/fill permit. The Certificate Holder is not proposing any new conditions or modifications to existing conditions of the Site Certificate.

Conclusion. The Department recommends the Council find that approval of this amendment request will satisfy the Council’s obligation to determine compliance with DSL removal/fill permit requirements.

3. *Public Health and Safety*

The Council is required to impose conditions in the Site Certificate for the protection of public health and safety, pursuant to ORS 469.401(2).

Discussion. In Section E.1.c of the Final Order of November 8, 2002, the Council found that the facility, if designed per the proposed conditions, will protect public health and safety. The conditions in the Site Certificate apply to related and supporting facilities that have been constructed and are currently in operation; no new conditions are required in conjunction with the reconfiguration of Unit 2. Therefore, the Council's findings in Section E.1.c of the Final Order of November 8, 2002 are sufficient to demonstrate compliance with the Public Health and Safety standard.

Conclusion. The Department recommends the Council find that the proposed changes to the facility continue to meet the Council's conditions that protect public health and safety, pursuant to ORS 469.401(2).

4. *Water Pollution Control Facilities Permit*

The development of an onsite sewage treatment system incorporating a septic tank, dosing tank, and bottomless sand filter is considered a form of wastewater discharge that requires a Water Pollution Control Facilities ("WPCF") permit from DEQ. The WPCF permit is a state level permit that falls under Council jurisdiction.

Discussion. Pursuant to ORS 469.401, the Council determined in its Final Order when adopting the original Site Certificate in 2002 that DEQ should issue the WPCF permit. No changes to the facility that require a new or modified WPCF permit are proposed.

Conclusion. The Department recommends the Council find that the proposed changes to the facility continue to meet the Council's conditions of the Water Pollution Control Facilities permit, pursuant to ORS 469.401.

5. *Water Right Transfer (OAR 690 Division 380)*

Discussion. Water for PWGP Unit 1 is supplied through a 5.4 cfs industrial water right transferred in 2006 from PGE's Trojan Nuclear Plant, Certificate No. 73396. The authorized point of diversion is the PGE intake structure on Bradbury Slough of the Columbia River.

Unit 2 will require an additional 3.0 cfs, for a total estimated peak water use of 8.4 cfs. In its request for Amendment #7, PGE requested a permanent water right transfer of 3.0 cfs from Certificate No. 73396¹². The water would be diverted from the existing Beaver/Port

¹² On July 14, 2006, WRD cancelled certificate 73396 as a result of previous transfer application T-10010, and remaining certificate 81969 was issued to describe the portion of the right not modified by T-10010.

Westward intake structure. PGE has requested new Site Certificate Condition D.13(1), requiring that before beginning operation of Unit 2, the certificate holder must obtain the water right transfer from the Water Resources Department (WRD) substantially in a form approved by EFSC.

Appendix O-2 of the request for Amendment #7 includes PGE's request to WRD for the water right transfer. PGE submitted its application for the transfer to WRD on September 24, 2009. WRD assigned the application number T-10955.

In its application to WRD, PGE requested a change in point of diversion (POD), a change in place of use for a portion of the existing water right, and a change of use from specific "Nuclear Plant Cooling" to general industrial use.

WRD conducted a review of PGE's application and issued a deficiency letter on November 25, 2009. In the deficiency letter, WRD required an Attachment describing the reasons for the changes requested, clarification on whether PGE was requesting a change to POD or an additional POD, clarifications to the proposed place of use to the nearest ¼ section, and the map required by OAR 690-380-3100 that is consistent with the description in Attachment A of the water right transfer request and is appropriately stamped by the Oregon Certified Water Right Examiner.

On December 3, 2009, PGE supplied the requested information and clarified that it was requesting a new POD, with the existing Trojan water right retaining its POD.

On December 7, 2009 WRD issued a draft preliminary determination (DPD) in accordance with its rules at OAR 690-380-4010. The DPD is Attachment 2 to this Order. In the DPD, WRD recommended findings that its review criteria at OAR 690-380-4010(2) were met. These include:

(2)(a) The right has been used over the past five years according to the terms and conditions of the right and the right is not subject to forfeiture under ORS 540.610

PGE submitted an affidavit from the Trojan Plant Manager, describing how the water has been used at Trojan for fire protection and demolition of the Trojan Nuclear Plant, in accordance with its existing water right. WRD noted that there is no information that would demonstrate that the right is subject to forfeiture under ORS 540.610.

(2)(b) The water user is ready, willing and able to use the full amount of water allowed under the right.

WRD noted that the diversion structure and equipment sufficient to use the full amount of water allowed under the existing right have been present within the five year period prior to submittal of transfer application T-10955, including pumps and distribution piping. Also, PGE's application for Site Certificate amendment included a water balance diagram showing the use of water at PWGP.

(2)(c) *The proposed transfer would not result in enlargement*

PGE is requesting a transfer of 3.0 cfs from an existing water right. This would not result in enlargement.

(2)(d) *The proposed transfer would not result in injury*

In its application for Site Certificate amendment PGE provided statements in support of the application from Columbia County and the Port of St. Helens. WRD noted that there would not be injury to other water rights.

(2)(e) *Any other requirements for water right transfers are met*

In its DPD, WRD noted that the water intake structure already includes fish screens that meet requirements of Oregon Department of Fish and Wildlife.

WRD recommended approval of the transfer subject to conditions. Some of the conditions are steps to be taken by WRD. The conditions recommended by WRD applicable to PGE are:

- The right to the use of the water is restricted to beneficial use at the place of use described, and is subject to all other conditions and limitations contained in Certificate 81969 and any related decree.
- 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.
- The Director¹³ may require the water user to install a headgate, a totalizing flow meter, or other suitable measuring devices at the point of diversion. If the Director 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 the Director 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.
- 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.
- The approved changes shall be completed and full beneficial use of the water shall be made on or before **October 1, 2011**. 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.

In its transmittal of the draft preliminary determination to ODOE, WRD also noted that OAR 690-380 requires certain additional documentation before issuing the transfer, including:

- report of land ownership meeting certain specifications,

¹³ In this context "Director" is the WRD director.

- a notarized statement of consent from any landowner not already included in the transfer application, and
- up to date information regarding ownership interest by the former co-owners of Trojan.

The Department recommends the Council find that the requested transfer complies with WRD rules at OAR Chapter 690 Division 380, with the following conditions:

(11) Prior to start of construction¹⁴ 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 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, 2014¹⁵. 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

¹⁴ In its amendment request, PGE requested that the condition apply prior to start of operation. However, ODOE recommends that the transfer be finalized prior to construction to ensure that a facility is not constructed without the certainty WRD will finalize any necessary documentation in time for operation.

¹⁵ In the draft preliminary determination WRD originally recommended a date of October 1, 2011. In subsequent correspondence PGE requested the date of 2014, and WRD stated its concurrence. See email from Dorothy Pedersen (WRD) to Rick Tetzloff (PGE) and Adam Bless (ODOE) dated 12-21-2009.

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.

Conclusion. The Department recommends the Council find that with the above condition, the request for PWGP Amendment #7 meets the Water Resources Department (WRD) standards for water right transfer under OAR Chapter 690 Division 380. The Department recommends that the Council hereby instruct WRD to issue a Final Order substantially consistent with the "Draft Preliminary Determination" issued by WRD on December 7, 2009 on the matter of transfer application T-10955 approving the change, listing the conditions of the new use consistent with the Seventh Amended Site Certificate and cancelling certificate 81969.

O. Carbon Dioxide Standard for Non Base Load Power Plants, OAR 345-024-0590

EFSC rules at OAR 345-001-0010(38) define "non-base load power plant" as:
(38) "Non-base load power plant" means a fossil-fueled generating facility that is limited by the site certificate to an average number of hours of operation per year of not more than 6,600 hours. For a non-base load power plant designed to operate at variable loads, the facility's annual hours of operation are determined by dividing the actual annual electric output of the facility in megawatt-hours by the facility's nominal electric generating capacity in megawatts.

Discussion. PGE has proposed PWGP Unit 2 as a non-base load power plant. In its application for Amendment #7, PGE stated that Unit 2 will operate at variable power to adjust for the variable nature of wind generation. In Exhibit Y of its request for Amendment #7, PGE proposes to limit the capacity factor of Unit 2 to 75.3%, the

equivalent of 6600 hours per year at full power. In Table Y-1, PGE estimated the equivalent hours of operation, kilowatt-hour (kWh) production and carbon dioxide emissions based on the equivalent of 3000 hours per year at full load. Therefore Unit 2 meets the definition of a non-base load power plant. The applicable standard is OAR 345-024-0590, which states:

345-024-0590: Standard for Non-Base Load Power Plants

To issue a site certificate for a non-base load power plant, the Council must find that the net carbon dioxide emissions rate of the proposed facility does not exceed 0.675 pounds of carbon dioxide per kilowatt-hour of net electric power output, with carbon dioxide emissions and net electric power output measured on a new and clean basis. For a base load gas plant designed with power augmentation technology as defined in OAR 345-001-0010, the Council shall apply this standard to the incremental carbon dioxide emissions from the designed operation of the power augmentation technology. The Council shall determine whether the carbon dioxide emissions standard is met as follows:

*(1) The Council shall determine the gross carbon dioxide emissions that are reasonably likely to result from the operation of the proposed energy facility. The Council shall base such determination on the proposed design of the energy facility, the limitation on the hours of generation for each fuel type and the average temperature, barometric pressure and relative humidity at the site during the times of the year when the facility is intended to operate. For a base load gas plant designed with power augmentation technology, the Council shall base its determination of the incremental carbon dioxide emissions on the proposed design of the facility, the proposed limitation on the hours of generation using the power augmentation technology and the average temperature, barometric pressure and relative humidity at the site during the times of the year when the facility is intended to operate with power augmentation technology. The Council shall adopt site certificate conditions to ensure that the predicted carbon dioxide emissions are not exceeded on a new and clean basis; however, the Council may modify the parameters of the new and clean basis to accommodate average conditions at the times when the facility is intended to operate and technical limitations, including operational considerations, of a non-base load power plant or power augmentation technology or for other cause ****

****(4) Before beginning construction, the certificate holder shall notify the Department of Energy in writing of its final selection of an equipment vendor and shall submit a written design information report to the Department sufficient to verify the facility's designed new and clean heat rate and its nominal electric generating capacity at average annual site conditions for each fuel type. For a base load gas plant designed with power augmentation technology, the certificate holder shall include in the report information sufficient to verify the facility's designed new and clean heat rate, tested under parameters the Council orders pursuant to section (1), and the nominal electric generating capacity at average site conditions during the intended use for each fuel type from the operation of the proposed facility using the power augmentation technology. The certificate holder*

shall include the proposed limit on the annual average number of hours for each fuel used, if applicable. The certificate holder shall include the proposed total number of hours of operation for all fuels, subject to the limitation that the total annual average number of hours of operation per year is not more than 6,600 hours. In the site certificate, the Council may specify other information to be included in the report. The Department shall use the information the certificate holder provides in the report as the basis for calculating, according to the site certificate, the gross carbon dioxide emissions from the facility and the amount of carbon dioxide emissions reductions the certificate holder must provide under OAR 345-024-0600;

(5) (a) Every five years after commencing commercial operation, the certificate holder shall report to the Council the facility's gross carbon dioxide emissions. The certificate holder shall calculate actual gross carbon dioxide emissions using the new and clean heat rate and the actual hours of operation on each fuel during the five-year period or shall report to the Council the actual measured or calculated 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 emissions reporting requirement.

(b) The certificate holder shall specify its election of method used to measure or calculate carbon dioxide emissions in the notification report described at section (4) of this rule. That election, once made, shall apply for each five year period unless the site certificate is amended to allow a different election. If the certificate holder calculates actual carbon dioxide emissions using the new and clean heat rate and the actual hours of operation, the certificate holder shall also report to the Council the facility's actual annual hours of operation by fuel type. If the actual gross carbon dioxide emissions exceed the projected gross carbon dioxide emissions for the five-year period calculated under section (4), the certificate holder shall offset any excess emissions for that period and shall offset estimated future excess carbon dioxide emissions using the monetary path as described in OAR 345-024-0600(3) and (4) or as approved by the Council.

In Table Y-1 of its amendment request, PGE estimated its equivalent hours of full power operation, kWh production, heat rate and carbon dioxide emissions for two possible plant configurations. One configuration is based on 200 MW of reciprocating engines with a nominal heat rate of 8,586 BTU/kWh. The other configuration is based on a pair of 100 MW combustion turbines with heat rate of 9,056 BTU/kWh.

PGE's selection of engine and generator depends on several factors. For example, the two types of engines have different noise characteristics, different capital costs, different operating and maintenance costs, different operating characteristics, and different emissions characteristics for pollutants regulated by the Department of Environmental Quality (DEQ).

Any engine selected will require offsets in order to meet the standard. For purposes of calculating the required offsets, the combustion turbines described in Table Y-1 would

require more offsets and are therefore the conservative assumption for purposes of meeting the EFSC CO₂ standard.

345-024-0600: Means of Compliance for Non-Base Load Power Plants

The applicant may elect to use any of the following means, or any combination thereof, to comply with the carbon dioxide emissions standard for non-base load power plants or for the incremental carbon dioxide emissions from the operation of a base load gas plant with power augmentation technology:

(3) Providing offset funds, directly or through a third party, in an amount deemed sufficient to produce the reduction in carbon dioxide emissions necessary to meet the applicable carbon dioxide emissions standard. The applicant or third party shall use the funds as specified in OAR 345-024-0710. The Council shall deem the payment of the monetary offset rate, pursuant to OAR 345-024-0580, to result in a reduction of one ton of carbon dioxide emissions. The Council shall determine the offset funds using the monetary offset rate and the level of emissions reduction required to meet the applicable standard. If the Council issues a site certificate based on this section, the Council may not adjust the amount of the offset funds based on the actual performance of offsets;

(4) Notwithstanding sections (1), (2) or (3), if the certificate holder exceeds the projected gross carbon dioxide emissions calculated under OAR 345-024-0590(4) during any five-year reporting period described in OAR 345-024-0590(5) and (6), the certificate holder shall offset excess emissions for the specific reporting period according to subsection (a) and shall offset the estimated future excess emissions according to subsection (b). The certificate holder shall offset excess emissions using the monetary path as described in subsection (c) and OAR 345-024-0710 or as approved by the Council; (a) In determining the excess carbon dioxide emissions that the certificate holder must offset for a five-year period, the Council shall credit the certificate holder with offsets equal to the difference between the carbon dioxide emissions allowed by the site certificate in previous periods and actual emissions, if actual emissions were lower than allowed. Once a certificate holder has used a credit, the certificate holder shall not use it again. (b) The Council shall specify in the site certificate a methodology for estimating future excess carbon dioxide emissions. The Department of Energy shall calculate estimated future excess emissions. To estimate excess emissions for the remaining period of the deemed life of the facility, the Department shall use the annual average number of hours of operation during the five-year period in which the certificate holder exceeded the estimated gross carbon dioxide emissions described in OAR 345-024-0590(5) and the new and clean heat rate and capacity for the facility, adjusted for the average temperature, barometric pressure and relative humidity at the site during the times of the year when the facility is intended to operate. If the annual average hours exceed 6,600, the Department shall estimate emissions at 100 percent capacity for the remaining period of a deemed 30-year life of the facility. At the request of the certificate holder, the Council may, by amendment of the site certificate, use an alternative methodology to estimate future excess carbon dioxide emissions; (c) The certificate holder shall pay for the net excess carbon dioxide emissions calculated pursuant to subsections (a) and (b) at

the monetary path offset rate in real dollars for the quarter and year in which the Council issued the final order that applied the carbon dioxide standard. The Council shall specify in the site certificate the methodology for calculating the real dollar value of the monetary offset rate. The Department shall calculate the net excess carbon dioxide emissions and notify the certificate holder of the amount of the monetary path payment required to offset them. The certificate holder shall pay fully the required amount to the qualified organization within 60 days of notification by the Department of the amount. The certificate holder shall not be eligible for a refund of any monetary path payments due to the calculations in this rule.

Calculations. The following discussion and Table O-1 show a sample carbon dioxide emissions calculation for the proposed PWGP Unit 2. The table is only for illustrative purposes and does not necessarily reflect the actual emissions, offsets, or monetary path payments. The conditions relating to the carbon dioxide standard and other conditions in the Site Certificate allow PGE flexibility in its choice of equipment vendor and the facility's design, within the parameters allowed pursuant to OAR 345-027-0050.

Before beginning construction of Unit 2, the certificate holder will submit to ODOE the design parameters necessary to calculate expected carbon dioxide emissions for the as built energy facility. Those parameters determine the specific amount of the monetary path payment for offset funds and selection and contracting funds required, based on final plant design and expected equivalent full power hours of operation.

Because the plant would operate at variable power levels, it was necessary to assume a nominal amount of annual operation. In the application, PGE specified 3000 equivalent full power hours per year.

The gross carbon dioxide emissions rate is expressed as pounds of carbon dioxide per kilowatt-hour of net electric power output. For this example, we calculated the gross emissions using the heat rate provided in Table Y-1 of the amendment request, based on the LMS 100 combustion turbine. "Net electric power output" is defined as "the electric energy produced or capacity made available for use excluding electricity used in the production of electrical energy." OAR 345-001-0010(33). For the gross carbon dioxide emissions rate, the table divides the combined output (kWh) into the combined carbon dioxide emissions (lb. CO₂) to determine the gross carbon dioxide emissions rate (lb. CO₂/kWh).

The standard allows PGE to emit 0.675 lb. CO₂/kWh without offsets. Table O-1 shows the allowed emissions based on 3000 equivalent full power hours per year over 30 years, and the emissions that are in excess of the amount allowed under the standard.

Average Annual Site Conditions. OAR 345-024-0550 requires that the carbon dioxide emissions and net power output be measured on a "new and clean basis." The Council's definition of new and clean basis specifies average annual site conditions, including temperature, barometric pressure and relative humidity. OAR 345-001-0010(35). In its

request for amendment, PGE stated the same annual average conditions that were used in the original 2002 Final Order approving the Port Westward Site Certificate:

Temperature	51 degrees Fahrenheit
Barometric Pressure	14.69 psi
Relative Humidity	78 percent

Monetary Path. PGE elected to comply with the carbon dioxide emissions standard by providing offset funds to The Climate Trust pursuant OAR 345-024-0600(3).

Conditions in the Site Certificate state that prior to construction, PGE will provide its final selection of equipment and plant design, and a final estimate of heat rate and expected operations. Using those parameters, ODOE will calculate the actual monetary path requirement. PGE is required by condition to provide a surety for those funds before starting construction on Unit 2.

**Table O-1
CO₂ Standard for Port Westward Generating Project**

A. CO₂ Standard	
Standard for Non Base-Load Gas Plant (lb. CO ₂ /kWh)	0.675
B. Parameters for Non Base Load Plant	
Net Power Output (kW)	200,300
New and Clean Heat Rate (Btu/kWh) HHV	9,056
Annual Hours of Operation	3,000
Calculations	
C. Non Base Base Load Parameters	
Net Power Output (kW)	200,300
Annual Hours of Operation	3,000
Annual Generation (million kWh/yr.)	601
Deemed Life of Plant (years) by Statute or Rule	30
Total Plant Output (million kWh for 30 years)	18,027
Heat Rate (Btu/kWh) HHV	9,056
CO ₂ Emissions Rate (lb. CO ₂ /Btu)	0.000117
Total CO ₂ Emissions (million lb.)	19,101
D. Total Operations	
Total Output (million kW for 30 years)	18,027
Combined CO ₂ Emissions (million lb. for 30 years)	19,101
Gross CO ₂ Emissions Rate (lb. CO ₂ /kWh)	1.060
CO ₂ Standard (lb. CO ₂ /kWh)	0.675
Excess CO ₂ Emissions Rate (lb. CO ₂ /kWh)	0.385

Excess Tons CO ₂ (million tons over 30 years)	3.466
E. Monetary Path	
Offset Fund Rate (\$/ton CO ₂)	\$ 1.27
Offset Funds Required (\$ million)	\$ 4.402
Contracting and Selection Funds (\$ million)	\$.217
Monetary Path Requirement (\$ million)	\$ 4.619

Supplemental Offset Funds. If Unit 2’s actual capacity factor exceeds the capacity factor used to calculate the monetary path payment, then the Site Certificate holder will be required to provide supplemental offset funds following a 5-year reporting period, pursuant to OAR 345-024-0590(6). In that case, the selection and contracting funds will be calculated based on the supplemental offset funds alone. The supplemental funds will be a small percentage of the original payment. To ensure adequate selection and contracting funds, the Council has previously found¹⁶ that the basis for the minimum payment for supplemental selection and contracting funds for each 5-year reporting period in which supplemental offset funds are required should be at the rate of 20 percent of the first \$250,000 in offset funds and 4.286 percent of the value of any offset funds in excess of that amount. In its request for amendment, PGE proposes to follow the same procedure for Unit 2. The Department recommends the Council find that this precedent should be continued.

Qualified Organization. PGE proposes to provide offset funds and selecting and contracting funds to The Climate Trust. The Council has previously found that The Climate Trust is a “qualified organization” in matters relating to nine other energy facilities. The Department recommends the Council find that The Climate Trust continues to meet the requirements of a “qualified organization,” as defined by OAR 345-001-0010(46), for the following reasons:

- The Climate Trust is exempt from federal taxation under section 501(c)(3) of the Internal Revenue Code. By letter dated November 19, 1997, the Internal Revenue Service determined that The Climate Trust (then the Oregon Climate Trust) is exempt from taxation under section 501(c)(3).
- The Climate Trust is incorporated in the state of Oregon. Articles of Incorporation are filed with the Oregon Secretary of State.
- The Articles of Incorporation of The Climate Trust require that offset funds received from certificate holders in accordance with ORS 469.503(2) be used for offsets projects that will result in direct reduction, elimination, sequestration, or avoidance of carbon dioxide emissions. The Articles of Incorporation of The Climate Trust require that decisions on the use of such funds be made by a body

¹⁶ For example, see Final Order on Port Westward Generating Plant Application for Site Certificate

composed of seven voting members of which (1) three are appointed by the Council, (2) three are Oregon residents appointed by an environmental organization named by the board of directors, and (3) one member is appointed by applicants for Site Certificates that are subject to ORS 469.503(2)(d) and the holders of such Site Certificates.

- The Climate Trust has made available on an annual basis, beginning after the first year of operation, a signed opinion of an independent certified public accountant stating that the qualified organization's use of funds pursuant to ORS 469.503 conforms with generally accepted accounting principles.
- The Climate Trust has provided the Council with its five year report for the period between 2004 and 2009. The report documents how the Climate Trust has met criteria for investing at least 60% of offset funds within two years. The report also lists the board of directors, verifying that they meet the selection criteria listed above.

Financial Instrument. OAR 345-024-0710(1) requires that the applicant supply a "*bond or letter of credit in a form reasonably acceptable to the Council to ensure the payment of the offset funds * * **." PGE has stated it will provide a bond or letter of credit.

Five Year Report. The Site Certificate requires the holder to report annual hours of operation with power augmentation for Unit 1 at the end of each five year period. The Department uses this report and the new and clean heat rate to calculate excess carbon dioxide emissions for that reporting period. If actual emissions exceed the amount offset through the monetary path, then the Department recalculates the monetary path payment and requires a supplemental payment. In September 2009 the Council amended OAR 345-024-0590(5) to allow reporting of carbon dioxide emissions based on actual measurements for licensees who already report those measurements to DEQ or the US Environmental Protection Agency under a mandatory carbon dioxide reporting requirement. The proposed conditions for Amendment #7 require the certificate holder to elect which carbon dioxide emissions reporting method it will use for each five year period.

Year One Test. The current Site Certificate requires a Year One Test for each phase of PWGP construction to determine heat rate. The measured heat rate is the basis for the new and clean heat rate that is used to determine if supplemental monetary path payments are required. If the certificate holder chooses to report carbon dioxide emissions based on direct measurements that are reported to the DEQ or US EPA under a mandatory carbon dioxide reporting requirement, then the new and clean heat rate is not necessary, because need for supplemental monetary path payments would be based on the actual measurements and actual net kWh generation for each five year reporting period. However, if no Year One Test is performed then there is no way in the future to determine a new and clean heat rate, and the certificate holder loses the option to report emissions based on new and clean heat rate in any subsequent five year reporting period. The Department has added proposed conditions clarifying this.

Proposed Conditions. In its request for Amendment #7, PGE proposed conditions to implement the monetary path payment requirements for Unit 2. PGE's suggested conditions are presented in the form of amendments to the original conditions, retaining all conditions for Unit 1 and adding new or modified conditions where needed to reflect the addition of Unit 2. The suggested conditions retain all the terms regarding the mechanics of compliance such as:

- i. A requirement to report final design and vendor selection information to the Department prior to construction, sufficient for the Department to calculate the actual payment
- ii. A bond or letter of credit provided to the Climate Trust in the amount sufficient to fund the required offsets as determined in accordance with OAR 345-024-0600
- iii. A year-one test to confirm actual new and clean heat rate
- iv. Discretion for the Department to approve modified parameters for the year one test
- v. Provisions for supplemental offset payment if the actual new and clean heat rate exceeds the heat rate that was the basis for the offset payment calculation
- vi. Provision for five-year operating reports, with supplemental payment required if the actual operating history, emissions rate and total emissions exceed the values that were the basis for the original offset payments
- vii. Provision allowing PGE the option of reporting actual five year emissions based on direct CO₂ measurements or calculated five year emissions based on heat rate and hours of operation

Recommendations. The Department recommends the Council adopt PGE's suggested conditions as shown below. Conditions that are not modified below will continue to apply as written in the original Site Certificate. Modified or new language is shown as redline, strikeout or double underline:

(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 ~~for the facility 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. [~~Amendment~~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. \[Amendment 7\]](#)
- (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 7]

- (7) The Certificate Holder shall submit all supplemental monetary path payment requirement calculations and data to the Department for verification. ~~The Certificate Holder shall use the Year One Capacity 2 and Year One Heat Rate 2 that it reports for the facility pursuant to Condition D.15(5)(b) to calculate whether it owes supplemental monetary path payments, pursuant to subsections (a) and (b).~~ [Amendment No. 7]
- (a) Each five years after beginning commercial operation of ~~the energy facility~~Unit 1 (“Unit 1 five-year reporting period”), the Certificate Holder shall report to the Department the annual average hours ~~the facility~~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 ~~submit~~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 ~~the energy facility~~Unit 1. [Amendment No. 7]
- (b) If the Department determines that ~~the energy facility~~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) ~~for Phase 1 and \$1.27 per ton of carbon dioxide emissions (in 2009 dollars) for Phase 2.~~ 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~~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) ~~for Phase 1 and \$1.27 per ton of carbon dioxide (in 2009 dollars) for Phase 2.~~ The Department shall notify the Certificate Holder of the amount of payment required, using the monetary path, to offset future excess emissions. [~~Amendment~~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 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 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]

Conclusion. The Department recommends the Council find that subject to the conditions proposed above, the proposed Port Westward Unit 2 meets the carbon dioxide standard for non-base load gas power plants, OAR 345-024-0590.

VI. CONCLUSIONS

The Department recommends the Council find that the actions in the Certificate Holder's request are consistent with current Council rules, with other applicable statutes and rules, and with statewide land use planning goals and would not cause a significant adverse impact to public health and safety or the environment. The Department recommends the Council issue the following order considering the effects that may be produced by the proposed changes to the facility described in the Certificate Holder's Request for Seventh Amendment to the Site Certificate for the Port Westward Generating Project and finding compliance with applicable state statutes, administrative rules, and local government ordinances.

The Department recommends that the Council amend the Sixth Amended Site Certificate for the Port Westward Generating Project as the Certificate Holder requests with modifications to the conditions as noted above in Section V.

VII. PROPOSED ORDER

Based on the above findings of fact, discussions and conclusions of law, the Energy Facility Siting Council approves Amendment Number Seven. The chair of the Council shall execute the Site Certificate Amendment in the form of the “Seventh Amended Site Certificate for the Port Westward Generating Project.” This incorporates Attachments to the Amended Site Certificate for the Port Westward Generating Project. The Seventh Amended Site Certificate for the Port Westward Generating Project, with Attachments, is attached to this order and is incorporated by reference into this order.

Approved this day of January 2010.

/s/

Tom Stoops, Siting Manager, ODOE

ATTACHMENT 1: DEPARTMENT’S RECOMMENDED SEVENTH AMENDED SITE CERTIFICATE

ATTACHMENT 2: WATER RESOURCES DEPARTMENT “DRAFT PRELIMINARY DETERMINATION” ON THE MATTER OF REQUEST FOR WATER RIGHT TRANSFER T-10955

ATTACHMENT 3: REVISED SECTION P.8 OF REQUEST FOR AMENDMENT SEVEN TO THE PORT WESTWARD SITE CERTIFICATE, SUBMITTED BY LETTER FROM RICK TETZLOFF TO ADAM BLESS, NOVEMBER 19, 2009

Attachment 1

Department's Proposed Seventh Amended Site Certificate

for the

Port Westward Generating Project