

## **CERTIFICATE HOLDER'S REQUEST FOR NINTH AMENDMENT TO THE SITE CERTIFICATION AGREEMENT FOR THE BOARDMAN POWER PLANT**

Pursuant to OAR 345-027-0050, Portland General Electric Company ("PGE"), the holder of the "Boardman Power Plant Amendment No. 8 to the Site Certification Agreement" dated September 11, 2009 (the "Site Certificate"), requests to amend the Site Certificate to authorize the temporary storage and processing (torrefaction) of biomass material on the Boardman Power Plant site and the use of the processed biomass as a fuel in test burns to be conducted at the Boardman Plant.

Section V of the Site Certificate establishes the process for amending the Site Certificate. As discussed below, this amendment request is not intended to address "a danger to the public health, safety or welfare" as described in Section V.A of the Site Certificate. Therefore, PGE believes this amendment is within the scope of Section V.B, which provides:

"Where PGE and the Council staff agree that it is desirable to amend this site certificate for reasons other than set forth in A. of this section either may file with the Council an application for an amendment to the Site Certificate Agreement which application shall state the necessity and reasons therefore. The Council may grant such application without further proceedings."

OAR 345-027-0060 sets forth the current Council rule regarding the required contents of a request to amend a site certificate. Without waiving any future rights under Section V of the Site Certificate, PGE agrees to the processing of this amendment request under the current Division 27 rules, and the discussion below provides the information required by OAR 345-027-0060.

### SECTION 1 INFORMATION REQUIRED PURSUANT TO OAR 345-027-0060(1)

1.1 Certificate Holder Information

1.2 Name and mailing address of the Certificate Holder:

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

Name, mailing address and telephone number of individual responsible for submitting the request:

Jaisen Mody  
Jaisen.Mody@pgn.com  
Portland General Electric Company  
121 S.W. Salmon Street  
3WTC-BR03  
Portland, OR 97204  
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### 1.3 Description of the Facility

The facility, referred to as the Boardman Plant, is described in Section II.B of the Site Certificate. The Boardman Plant has been constructed and was placed into service on August 3, 1980. The Boardman Plant generates electricity using a conventional boiler fueled by coal.

### 1.4 Description and Analysis of the Proposed Change

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

#### 1.4.1 Description of the Proposed Change

Pursuant to a decision by the Oregon Environmental Quality Commission, the Certificate Holder cannot use coal as fuel in the Boardman Plant after December 31, 2020. PGE is investigating the feasibility of using torrefied biomass, a renewable resource, as fuel in the Boardman Plant.

Raw biomass will likely come from several sources. PGE is contracting with several farms in the Boardman area to grow a closed-loop energy crop, *Arundo donax* (giant cane). The harvested *Arundo* and other acquired biomass (which may include straw, corn stover, poplar or other agri-waste) will be accumulated and torrefied so that product quality can be developed and tested in preparation for PGE to conduct approximately several days of co-firing (coal with a blend of up to 10% torrefied biomass) and a one day test of 100% firing of the torrefied biomass. The co-firing test is anticipated to begin not earlier than October 2013, with the 100% firing occurring by the end of 2015.

PGE is seeking bidders to torrefy and densify the raw biomass, producing a fuel in pellet or briquette form. PGE is providing bidders with the flexibility to perform this work either on the Boardman Plant site or on a site selected by the bidder.

Attachment 1 is a site plan showing the area proposed for raw biomass storage (40 acres), two potential locations for the torrefier (each approximately 4 acres), and the proposed location for storage of torrefied biomass (4 acres).

PGE is not at this time seeking authorization for ongoing use of torrefied biomass or for conversion of the Boardman Plant to biomass fuel. The torrefaction unit would be disassembled and removed when no longer needed for processing biomass. PGE anticipates using all of the stored torrefied biomass during the test firings.

PGE has obtained from the Oregon Department of Environmental Quality a modification of the Boardman Title V Permit (Permit 25-0016). A copy of the permit modification request is attached as Attachment 2, and provides more detail regarding the process for drying and torrefying the biomass. The permit modification is expected to be approved by January, 2013. Pursuant to applicable DEQ regulations, the Title V Permit does not recognize “temporary” activities; therefore, the Title V Permit does not reflect the proposed limited span of time for test burns as described in this Amendment Request.

#### 1.4.2 Analysis of Proposed Change under OAR 345-027-0050

Under OAR 345-027-0050, a site certificate amendment request is required if a certificate holder proposes “to design, construct, or operate a facility in a manner different from the description in the site certificate” and the proposed change meets one of three criteria, discussed below.

(a) “Could result in a significant adverse impact that the Council has not addressed in an earlier order and the impact affects a resource protected by Council standards.”

Response: There are no significant adverse impacts associated with the requested change. The proposed change allows the use of a portion of the current Boardman Plant site, on a temporary basis, for storage of raw and torrefied biomass and for operation of a drum dryer and torrefier (the dryer and torrefier are collectively referred to herein as the “torrefaction unit”). The site already contains a large area used for storage of coal. The proposed amendment also would authorize the use of torrefied biomass as a fuel in the facility for the limited purpose of the test firing. The proposed amendment would not result in adverse impacts that differ significantly in either nature or extent from the operations already authorized under the Site Certificate.

(b) “Could impair the certificate holder’s ability to comply with a site certificate condition; or”

Response: The temporary activities proposed in this amendment request would not impair the Certificate Holder’s ability to comply with conditions in the current Site Certificate.

(c) “Could require a new condition or change to a condition in the site certificate.”

Response: Although the requested change is not to a condition of the Site Certificate, Section II.B.1 of the Site Certificate describes the Boardman Plant as a “power plant using a conventional boiler fueled by coal.” The Certificate Holder is submitting this Amendment Request to ensure the authorization of: (1) uses of the site not currently mentioned in the Site Certificate; and (2) use of a fuel not currently mentioned in the Site Certificate. Section II.B.1 of the Site Certificate describes the Boardman Plant as a “power plant using a conventional boiler fueled by coal.”

## 1.5 Proposed Changes to Site Certificate

OAR 345-027-0060(d) requires that a request to amend a site certificate must include “the specific language of the site certificate, including affected conditions, that the certificate holder proposes to change, add or delete by an amendment.” PGE proposes only one change to the Site Certificate -- adding a new Section IV.C.4 under "Uses of the Site":

### 4. Test firing of biomass.

(a) PGE is authorized to store green biomass, to process the biomass in a torrefaction unit, to store torrefied biomass, and to use the biomass as fuel for the torrefaction unit and in test burns in the Boardman Plant consistent with PGE's Request for Amendment No. 9, and subject to the restrictions set forth in this Section IV.C.4.

(b) Storage of biomass and operation of the torrefaction unit (including dryer) within the Boardman Plant site shall be occur in the areas shown on Attachment 1 to PGE's Request for Ninth Amendment.

(c) PGE shall provide notice in writing to the Department when it begins test burns of biomass. PGE shall complete all test burns within two years after the first test burn.

(d) If the torrefaction unit is installed and operated on the Boardman Plant site, PGE shall provide notice in writing to the Department when the torrefaction unit is installed on the site and when it is removed. The torrefaction unit shall be removed from the Boardman Plant Site not later than one month after completion of the test burns.

(e) Any green or torrefied biomass remaining on the site upon completion of the test burns shall be removed from the site.

## 1.6 Relevant standards

OAR 345-027-0060(1)(e) requires that an Amendment Request include “a list of the Council standards relevant to the proposed change.” The applicable Council standards are identified and addressed in Section 1.6 below.

1.7 Analysis of compliance with ORS 469, Council rules and applicable state and local laws, rules and ordinances

OAR 345-027-0060 requires that this request include:

“an analysis of whether the facility, with the proposed change, would comply with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances if the Council amends the site certificate as requested. For the purpose of this rule, a law, rule or ordinance is ‘applicable’ if the Council would apply or consider the law, rule or ordinance under OAR 345-027-0070(10).”

OAR 345-027-0070(10) provides:

“In making a decision to grant or deny issuance of an amended site certificate, the Council shall apply the applicable substantive criteria, as described in OAR 345-022-0030, in effect on the date the certificate holder submitted the request for amendment and all other state statutes, administrative rules, and local government ordinances in effect on the date the Council makes its decision.”

OAR 345-022-0030 sets forth the Council’s land use standard. This section of the Amendment Request addresses the land use standard, and each of the other statutes, rules and local government ordinances applicable to the proposed temporary changes in the Boardman Plant.

1.7.1 Division 22 Standards

(a) OAR 345-022-0010 Organizational Expertise

OAR 345-022-0010 requires the Council to 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.

Response: This Amendment Request seeks authorization only for temporary activities, including the temporary storage of green and processed biomass, the placement and use of equipment to dry and torrefy the biomass, and the use of the torrefied biomass as a fuel in limited test burns. No new permanent facilities would be constructed, operated or retired. The Certificate Holder has operated the Boardman Plant for over 30 years and has the demonstrated organizational expertise to do so. The processing of the biomass would be performed by a qualified contractor selected through an RFP process. The contractor would be required to set up, operate, dismantle and remove the dryer and torrefier.

(b) OAR 345-022-0020, Structural Standard

OAR 345-022-0020 requires the Council to find that the applicant, through appropriate site-specific study, has adequately characterized the seismic, geologic and soils hazards of the site and its vicinity and that the applicant can design, engineer and construct the facility to avoid dangers to human safety presented by such hazards.

Response: PGE is not proposing to construct any new permanent improvements at the Boardman Plant. Biomass would be stored in an open, flat area of the site, as shown on Attachment 1. A contractor would provide portable facilities for drying and torrefying the biomass; those facilities would be removed from the site once enough torrefied biomass has been accumulated for the test burns, and in any event not later than one month after completion of the test burns.

(c) OAR 345-022-0022, Soil Protection

OAR 345-022-0022 requires the Council to find that the design, construction, and operation of the facility, taking mitigation measures into account, 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.

Response: The temporary uses proposed in this Amendment Request do not involve significant soil disturbance, discharges to soils, or potential for chemical spills. Most of the area occupied, as shown on Attachment 1, would be used for storage of stacked green biomass if processing occurs on site. A smaller area, located near the existing coal pile and conveyor, will be used for storage of processed biomass.

(d) OAR 345-022-0030, Land Use

OAR 345-022-0030 requires the Council to find that the proposed facility “complies with the statewide planning goals adopted by the Land Conservation and Development Commission.” Under ORS 469.504(1)(b), the Council is authorized to make the determination whether the proposed facility complies with “applicable substantive criteria” and with any LCDC “administrative rules and goals and any land use statutes directly applicable to the facility under ORS 197.646(3).”

Response: All temporary activities covered by this Amendment Request would occur on land zoned by Morrow County as General Industrial (M-G). The area zoned MG encompasses 640 acres of rural land identified as the “PGE Carty Coal Fired Plant” exception area in the Morrow County Comprehensive Plan:

“This parcel of 640 acres is the site of a PGE coal fire plant and is completely developed and no longer available of resource uses.”

The provisions of Section 3.070 of the Morrow County Zoning Ordinance (MCZO) govern development in the General Industrial Zone. Although the 640-acre exception area was expressly created to accommodate the existing power plant, MCZO 3.070(1) (“Uses Permitted Outright”) does not list generating facilities. The Comprehensive Plan, however,

prevails over the Zoning Ordinance where the two are in conflict.<sup>1</sup> The fact that the Comprehensive Plan specifically identifies the presence of the generating plant as the basis of the “developed” exception means that the generating plant and uses accessory to it are permitted in this exception area.<sup>2</sup> An analysis of compliance with Morrow County’s conditional use criteria follows the discussion of compliance with the development standards of the M-G Zone.

*3.070.C. Use Limitations. In an MG Zone, the following limitations and standards shall apply to all permitted uses:*

*1. No use permitted under the provisions of this section that requires a lot area exceeding two (2) acres shall be permitted to locate adjacent to an existing residential lot in a duly platted subdivision, or a lot in a residential zone, except as approved by the Commission.*

Response: This standard does not apply. There are no residentially zoned lands or residential uses on or adjacent to the Boardman site.

*2. No use permitted under the provisions of this section that is expected to generate more than 20 auto-truck trips during the busiest hour of the day to and from the subject property shall be permitted to locate on a lot adjacent to or across the street from a residential lot in a duly platted subdivision, or a lot in a residential zone.*

Response: This standard does not apply. There are no residentially zoned lands or residential uses on or adjacent to the Boardman site.

*D. Dimension Requirements. The following dimensional requirements apply to all buildings and structures constructed, placed or otherwise established in the M-G zone.*

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<sup>1</sup> *Baker v. City of Milwaukie*, 271 Or 500 (1975)

<sup>2</sup> PGE also notes that the storage and processing of biomass would be allowed under the exclusive farm use zoning to which the M-G zone is an exception. The Morrow County EFU zone allows "farm use" as defined in ORS 215.203 and Article 1 of the Morrow County Zoning Ordinance. See MCZO 3.010(1). ORS 215.203 and Article 1 of the MCZO define "farm use" in relevant part as "the current employment of land . . . for the primary purpose of obtaining a profit in money by raising, harvesting, and selling crops . . . or any other agricultural or horticultural use . . . ."

ORS 215.203(2)(b)(L) defines "current employment" in relevant part as:

"(L) Land used for the processing of farm crops into biofuel, as defined in ORS 315.141, if:

(i) Only the crops of the landowner are being processed;

(ii) The biofuel from all of the crops purchased for processing into biofuel is used on the farm of the landowner;  
or

(iii) The landowner is custom processing crops into biofuel from other landowners in the area for their use or sale."

ORS 315.141(1)(b) in turn defines "biofuel" as:

(b) "Biofuel" means liquid, gaseous or solid fuels, derived from biomass, that have been converted into a processed fuel ready for use as energy by a biofuel producer's customers or for direct biomass energy use at the biofuel producer's site.

It appears from these definitions that torrefaction of the green biomass grown by other landowners in the area would be "custom processing" of those crops into biofuel, allowed in the EFU zone.

*1. Lot size and frontage: A minimum lot size has not been determined for this zone although the lot must be of a size necessary to accommodate the proposed use, however, it is anticipated that most, if not all uses will be sited on lots of at least two acres. The determination of lot size will be driven by the carrying capacity of the land given the proposed use. Minimum lot frontage shall be 300 feet on an arterial or collector; 200 feet on a local street.*

Response: This Amendment Request seeks authorization for uses on the site and lot currently containing the Boardman Power Plant. The exception area for the Boardman Power Plant site (i.e., the area zoned M-G) is an entire section – 640 acres. The portion of Tower Road under private ownership extends along and through the lot for several thousand feet, well over the minimum amount of lot frontage required under this standard.

*2. Setbacks: No specific side or rear yard setbacks are identified within this zone, but may be dictated by provisions of the Building Code or other siting requirements. The minimum setback between a structure and the right-of-way of an arterial shall be 50 feet. The minimum setback of a structure from the right-of-way of a collector shall be 30 feet, and from all lower class streets the minimum setback shall be 20 feet. There shall be no setback requirement where a property abuts a railroad siding or spur if the siding or spur will be utilized by the permitted use.*

Response: Tower Road terminates at the Boardman Plant site and is classified as private roadway for approximately 2.27 miles. The temporary uses proposed by this Amendment Request would be located over ¼ mile from Tower Road.

*3. Stream Setback: All sewage disposal installations such as outhouses, septic tank and drainfield systems shall be set back from the high-water line or mark along all streams and lakes a minimum of 100 feet, measured at right angles to the high-water line or mark. All structures, buildings, or similar permanent fixtures shall be set back from the high-water line or mark along all streams or lakes a minimum of 10 feet measured at right angles to the high-water line or mark.*

Response: The proposed use does not involve new sewage disposal installations. In addition, there are no streams or lakes within 100 feet of any of the storage or processing areas shown on Attachment 1.

*4. Uses adjacent to residential uses. A sight-obscuring fence shall be installed to buffer uses permitted in the General Commercial Zone from residential uses. Additional landscaping or buffering such as diking, screening, landscaping or an evergreen hedge may be required as deemed necessary to preserve the values of nearby properties or to protect the aesthetic character of the neighborhood or vicinity.*

Response: There are no residential uses adjacent to the site.

### *E. Transportation Impacts*

*1. Traffic Impact Analysis (TIA). In addition to the other standards and conditions set forth in this section, a TIA will be required for all projects generating more than 400 passenger car equivalent trips per day. Heavy vehicles B trucks, recreational vehicles and buses B will be defined as 2.2 passenger car equivalents. A TIA will include: trips generated by the project, trip distribution for the project, identification of intersections for which the project adds 30 or more peak hour passenger car equivalent trips, and level of service assessment, impacts of the project, and, mitigation of the impacts. If the corridor is a State Highway, use ODOT standards.*

Response: The proposed use will involve trucking green biomass to the Boardman Plant Site (or processed biomass, if drying and torrefaction occurs at another location). The trucking will occur over several months. In addition, if torrefaction occurs at the Boardman Power Plant site, equipment likely would be delivered to the site by truck, and removed from the site by truck. The proposed use is temporary, and will not generate 400 passenger car equivalent trips per day either at its peak intensity or on average. A Traffic Impact Analysis therefore is not required.

#### (e) OAR 345-022-0040, Protected Areas

OAR 345-022-0040 requires the Council to find that, taking into account mitigation, the design, construction, and operation of the facility are not likely to result in significant adverse impact to areas protected by state or federal statute.

Response: The temporary uses proposed by this Amendment Request would not result in a significant adverse impact to areas protected by state or federal statute.

The Application for Site Certificate for the Carty Generating Station identified “protected areas” within a 20-mile analysis area for the Carty Generating site, which is in relatively close proximity to the Boardman Plant. Based on that inventory of protected areas, it appears the closest protected areas would be the Boardman Research Natural Area approximately 2 miles to the east, and the Horn Butte Area of Critical Environmental Concern, located at least 7 miles to the west.<sup>3</sup> The uses proposed in this Amendment Request are temporary and would be located adjacent to the existing Boardman Power Plant, rail tracks and coal yard, and would not create any incremental impacts that would affect protected areas two miles or more distant from the Boardman Power Plant.

#### (f) OAR 345-022-0050, Retirement and Financial Assurance

OAR 345-022-0050 requires the Council to find that the applicant has a reasonable likelihood of obtaining a bond or comparable security, satisfactory to the Council, in an amount adequate to restore the site to a useful, nonhazardous condition if the certificate holder either begins but does not complete construction of the facility or permanently closes the facility before establishing the financial mechanism or instrument described in OAR 345-027-0020(9).

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<sup>3</sup> Application for Site Certificate for Carty Generating Station, Figure L-1 (Attachment 4.1).

Response: The proposed use is temporary in nature. PGE expects to consume all stored and processed biomass during the test burns, and the torrefaction contractor will be required to disassemble and remove the dryer and torrefier from the Boardman Power Plant site upon completion of the processing of the biomass. The biomass itself will be organic material (as described in this Amendment Request) and will not create a potential for degradation or contamination of the Boardman Power Plant site. As described in Attachment 2, a small quantity of liquefied petroleum gas (LPG) will be used for startup of the torrefaction unit. Normal startup requires approximately 5 gallons of LPG fuel. After startup, the heat for the torrefaction unit will be supplied by combustion of torrefied biomass.

The Certificate Holder's proposed amendments to the Site Certificate require the removal of the dryer and torrefier no later than one month after the test burns are complete. Therefore, there is no impact on retirement of the facility.

(g) OAR 345-022-0060, Fish and Wildlife Habitat

OAR 345-022-0060 requires the Council to find that the design, construction and operation of the facility, taking into account mitigation, are consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025 in effect as of September 1, 2000.

Response: The temporary facilities for storage and torrefaction of biomass will be located within a portion of the Boardman site adjacent to the coal storage yard, as shown on Attachment 1. Any additional disturbance in the area due to storage or processing of biomass will temporary. The area was surveyed as part of the Application for Site Certificate for the Carty Generating Station, and was determined to be a combination of "Developed (Industrial Use)" and "Impacted Shrub-Steppe/Grassland."<sup>4</sup> Therefore, there will be no permanent impact on habitat requiring mitigation under the fish and wildlife habitat mitigation goals.

(h) OAR 345-022-0070, Threatened and Endangered Species

OAR 345-022-0070 requires the Council, after consultation with appropriate state agencies, to find that the design, construction and operation of the energy facility are consistent with any protection and conservation programs adopted by the Oregon Department of Agriculture for plant species listed as threatened or endangered under ORS 564.105(2), or if the Department of Agriculture has not adopted a protection and conservation program, that the facility is not likely to cause a significant reduction in the likelihood of survival or recovery of the species. With respect to wildlife species, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to cause a significant reduction in the likelihood of survival or recovery of species listed as threatened or endangered by Oregon Fish and Wildlife Commission under ORS 496.172(2).

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<sup>4</sup> Application for Site Certificate for the Carty Generating Station, Figure P-2 (see Attachment 4.2).

Response: Information on threatened or endangered species in the vicinity of the Boardman Power Plant is presented in the ASC for the Carty Generating Station. The only species of concern in the vicinity is the Washington Ground Squirrel, a state-listed endangered species under the Oregon Endangered Species Act.<sup>5</sup> During surveys conducted in 2010, active Washington ground squirrel burrows were found northeast of the Boardman Plant coal yard and railroad loop. A small portion of the 785-foot buffer area for those active burrows overlaps with land inside the railroad loop that has been proposed for biomass storage or a torrefaction unit.<sup>6</sup> At this location, the height of the railroad berm exceeds 20 feet and, combined with the adjoining dirt access road, represents an approximately 100-foot wide break in habitat. PGE proposes that the elevated railroad grade constitutes a significant barrier to Washington ground squirrel habitat, and that the squirrels are much more likely to use the large areas of available habitat outside the railroad loop. Therefore, the buffer for the active burrows should end where it meets the railroad grade.

In addition, PGE is a party to the Threemile Canyon Multi-Species Candidate Conservation Agreement with Assurances (MSCCAA). The MSCCAA, to which both the U.S. Fish & Wildlife Service and ODFW are also parties, covers several species including the Washington ground squirrel. The MSCCAA identifies Covered Areas and Covered Activities for the purposes of the MSCCAA and associated federal ESA Section 10(a) permit. Electric generation is a permitted use, as is operation of a coal yard: “The coal yard is encircled and enclosed by the rail line that is used to deliver coal to the site.”<sup>7</sup> All uses proposed in this Amendment Request would be within the “Covered Area” of the coal yard.

(i) OAR 345-022-0080, Scenic and Aesthetic Values

OAR 345-022-0080 requires the Council to find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic and aesthetic values identified as significant or important in applicable federal land management plans or in local land use plans in the analysis area.

Response: The storage of green biomass would occupy a substantial area, as shown on Attachment 1. The green biomass would be stored in stacked bales. Stacks are not expected to be more than 30-35 feet in height, but could be several hundred feet in length. Stacks would be separated by at least 100 feet for fire safety purposes. The dryer and torrefier would have a comparatively small footprint. All of these temporary uses would be visually subordinate to the existing Boardman Power Plant including the generating facility and coal pile.

Federal land management plans and local land use plans applicable in the area do not identify any scenic or aesthetic values in the analysis area.<sup>8</sup> However, ODOT has classified a portion of SR 74 as the Blue Mountain Scenic Byway. SR 74 is approximately 10 miles west of the Boardman Plant Site; views would not be affected by the temporary uses proposed in this Amendment Request.

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<sup>5</sup> Application for Site Certificate for the Carty Generating Station, Exhibit Q and Figure Q-1 (see Attachment 4.3).

<sup>6</sup> Application for Site Certificate for the Carty Generating Station, Figure Q-2 (see Attachment 4.3).

<sup>7</sup> Multi-Species Candidate Conservation Agreement with Assurances at 45 (Attachment 5).

<sup>8</sup> Application for Site Certificate for the Carty Generating Station at R-8 (see Attachment 4.4).

(j) OAR 345-022-0090, Historic, Cultural, and Archaeological Resources

OAR 345-022-0090 requires the Council to find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impacts to historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places, and/or archaeological objects, as defined in ORS 358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c).

Response: The proposed uses are located within the existing Boardman Power Plant site. No historic structures or other improvements are present in the area. The Order of the Nuclear and Thermal Energy Council dated February 27, 1975 (Attachment 3) notes that the route of the “Old Oregon Trail” passes several miles south of the site, and also notes that “several potential archaeological sites have been discovered, near or on the proposed thermal power plant site.” The uses proposed in this Amendment Request would not result in disturbance of historic, cultural or archaeological resources because if any such resources exist in the area of the proposed uses, they would be below the ground surface and would not be disturbed.

(k) OAR 345-022-0100, Recreation

OAR 345-022-0100 requires the Council to 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.

Response: The uses proposed in this Amendment Request would be located within the existing Boardman Power Plant site, which has operated as a coal-fired generating plant for over 30 years. The storage and processing of biomass would occur in a portion of the site surrounded by railroad tracks and closed to public access. No impacts on recreational opportunities are expected because the nearest developed federal, state or local recreational facilities are more than five miles away.<sup>9</sup>

(l) OAR 345-022-0110, Public Services

OAR 345-022-0110 requires the Council to 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 to provide sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.

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<sup>9</sup> Application for Site Certificate for Carty Generating Station, Exhibit T (see Attachment 4.5).

Response: The uses proposed in this Amendment Request would be temporary, would be located entirely within the existing Boardman Power Plant site, and would utilize existing public and private infrastructure. The temporary use is not expected to result in the presence of more than one additional person per shift at the site (plus occasional on-call maintenance personnel) during the processing of the biomass. PGE will not need to hire additional employees; the contractor selected through the RFP process would be expected to supply operators for the duration of the operation of the dryer and torrefier -- a total of approximately four FTE, which takes into account 24/7 work operating the torrefier.

PGE does not know if those contractor employees will be from the local area or will temporarily relocate. To the extent they are from the local area, there will be no incremental impact on public service. To the extent they are from outside the area, it is unlikely (due to the temporary nature of work) that they will relocate families to the area. Thus, the only likely impact will be use of temporary housing (motels or rental housing) for a relatively small number of temporary workers. There will be no significant adverse impact to police, health care, or schools. Other public services are addressed below:

Sewers and sewage treatment: The Boardman Power Plant has an existing private system for managing sanitary sewage. The system has substantial excess capacity, and can easily serve a small number of contractor personnel during the processing of the biomass. Moreover, the temporary use is not expected to result in more than one additional person per shift present at the site during the processing of the biomass.

Water: As the purpose of processing the biomass is to dry it and prepare it for combustion, water use if any is expected to be minimal.

Storm water drainage: No new storm drainage facilities would be necessary. The storage and processing would occur in a portion of the Boardman Plant Site (see Attachment 1) that is relatively flat. Storm water runoff would be allowed to infiltrate to the ground surface.

Solid waste management: As discussed under the Waste Minimization standard, the temporary uses will generate very little solid waste other than a small amount of ash which will be disposed of on site.

Traffic safety: Most of the green biomass would be sourced from local agriculture and would arrive at the Boardman Plant Site by truck. As local farms generally ship their products by truck, no significant increase in truck traffic on local roads is anticipated.

Fire protection: As noted above, green biomass would be stored in stacks several hundred feet long; stacks would be separated by at least 100 feet for fire safety purposes.

The Boardman Rural Fire Protection District has an existing facility, Station #2, located outside of the Boardman Power Plant. This station is located on PGE-owned property under an agreement with PGE. The Fire District constructed the building and the building houses equipment owned by the Fire District, which can be used by the PGE Fire Brigade.

In addition to the Fire District, the Boardman Plant has a number of fire-trained personnel on staff, which form a private Fire Brigade for the PGE facility. The Fire Brigade has been in use since the Boardman Plant first began operation.

The proximity of Station #2, coupled with the existing PGE Boardman Plant Fire Brigade, would provide adequate fire protection resources. The temporary uses proposed by this Amendment Request would not significantly impact the Boardman Rural Fire Department's ability to provide service to the community.

(m) OAR 345-022-0120, Waste Minimization

OAR 345-022-0120 requires the Council to find that, to the extent reasonably practicable, 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 re-use of such wastes; and 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 impacts on surrounding and adjacent areas.

Response: The activities for which PGE seeks authorization through this Amendment Request would generate only minimal quantities of waste. PGE anticipates the biomass will be fully utilized in the operation of the torrefier and in the test burns in the Boardman Power Plant. In the event a small amount of biomass remains on site at completion of the test burns, PGE will either dispose of the material at a permitted solid waste disposal facility or, if feasible, transfer the biomass to a company that can use it legally as fuel. Ash from combustion of the biomass will be disposed of with coal ash. The biomass will likely be baled and stacked for storage; the twine or wire used in the baling process would be recycled.

1.7.2 Division 23 Standards

The Division 23 standards apply only to "nongenerating facilities" and are inapplicable to the Boardman Power Plant and the activities proposed in this Amendment Request. Pursuant to OAR 345-023-0005, the standards of Division 23 do not apply to "nongenerating facilities that are related or supporting facilities." Moreover, the dryer and torrefier would not be "nongenerating facilities" as defined in ORS 469.503(2)(e), for the reasons discussed in Section 1.6.3 of this Amendment Request.

1.7.3 Division 24 Standards

The Council's Division 24 standards include requirements for energy facilities that emit carbon dioxide. The Division 24 rules implement the carbon dioxide emissions standard of ORS 469.503(2), which provides in part:

"If the energy facility is a fossil-fueled power plant, the energy facility complies with any applicable carbon dioxide emissions standard adopted by the council or enacted by statute."

Response: Although the Boardman Power Plant is a “fossil-fueled power plant” as defined in ORS 469.503(2)(d),<sup>10</sup> the Site Certificate for the Boardman Power Plant predates the carbon dioxide emissions standards of ORS 469.503(2) and the Council’s Division 24 rules. The Boardman Power Plant therefore is not subject to the carbon dioxide emissions standards.

The Amendment Request seeks authorization only for the storage, processing (drying and torrefaction) and use of biomass as a fuel for limited test burns in the Boardman Power Plant. With the exception of very small quantities of liquefied petroleum fuel used in start-up of the torrefaction unit, this Amendment Request involves only the combustion of biomass that is not derived from natural gas, coal or petroleum and therefore is not a “fossil fuel” for purposes of the carbon dioxide emissions standard. In fact, the combustion of the biomass during the test burns will offset the use of coal. PGE therefore concludes that the carbon dioxide emission standards should not be applied to this amendment request.

That conclusion is supported by the fact that neither the statute nor the Council’s Division 24 rules specifies a carbon dioxide emissions standard applicable to combustion of biomass. ORS 469.503(2) requires a demonstration of compliance with “any applicable carbon dioxide emissions standard adopted by the council or enacted by statute,” and OAR 345-024-0500 correspondingly requires a finding by the Council “that the energy facility complies with any applicable carbon dioxide emissions standard adopted by the Council or enacted by statute.” At present, the statute and rules provides carbon dioxide emissions standards applicable only to “base load gas plants” (ORS 469.503(2)(a); OAR 345-024-0050 through 345-024-0570), “non-base load power plants” (OAR 345-024-0590 through OAR 345-024-0610) and “nongenerating energy facilities” (OAR 345-024-0620 through 345-024-0640). This Amendment Request does not involve a “base load gas plant” as defined in ORS 469.503(2)(e)(B), a non-base load power plant” as defined in OAR 345-001-0010(38), or a “nongenerating energy facility” as defined in ORS 469.503(2)(e)(K):

- The proposal does not involve a “generating facility that is fueled by natural gas” and therefore is not a “base load gas plant” under ORS 469.503(2)(e)(B);
- The proposal does not involve 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,” and therefore is not a “non-base load generating plant” as defined in OAR 345-001-0010(38); and

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<sup>10</sup> ORS 469.503(2)(e)(D) defines “fossil-fueled power plant” as “a generating facility that produces electric power from natural gas, petroleum, coal or any form of solid, liquid or gaseous fuel derived from such material.”

- The proposal does not involve “energy facilities that are defined in ORS 469.300(11)(a)(C) and (E) to (I), and therefore is not a “nongenerating energy facility” as defined in ORS 469.503(2)(e)(K). More specifically, although the dryer and torrefier will “convert biomass to a ... solid product ... intended to be used as a fuel,” (ORS 469.300(11)(a)(G)) the temporary processing facility will not meet the jurisdictional threshold of the statute (production of the equivalent of six billion Btu of heat a day).<sup>11</sup>

In summary, this Amendment Request seeks authorization for activities related to a limited test burn of biomass rather than fossil fuel, and there is no “applicable” carbon dioxide emission standard in the statute or the Council’s rules.

#### 1.7.4 Council Standards for Approving Amendment

OAR 345-027-0070(10) identifies the factors the Council shall consider in making a decision to grant or deny issuance of an amended site certificate. These factors are discussed below.

(a) OAR 345-027-0070(10)(a)

*(a) For an amendment that would change the site boundary or the legal description of the site, the Council shall consider, for the area added to the site by the amendment, whether the facility complies with all Council standards;*

Response: The Certificate Holder is not proposing to change the site boundary or the legal description of the site. Therefore, this standard is not applicable.

(b) OAR 345-027-0070(10)(b)

*(b) For an amendment that extends the deadlines for beginning or completing construction, the Council shall consider:*  
*(A) Whether the Council has previously granted an extension of the deadline;*  
*(B) Whether there has been any change of circumstances that affects a previous Council finding that was required for issuance of a site certificate or amended site certificate; and*  
*(C) Whether the facility complies with all Council standards, except that the Council may choose not to apply a standard if the Council finds that:*  
*(i) The certificate holder has spent more than 50 percent of the budgeted costs on construction of the facility;*

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<sup>11</sup> The torrefaction unit is estimated to produce approximately 2 tons of torrefied biomass per hour, or 96,000 lbs./day. At a gross calorific value (HHV) of approximately 9500 Btu/lb., the unit would produce the equivalent of just over 900 million Btu per day.

- (ii) The inability of the certificate holder to complete the construction of the facility by the deadline in effect before the amendment is the result of unforeseen circumstances that are outside the control of the certificate holder;*
- (iii) The standard, if applied, would result in an unreasonable financial burden on the certificate holder; and*
- (iv) The Council does not need to apply the standard to avoid a significant threat to the public health, safety or the environment;*

Response: The Certificate Holder is not requesting to extend deadlines for beginning or completing construction. Therefore, this rule is not applicable to the request.

(c) OAR 345-027-0070(10)(c)

- (c) For any amendment not described above, the Council shall consider whether the amendment would affect any finding made by the Council in an earlier order.*

Response: Attachment 3 is a copy of the “Findings of Fact, Findings of Ultimate Fact, Conclusions of Law, and Order” dated February 27, 1975 and approved by the Nuclear and Thermal Energy Council, predecessor to the Energy Facility Siting Council. This Order approved the original “Site Certification Agreement” for the Boardman Power Plant. The temporary uses proposed in this Amendment Request would not affect any findings made in that Order or any other prior order for the Boardman Power Plant.

(d) OAR 345-027-0070(10)(d)

- (d) For all amendments, the Council shall consider whether the amount of the bond or letter of credit required under OAR 345-022-0050 is adequate.*

Response: As discussed in response to OAR 345-022-0050 (Retirement and Financial Assurance), this amendment request proposes only temporary uses. Biomass stored on the site will be consumed in the torrefaction unit and in the test burns, and the torrefaction unit itself will be removed from the site no later than one month after completion of the test burns. Therefore, the Amendment Request does not affect the Certificate Holder’s ability to retire the facility and restore it to a useful, nonhazardous condition, and no financial assurance associated with such future retirement is necessary as a condition of this Amendment Request. Section III.A of the Site Certificate sets forth PGE’s warranty of its financial ability to operate and retire the Boardman Plant, as required by ORS 453.395(4) (1974). Nothing in this Amendment Request would affect that warranty.

1.7.5 Other State Statutes, Administrative Rules and Local Government Ordinances

Pursuant to ORS 469.503(3), the Council must determine that the proposed facility complies with all other Oregon statutes and administrative rules identified in the Project Order, as amended, as applicable to the issuance of a site certificate. Section IV.H of the Site Certificate describes a range of approvals granted under other statutes and rules. These include approvals under programs implemented by the State Land Board, the Department of Geology and Mineral Industries, the Water Resources Department, the State Highway Division, the Public Utility Commission, the Department of Fish and Wildlife, the Department of Environmental Quality, the State Health Division, and the Department of Consumer and Business Services.

As indicated by Attachment 2, the Certificate Holder applied to the Oregon Department of Environmental Quality for a modification of the Title V permit for the Boardman Plant; DEQ has approved the permit modification. The Council's approval of the Certificate Holder's request to allow temporary uses at the Boardman Power Plant site for a test burn of biomass would not affect or involve compliance with other state statutes, administrative rules or local government ordinances, except as already addressed in this Amendment Request.

1.8 Updated list of property owners

OAR 345-027-0060(1)(g) requires "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)."

Response: An updated list of property owners in or within 500 feet of the site boundary is attached as Attachment 6.

SECTION 2 INFORMATION CONSISTENT WITH SITE CERTIFICATE APPLICATION REQUIREMENTS

OAR 345-027-0060(2) requires:

"In a request to amend a site certificate, the certificate holder shall provide the information described in applicable subsections of OAR 345-021-0000 and OAR 345-021-0010. The certificate holder may incorporate by reference relevant information that the certificate holder has previously submitted to the Department or that is otherwise included in the Department's administrative record on the facility."

This Amendment Request seeks authorization for temporary uses within the existing Boardman Power Plant site. The information in support of this Amendment Request is provided in the text and in the Attachments.

## SECTION 3 CONCLUSION

The Certificate Holder requests the approval of this Amendment Request.

### **Attachments:**

Attachment 1: Site Plan showing proposed area for raw biomass storage, torrefied biomass storage, and alternative locations for torrefier

Attachment 2: Notice of Construction and Significant Modification Application for Title V Permit 25-0016-TV-01

Attachment 3: “Findings of Fact, Findings of Ultimate Fact, Conclusions of Law, and Order” dated February 27, 1975, approved by the Nuclear and Thermal Energy Council.

Attachment 4: Excerpts from Application for Site Certificate for the Carty Generating Station

4.1: Exhibit L (Protected Areas)

4.2: Exhibit P (Fish and Wildlife Habitat)

4.3: Exhibit Q (Threatened and Endangered Species)

4.4: Exhibit R (Scenic and Aesthetic Values)

4.5: Exhibit T (Recreation)

Attachment 5: Threemile Canyon Multi-Species Candidate Conservation Agreement with Assurances (MSCCAA)

Attachment 6: Updated list of property owners