**Portland General Electric Company**
*121 SW Salmon Street • Portland, Oregon 97204*

February 16, 2018
Carty Generating Station

Sarah Esterson
Senior Siting Analyst
Energy Facility Siting Division
Oregon Department of Energy
550 Capitol Street NE
Salem, OR 97301

Subject: Carty Generating Station
Revised Request for Amendment No. 1 of the Site Certificate

Dear Ms. Esterson,

Portland General Electric Company (PGE) hereby submits a revised Request for Amendment No. 1 (RFA) of the Site Certificate for the Carty Generating Station to the Oregon Department of Energy (the Department). PGE submitted the original RFA in August 2016, subsequently requested a temporary suspension of its review and, in a letter dated October 27, 2017, notified the Department of our intent to submit this revised RFA.

As requested, three hard copies of the RFA are enclosed and both Word and PDF versions have been provided electronically.

We appreciate your review of the enclosed documents and your assistance with the site certificate amendment process. If there are any questions regarding the RFA, please do not hesitate to contact me at 503-464-2634.

Respectfully,

Lenna Cope

Lenna Cope
Environmental Engineer
Portland General Electric

cc: Maxwell Woods (ODOE)
Todd Cornett (ODOE)
Craig Armstrong (PGE)

# Request for Amendment No. 1 of the Site Certificate for the Carty Generating Station

Submitted to:

**Oregon Department of Energy**

**February 2018**

**Prepared by:**

**Portland General Electric Company**
**121 SW Salmon St.**
**3WTC-BR05**
**Portland, OR 97204**

Portland General Electric

ecology and environment, inc.
Global Environmental Specialists

# Table of Contents

# List of Attachments and Exhibits

# List of Tables

**Table** **Page**

# Acronyms and Abbreviations

| | |
|---|---|
| AC | alternating current |
| AINW | Archaeological Investigations Northwest, Inc. |
| amp | ampere |
| APLIC | Avian Powerline Interaction Committee |
| APP | Avian Protection Plan |
| ASC | Application for Site Certificate |
| AVA | Viticultural Area |
| bgs | below ground surface |
| BMP | best management practice |
| BONAP | Biota of North America Program |
| BPA | Bonneville Power Administration |
| CCAA | Candidate Conservation Agreements with Assurances |
| Cornforth Consultants | Cornforth Consultants, Inc. |
| Council | Oregon Energy Facility Siting Council |
| CSZ | Cascade Subduction Zone |
| dB | decibels |
| dBA | A-weighted decibels |
| DC | direct current |
| Department | Oregon Department of Energy |
| DEQ | Oregon Department of Environmental Quality |
| DOGAMI | Oregon Department of Geology and Mineral Industries |
| DSL | Oregon Department of State Lands |
| E & E | Ecology and Environment, Inc. |
| EFU | Exclusive Farm Use |
| EMF | electric and magnetic fields |
| EPA | United States Environmental Protection Agency |
| EPC Contract | engineering, procurement, and construction contract |
| ESA | federal Endangered Species Act |
| ESCP | Erosion and Sediment Control Plan |
| FAA | Federal Aviation Administration |
| FR | Federal Register |
| g | acceleration |
| GPS | global positioning system |
| HMA | Habitat Mitigation Area |
| IBC | International Building Code |
| IPaC | Information for Planning and Conservation |
| ISO | International Organization for Standardization |
| kV | kilovolt |
| LCC | Land Capability Class |
| MCE | maximum credible earthquake |
| MCER | maximum considered earthquake |

| | |
|---|---|
| MCZO | Morrow County Zoning Ordinance |
| met | meteorological |
| MG | General Industrial |
| MSCCAA | Multi-Species Candidate Conservation Agreement with Assurances |
| MVA | megavolt ampere |
| MW | megawatts |
| NHD | National Hydrography Dataset |
| $NO_X$ | nitrogen oxide |
| NPDES | National Pollution Discharge Elimination System |
| NRCS | Natural Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NWI | National Wetlands Inventory |
| NWSTF | Naval Weapons Systems Training Facility |
| OAR | Oregon Administrative Rules |
| ODA | Oregon Department of Agriculture |
| ODEQ | Oregon Department of Environmental Quality |
| ODFW | Oregon Department of Fish and Wildlife |
| OHWM | ordinary high water mark |
| ORS | Oregon Revised Statutes |
| OSSC | Oregon Structural Specialty Code |
| PGE | Portland General Electric Company |
| Plan | Habitat Monitoring and Mitigation Plan (Appendix P-3) |
| Plan | Revegetation and Noxious Weed Control Plan (Appendix P-4) |
| PV | photovoltaic |
| redox | redoximorphic |
| RFA | Request for Amendment No. 1 of the Site Certificate for the Carty Generating Station |
| RNWCP | Revegetation and Noxious Weed Control Plan |
| ROW | right-of-way |
| S1 | 1 second earthquake motion |
| SA | spectral acceleration |
| SDAM | Streamflow Duration Assessment Method for Oregon |
| SHPO | State Historic Preservation Office |
| SM1 | maximum considered earthquake 1.0 second |
| SMS | maximum considered earthquake short period |
| SPCC | Spill Prevention Control and Countermeasure Plan |
| SPL | sound pressure level |
| SS | short period earthquake motion |
| SSURGO | Soil Survey Geographic database |
| TIA | traffic impact analysis |
| TNC | The Nature Conservancy |
| USACE | United States Army Corps of Engineers |
| USFWS | U.S. Fish and Wildlife Service |
| WGS | Washington ground squirrel |
| WillametteCRA | Willamette Cultural Resources Associates, Ltd. |
| WPCF | Water Pollution Control Facility |

# Glossary of Project-Specific Terms

**amended Energy Facility Site**: The project site as amended under the RFA.

**amended Site Boundary:** The Site Boundary as amended under the RFA.

**analysis area:** Site Boundary expansion areas plus the designated buffer distance for the respective exhibit

**Application for Site Certificate for the Carty Generating Station (ASC)**: The original application filed in 2011.

**Carty Generating Station:** The facility proposed under the ASC.

**Carty Generating Station as amended**: The facility as modified under the RFA

**Carty Solar Farm:** New feature added under the RFA. The Carty Solar Farm is a 50-megawatt photovoltaic solar-powered generating unit, and when referred to in the exhibits, includes all associated related and supporting facilities.

**original Energy Facility Site:** The project site as defined in the ASC.

**original Site Boundary:** The site boundary as defined in the ASC.

**Request for Amendment No. 1 of the Site Certificate for the Carty Generating Station (RFA)**: The modifications to the Site Certificate requested in this document and supporting exhibits and analysis.

**Site Boundary expansion areas**: All areas included in the amended site boundary that are NOT included in the original Carty Generating Station site boundary.

**Transmission Line:** All references made herein to "transmission line(s)", "transmission facility(ies)", and "transmission system" are solely intended to be consistent with the terminology used in OAR 345, and should not be interpreted to suggest that such facilities are considered, by PGE, to be part of PGE's "Transmission System", as that term is defined in PGE's Open Access Transmission Tariff (OATT), or that such designations as "transmission", in this context, in any way makes them subject to the regulatory jurisdiction or control of the Federal Energy Regulatory Commission (FERC), unless the context makes clear otherwise.

**Unit 1**: Natural gas combined cycle electrical generating unit; unchanged from ASC.

**Unit 2**: Natural gas combined cycle electrical generating unit; approved in Site Certificate, but not constructed. The construction timeline for this unit has lapsed and PGE will not request an extension; therefore, this unit is no longer approved.

# 1. Introduction

In 2012, the Energy Facility Siting Council (Council) issued a Site Certificate to Portland General Electric Company (PGE) for the Carty Generation Station. That certificate authorized the construction and operation of two natural gas combined cycle generating units (Unit 1 and Unit 2) and related and supporting facilities. Unit 1 and its related and supporting facilities have been constructed and placed in service. Unit 2 and its related and supporting facilities have not been constructed and the construction timeline for Unit 2 required under Site Certificate Condition 4.3 has passed. PGE is not requesting a construction timeline extension; therefore, Unit 2 and all previously approved, but not constructed related and supporting facilities are no longer approved under the Site Certificate.

PGE is submitting this Request for Amendment (RFA) No. 1 to the Council to allow construction and operation of a photovoltaic (PV) solar generating unit and related and supporting facilities (together referred to as the Carty Solar Farm), and removal of Site Certificate conditions related to archaeological resource site 35MW19, based on recent cultural survey reports. This RFA provides the Council with information required under Oregon Administrative Rules (OAR) 345-0270-0050 to allow the Council's review and consideration of the proposed changes.

To support the Council's evaluation, PGE has included the following documents with this RFA:

- Attachment 1 – Proposed Revisions to the Carty Generating Station Site Certificate
- Exhibits A through DD – Providing information related to the proposed Carty Solar Farm, including analysis of potential impacts and, where appropriate, discussion of mitigation.

# 2. Certificate Holder Information

## A. Name and Mailing Address of Certificate Holder

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

## B. Name and Address of the Individual Responsible for Submitting the Request

Arya Behbehani
General Manager Environmental & Licensing Services
Portland General Electric Company
121 SW Salmon Street, 3WTC0403
Portland, OR 97204

503-464-8141

Arya.Behbehani@pgn.com

# 3. Description of the Facility

## A. Nature of the Facility

As described in the Site Certificate, the Carty Generating Station is a natural-gas-fueled combined-cycle electric power generating plant. The previously authorized facility consists of up to two generating units, each capable of generating up to 450 megawatts (MW) of electrical power; the already constructed and in operation Unit 1, and the not constructed Unit 2. A combined cycle generating unit consists of one or more high efficiency combustion turbine generators (CTG), a heat recovery steam generator, a steam turbine generator, and a cooling tower. A natural-gas-fueled auxiliary boiler supplies steam when none is available from the heat recovery steam generator, to start the CTG or to maintain the plant in a ready-to-start condition.

The Carty Generating Station includes the following related or supporting facilities for Unit 1:

- Unit 1 to Grassland Switchyard 500-kilovolt (kV) transmission line
- Grassland Switchyard
- Interconnecting water pipelines
- Cooling tower
- Liquid storage facilities
- Accessory buildings
- Utility lines
- Roads

The Carty Generating Station includes the following previously approved, but not constructed facilities that are no longer approved under the site certificate due to the required construction timeline lapsing:

- Unit 2 electric power generating plant
- Unit 2 to Grassland Switchyard 500-kV transmission line
- 18 mile 500-kV transmission line(s) from the Grassland Switchyard to the Slatt Substation
- Evaporation ponds

Carty Unit 1 entered service in late July 2016 as one of the most efficient power plants in the Western United States.

The passing of Oregon Senate Bill 1547 in March of 2016 enacted a Renewable Portfolio Standard (RPS) of 50% by 2040 and requires a transition from coal by 2030. The modified RPS included expanded and accelerated interim RPS milestones (20% by 2020, 27% by 2025, 35% by 2030, and 45% by 2035) that will drive PGE's portfolio needs over the next 30+ years. In addition, PGE recently joined more than 1,200 governors, mayors, businesses, and colleges and universities from across the U.S. in declaring their intent to continue to ensure the U.S. remains a global leader in reducing carbon emissions.

These factors result in an increased need to add and promote new renewable resources to the PGE generation portfolio. The acknowledged 2016 Integrated Resource Plan revised action plan calls for acquiring approximately 100 average megawatts of RPS eligible resources that contribute to meeting the company's energy and capacity needs by 2021.

With this RFA, PGE is proposing to add the Carty Solar Farm as a 50 MW PV solar farm to help meet our long term RPS requirements and commitment to reducing carbon emissions (see Section 4).

As proposed, the Carty Generating Station will consist of Unit 1 and the Carty Solar Farm, and will be controlled and operated from the Carty central control room. The two units will diversify PGE's generation portfolio in Morrow County and provide significant economic development for the area.

## B. Facility Location

The Carty Generating Station is located in Morrow County, Oregon, southwest of the city of Boardman and near the Carty Reservoir. This location is also adjacent to the existing Boardman Plant. The existing transmission line associated with the Carty Generating Station Unit 1 is located on PGE property in Morrow County. Electricity generated by Unit 1 connects via a 1-mile long 500 kV transmission line to the Grassland Switchyard, where it connects to the grid via an existing 500 kV transmission line to the Slatt Substation.

Unit 1 and associated related and supporting facilities, including the Unit 1 to Grassland Switchyard 500 kV transmission line, the Grassland Switchyard, and permanent access roads, are located in Township 3 North, Range 24 East, Sections 32 and 33.

The locations of proposed modifications described in Section 4 of this RFA, with Township, Range, and Section numbers in relation to the Willamette Meridian, are as follows:

- Carty Solar Farm generation facility (location of the solar arrays) would be located south and southeast of the Carty Reservoir in Township 2 North, Range 24 East, Sections 2, 3, 10, and 11.

- Related and supporting facilities, including transmission lines and temporary construction areas would be located in proximity to and between the Carty Solar Farm generation facility and either Unit 1, the Boardman Plant, or the Grassland Switchyard, depending on selected route of interconnection to the grid, in the sections listed above and Township 3 North, Range 24 East, Sections 34 and 35.

# 4. Proposed Changes and Analysis

## A. Proposed Changes

Changes to the Carty Generating Station include:

- Addition of a 50 MW solar PV generation facility and related and supporting facilities (together, the Carty Solar Farm)
- Removal of Site Certificate conditions related to archaeological resource site 35MW19, based on recent cultural survey reports.

The major components, structures, and systems of Unit 1 are described in the Site Certificate. . The Carty Solar Farm is described below.

All units would be fully integrated into the operations and maintenance of the Carty Generating Station.

**Carty Solar Farm**

The Carty Solar Farm would consist of multiple solar arrays. A solar array consists of a series of PV modules connected to an inverter and supporting equipment necessary to effectively produce power; a typical array size for utility scale generation is approximately 2.0 MW of electricity under standard conditions. While the mounting system, final array size, dimensions, MW capacity, and number of arrays would be determined during detailed design and equipment selection/procurement, the overall solar unit would have a nominal capacity of approximately 50 MW.

PV modules produce power by converting incoming sunlight to direct current (DC) electrical power. PV modules are arranged in series circuits to effectively increase output voltage. These series circuits of PV modules are called "strings" in industry terms. The "string" is the basic building block of power conversion in the solar unit. The final module mix for the Carty Solar Farm would be selected to be well-suited for the environment in terms of durability and reliability.

The PV modules would be mounted on a racking system, which would be supported by driven piers (piles) directly embedded in the ground or other appropriate foundation determined during detailed design. The PV modules would then be fastened to the racking assembly and electrically connected together in series strings. The strings would be routed to DC combiners at the ends of the array rows. Combiner output circuits would be routed underground to the inverter stations.

Inverter stations serve three primary purposes: (1) collect DC power in a central location, (2) convert the DC power from arrays into alternating current (AC) power, and (3) convert low-voltage AC power to medium-voltage AC power at the appropriate collector circuit potential. Each inverter station consists of DC collection equipment (including junction boxes and

overcurrent protective devices), utility-scale inverters, and a low-to-medium-voltage transformer. The output power from the inverter stations is then fed to the AC collection system.

Fencing would be installed around the perimeter of the Carty Solar Farm. The final fence configuration would be determined during detailed design but would likely consist of 8-foot chain link topped by an additional foot of barbed wire. Access roads would be constructed along the interior of the array field, to allow for maintenance access to each of the inverter stations.

Electrical energy produced by the Carty Solar Farm site would be collected and routed via a 34.5 kV transmission line to one of three interconnection options north of the Carty Reservoir, which include Option 1 – Grassland Switchyard Interconnect, Option 2 – Carty Unit 1 Isophase Interconnect, and Option 3 – Boardman Plant Interconnect. Interconnect Option 1 would involve a buildout of the Grassland Switchyard up to the area already approved in the Site Certificate. The RFA describes five potential transmission line routes from the Carty Solar Farm to reach three interconnection options, and each route would be of the same approximate design. The interconnection transmission line would be approximately 2.25 to 3 miles long, depending on the route selected.

The Carty Solar Farm would include temporary construction laydown and parking areas near the Carty Reservoir and Unit1, and several areas in the new portions of the amended Site Boundary where PGE currently does not propose permanent or temporary disturbances, but that are being included to accommodate potential small changes during the final project design stage.

PGE is requesting approval to use all these areas to construct the Carty Solar Farm. PGE has included all of these areas (and appropriate buffers) in the resource assessments described in the other exhibits for this RFA to help determine whether the project meets the applicable Oregon Energy Siting Facility Council (Council) standards.

## B. Analysis of Proposed Changes

Under OAR 345-027-0050(1), there are three criteria that require a certificate holder to request an amendment to a site certificate for changes in design, construction, or operation of a facility: a potential significant impact not previously addressed, potential impairment of the certificate holder's ability to comply with certificate conditions, or the need to add or change conditions of the site certificate. The changes described in this RFA include addition of a generating unit, expansion of the Site Boundary, increase in expected energy generation, increase in area of temporary and permanent impacts and use of land zoned for Exclusive Farm Use, increase in water consumption and a change in retirement cost estimates. These changes will result in additional impacts that warrant the Council's review, will require that modifications be made to the Site Certificate to allow PGE to construct and operate the proposed facilities, and will require changes in conditions of the Site Certificate. Therefore, based on all three criteria that require an amendment request, PGE has determined that the amendment of the Site Certificate is necessary and hereby requests the Council consideration of this RFA under OAR 345-0027-0070.

To provide the Council with the information necessary to evaluate this request, PGE has developed a series of exhibits (A through DD). Those exhibits can be found at the end of this request. Each exhibit provides information regarding the Carty Solar Farm, analysis of potential impacts to resources, and/or discussion of potential mitigation measures, as appropriate.

# 5. Proposed Modifications to Site Certificate

Attachment 1 provides a redlined version of the current Site Certificate for the Carty Generating Station. PGE has proposed modifications to the certificate to reflect the proposed changes described in this RFA, as well as to update information that has changed since the submittal of the ASC. In addition to the redlined text, PGE would like to note the following:

- *Condition 7.6: The certificate holder must report emissions, transfer, and waste management data for hydrazine and sodium nitrite as required by Section 313 of the Emergency Planning and Community Right-to-know Act (EPCRA) and Section 6607 of the Pollution Prevention Act.*

  **Note:** This condition is not applicable to Carty. Only applicable to utilities that combust coal and/or oil. Therefore PGE recommends deleting this condition.

- *Condition 9.4: During construction of the facility, the certificate holder must complete monitoring according to the NPDES Storm Water Discharge General Permit #1200-C issued to the certificate holder for construction of each unit to ensure that there are no significant potential adverse impacts to soils and:*

  a. *During construction, monitor disturbed area erosion and sediment control measures at the active construction site on a weekly basis and every two weeks on inactive sites. Inspection of both active and inactive sites must occur at least daily during periods when 0.5 inches or more rain has fallen in a 24-hour period. [Deleted]. [Amendment No. 1]*

  b. *The certificate holder must remove trapped sediment when storage capacity has been reduced by 50 percent. Sediments will be placed in an upland area certified by a qualified wetlands specialist.[Deleted]. [Amendment No. 1]*

  c. *Observe and record color and turbidity within 35 feet upstream and downstream of locations where surface waters from the construction site(s) enter a receiving stream. Observations shall note whether sheen and floating matter is present or absent. Any apparent color and turbidity of the discharge, as well as any observable difference in comparison with the receiving stream shall be described. If there are observable differences, or any sheen or floating matter is present, the certificate holder must take immediate steps to identify and rectify the cause of the run-off to the stream. [Deleted]. [Amendment No. 1]*

*d. If the erosion and sediment control measures are deemed ineffective, different strategies and/or measures shall be implemented, maintained and monitored. [Deleted]. [Amendment No. 1]*

*e. After completing construction in an area, the certificate holder must monitor the area until soils are stabilized and evaluate whether construction-related impacts to soils are being adequately addressed by the mitigation procedures described in the Erosion and Sediment Control Plan and the approved Revegetation and Noxious Weed Control Plan. As necessary, the certificate holder must implement follow-up restoration measures such as scarification and reseeding to address those remaining impacts.*

**Note:** The deleted portions of this condition are all requirements of the 1200-C permit. Condition 9.1 already requires the certificate holder to obtain a 1200-C permit and following the requirements of that permit. In addition, this was only a partial list of the monitoring requirements in the 1200-C, so, by removing the details and requiring monitoring in accordance with the permit more monitoring requirements are captured.

- *Condition 11.1*: *Before beginning construction, the certificate holder shall label Oregon State Historic Preservation Office (SHPO) archaeological resource site 35MW19 and a 100-foot buffer around site 35MW19 on construction maps and drawings as a "no entry" area. Site 35MW19 and its 100-foot buffer shall be marked with temporary fencing or stakes with rope and/or flagging to prevent inadvertent entry*
  *[Final Order IV.K.2.1][Deleted]. [Amendment No. 1]*

**Note:** Per Exhibit S, this site has since been studied further and is not eligible for listing on the National Register of Historic Places, and the site need not be avoided for future developments. Therefore, conditions related to avoidance of that site have been deleted. The site was avoided for construction of Unit 1.

# 6. Review of Council Standards and Compliance Analysis

Council standards for siting energy facilities are intended to address three broad issues:

- The ability of the applicant to construct and operate the facility;
- The suitability of the site;
- What adverse impacts the facility could have on the environment and community.

These same issues apply to the Council's evaluation of a request for amendment to a site certificate. The Council standards that would be relevant to the changes proposed in this RFA include all standards in Division 22 and some standards in Division 24. Table 1 provides a list of relevant standards; analysis of compliance with those standards by the new and modified facilities proposed for the Carty Generating Station, as amended; and references to more detailed information provided in attached exhibits that inform and support the conclusions of this analysis.

**Table 1 – Council Standards and Analysis**

| Council Standard | Description | Analysis | Supporting Information |
|---|---|---|---|
| OAR 345-022-0000 General Standard of Review | Compliance with Oregon standards | The Carty Solar Farm will comply with relevant standards and permit conditions. | Exhibits E, G, CC |
| | Noise | Detailed noise analysis for the Carty Solar Farm shows no significant impact. | Exhibit X |
| | Wetlands | No temporary or permanent impacts within wetlands; no removal-fill permit required. | Exhibit J |
| | Water Pollution Control Facility Permit | The Carty Solar Farm would be permitted under the existing WPCF permit and will not result in exceedance of permit conditions. | Exhibit V |
| | Water rights | RFA includes a Application of Permit Amendment. | Exhibit O |
| OAR 345-022-0010 Organizational Expertise | Demonstrated ability to construct, operate and retire facility | PGE has extensive experience in construction and operation of natural gas and solar generation and transmission facilities and will provide financial security to ensure appropriate retirement. | Exhibits D, W |

**Table 1 – Council Standards and Analysis**

| Council Standard | Description | Analysis | Supporting Information |
|---|---|---|---|
| OAR 345-022-0020 Structural Standard | Seismic and site-specific soil analysis to guide safe design | Geotechnical surveys evaluated seismic risks and provided detailed information necessary to design safe facilities. | Exhibit H |
| OAR 345-022-0022 Soil Protection | Impacts to soil from erosion, facility operations/discharge, or salt deposition from cooling towers | PGE will construct the Carty Solar Farm under the 1200-C stormwater permit that describes measures to limit potential erosion. Wastewater will be managed and discharged in compliance with WPCF permit. No changes to cooling towers under this RFA. | Exhibits I, V, Z |
| OAR 345-022-0030 Land Use | Compliance with statewide planning goals | Construction on Exclusive Farm Use-zoned land requires Council exception to Goal 3; this exception is warranted. Site is ideal for power generation and is not well suited to agricultural use. | Exhibits I, K |
| OAR 345-022-0040 Protected Areas | No significant impacts to listed protected areas | Construction and operation of the Carty Solar Farm will have no significant impact on protected areas. | Exhibit L |
| OAR 345-022-0050 Retirement and Financial Assurance | Site can be restored following retirement and applicant is able to document financial assurance | The site can be restored to useful, non-hazardous condition and PGE has provided adequate suitable assurance | Exhibits M, W |
| OAR 345-022-0060 Fish and Wildlife Habitat | Facility construction and operation consistent with mitigation goals and standards | Biological surveys established habitat categories for all new temporary and permanent impacts under this RFA; PGE has amended the existing habitat mitigation plan to provide appropriate mitigation for loss of habitat. | Exhibit P |
| OAR 345-022-0070 Threatened and Endangered Species | Facility construction and operation will not cause significant reduction in likelihood of survival or recovery of species | The Washington ground squirrel (WGS) is listed as endangered by the State of Oregon, and is known to occur in proximity to the facility. Biological surveys did not identify WGS communities within disturbance areas associated with the Carty Solar Farm. PGE has consulted with ODFW | Exhibit Q |

**Table 1 – Council Standards and Analysis**

| Council Standard | Description | Analysis | Supporting Information |
|---|---|---|---|
| | | regarding appropriate steps to minimize potential impacts during construction and operation of the new or modified facilities, as well as mitigation for potential impacts on WGS habitat. | |
| OAR 345-022-0080 Scenic Resources | No significant impacts to scenic resources | Analysis of impacts to scenic resources indicated no significant impacts, due to location and nature of the Carty Solar Farm. | Exhibit R |
| OAR 345-022-0090 Historic, Cultural and Archaeological Resources | No significant impacts to cultural resources | Cultural studies did not identify significant cultural sites that would be impacted by construction and operation of the the Carty Solar Farm. | Exhibit S |
| OAR 345-022-0100 Recreation | No significant impact to recreational opportunities | No significant recreational opportunities will be impacted by the Carty Solar Farm. | Exhibit T |
| OAR 345-022-0110 Public Services | No significant impact to public and private service providers | No significant impacts on service providers of water or wastewater | Exhibits O and V |
| | | Impacts of construction traffic can be mitigated | Exhibit U |
| | | No significant impacts on other public services | Exhibit U |
| OAR 345-022-0120 Waste Minimization | Solid waste and wastewater plans to minimize waste and provide recycling/ reuse to the extent reasonably practical | New and modified facilities will have minimal effect on PGE's efforts to minimize waste generated by the Carty Generating Station, as amended | Exhibit V |
| OAR 345-024-0090 Transmission Lines | Limits on electric fields and induced current | Electric and magnetic field analysis for transmission lines under this RFA indicated limits would not be exceeded | Exhibit AA |

**Key:**
OAR = Oregon Administrative Rules
ODFW = Oregon Department of Fish and Wildlife
PGE = Portland General Electric Company
RFA = Request for Amendment No. 1 of the Site Certificate for the Carty Generating Station
WGS = Washington ground squirrel
WPCF = Water Pollution Control Facilities

Several of the standards listed in Table 1 (0020, 0090, 0110, and 0120) allow the Council to issue a certificate for solar energy generation without the findings that would otherwise be

required above. The Council may still impose relevant conditions for such facilities. PGE is not requesting exception to the findings requirements for the Carty Solar Farm for those standards to which such exceptions might apply. This is because the conditions that would be relevant for the Carty Solar Farm would still be appropriate to include in the proposed modifications to the Site Certificate.

For the standards listed in Table 1, the information needed to support a Council finding of compliance can be found in the relevant exhibits listed.

# 7. Property Owners

An updated list of property owners located within or adjacent to the proposed amended Site Boundary is provided in Exhibit F.

# Attachment 1

## Proposed Revisions to the Carty Generating Station Site Certificate