Request for Amendment 4 to the Site Certificate for the Carty Generating Station

Submitted to:

Oregon Department of Energy

Prepared by:

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3WTC-0403

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Table of Contents

1.0 Introduction 1
1.1 Project Summary and Request 1
1.2 RFA 4 Layout 1
1.3 Background and Procedural History 2
2.0 Amendment Required under OAR 345-027-0350 and Review Process under OAR 345-027-0351 4
3.0 Certificate Holder Information – OAR 345-027-0360(1)(a) 5
3.1 Name of the Facility 5
3.2 Name and Mailing Address of the Certificate Holder 5
3.3 Name and Mailing Address of the Individuals Responsible for Submitting the Request 5
4.0 Detailed Description of the Proposed Change – OAR 345-027-0360(1)(b) 6
4.1 Project Description 9
4.1.1 Overview of Proposed Facility 9
4.1.2 Major Components, Structures, and Systems 11
4.1.3 Related or Supporting Facilities 15
4.1.4 Other Systems and Information 21
4.1.5 Construction Schedule 25
4.2 Effect of Proposed Changes on the Facility – OAR 345-027-0360(1)(b)(A) 26
4.3 Applicable Laws and Council Rules – OAR 345-027-0360(1)(b)(B) 27
4.4 Location of the Proposed Change – OAR 345-027-0360(1)(b)(C) 28
4.4.1 Facility Location 28
4.4.2 Specific Location of Major and Supporting Facilities 28
4.4.3 Permanent and Temporary Disturbance Areas 29
5.0 Division 21 Requirements – OAR 345-027-0360(1)(c) 31
5.1 Other Participants – OAR 345-021-0010(1)(a)(B) 32
5.2 Other Affiliations – OAR 345-021-0010(1)(a)(C) through (F) 32
5.3 Organizational Expertise – OAR 345-021-0010(1)(d) 32
5.4 Required Permits – OAR 345-021-0010(1)(e) 36
5.4.1 Permit Applications Not Federally Delegated – OAR 345-021-0010(1)(e)(C) 42
5.4.2 Permit Applications Federally Delegated – OAR 345-021-0010(1)(e)(D) 43
5.4.3 Third Party State or Local Permits – OAR 345-021-0010(1)(e)(E) 43

5.4.4 Third Party Federally Delegated Permits – OAR 345-021-0010(1)(e)(F) 45
5.4.5 Monitoring – OAR 345-021-0010(1)(e)(G) 45
6.0 Site Certificate Revisions – OAR 345-027-0360(1)(d) 45
7.0 Other Standards and Permits – OAR 345-027-0360(1)(e) 48
8.0 Property Owners of Record – OAR 345-027-0360(1)(f)) 52
9.0 Conclusion 52
10.0 References 53

List of Tables

Table 1. Approved and Proposed Facility Components 6
Table 2. Permanent and Temporary Disturbances 30
Table 3. Crosswalk Between Current OARs and Carty Generating Station RFA 4 31
Table 4. Portland General Electric Company's Generation Facilities 34
Table 5. Permits 38
Table 6. Potential Third-Party State or Local Permits 44
Table 7. Standards and Laws Relevant to Proposed Amendment 49

List of Figures

Figure 1. Vicinity Map
Figure 2. Preliminary Site Plan
Figure 3. Area Subject to Request for Amendment 4
Figure 4. Energy Facilities within 10 Miles

List of Attachments

Attachment 1. Redlined Site Certificate
Attachment 2. Articles of Incorporation
Attachment 3. Property Owner List
Attachment 4. Division 21 Exhibits

Acronyms and Abbreviations

AC	alternating current
ASC	Application for Site Certificate
BCP	Boardman Coal Plant
BESS	battery energy storage system
BPA	Bonneville Power Administration
Certificate Holder/ PGE	Portland General Electric Company
CFR	Code of Federal Regulations
CGS/Facility	Carty Generating Station
Council	Energy Facility Siting Council
CTG	Combustion Turbine Generator
DC	direct current
Department	Oregon Department of Energy
EPC	engineering, procurement, and construction
ESCP	Erosion and Sediment Control Plan
FAA	Federal Aviation Administration
GSU	generator step-up
HV	high-voltage
ISU	inverter step-up
kV	kilovolt
MW	megawatt
NPDES	National Pollutant Discharge Elimination System
O&M	operations and maintenance
OAR	Oregon Administrative Rules
ODEQ	Oregon Department of Environmental Quality
ODOE	Oregon Department of Energy
ODOT	Oregon Department of Transportation
ORS	Oregon Revised Statute
PCS	power conversion station
RFA	Request for Amendment
SCADA	supervisory control and data acquisition
SPCC	Spill Prevention, Control, and Countermeasure
USC	U.S. Code
WPCF	Water Pollution Control Facility

1.0 Introduction

1.1 Project Summary and Request

The Portland General Electric Company (PGE or Certificate Holder) is submitting a Request for Amendment (RFA) 4 to the Site Certificate for the Carty Generating Station (CGS or Facility). The Facility is located approximately 13 miles southwest of Boardman, in Morrow County, Oregon (see Figure 1). As currently approved, the Facility is capable of generating up to 450 megawatts (MW) of electrical power. CGS consists of the operating 450-MW natural gas-fueled combined-cycle unit (Unit 1). The Facility was also previously approved for the 50-MW Carty Solar Farm (Carty Solar Farm) which was not constructed before the construction commencement date and therefore is no longer authorized.[1]

In this RFA 4, the Certificate Holder is proposing to add 200 MW alternating current (AC) of nominal and average generating capacity by expanding into areas formerly used for PGE's Boardman Coal Plant (BCP) and maximizing the buildable area southeast of Carty Reservoir. As part of RFA 4, the Certificate Holder also proposes the addition of a battery energy storage system (BESS) to the Facility with the capability of storing up to 200 MW AC over a duration to be determined, in an area formerly used by the coal plant. The overall CGS additions proposed with RFA 4 (including the BESS) are referred to throughout this request for amendment (i.e., this Division 27 document and the various exhibits included in Attachment 4) as the Carty Solar Farm with proposed RFA 4 changes. If the Council approves the Fourth Amended Site Certificate, the proposed RFA 4 changes will be referred to as the Carty Solar Farm including in the Site Certificate Conditions.

The proposed changes will add non-emitting energy generation provided by the Facility, and with the addition of the BESS, will maximize reliability and customer value to deliver energy and capacity to PGE customers and to help achieve Oregon's ambitious decarbonization targets.

1.2 RFA 4 Layout

The layout proposed for the Carty Solar Farm with proposed RFA 4 changes includes four main areas with infrastructure improvements: two separate solar areas; an area for BESS; and a proposed collector substation with overhead electrical connection between the proposed substation and existing transmission line dead-end structure remaining from the BCP. These four areas are all located within the micrositing area for the Carty Solar Farm with proposed RFA 4 changes and are identified on Figure 2. The micrositing area is located fully within the Amended Site Boundary, within which construction of the infrastructure identified below may occur subject to Site Certificate conditions.

The two solar areas will be fenced separately and are as follows:

[1] The preliminary RFA 4 (pRFA 4) for Carty Generating Station referenced the 50-MW Carty Solar Farm; the final RFA 4 (fRFA 4) removes these references due to the authorization expiration in the Site Certificate.

- Northern Solar Area – solar modules, inverters, transformers, tracking systems, posts, underground collector lines, proposed access roads, and other associated equipment within a perimeter fence located to the north of the Carty Reservoir in areas formerly used for the BCP.
- Southern Solar Area – solar modules, inverters, transformers, tracking systems, posts, underground collector lines, proposed access roads, and other associated equipment within a perimeter fence located to the southeast of the Carty Reservoir.

The BESS is proposed within the Northern Solar Area. The BESS is proposed in areas formerly used for the BCP and will include its own perimeter fence, separate from fencing for other areas.

The proposed collector substation location is west of the Northern Solar Area, in an area formerly used for the BCP. The substation will include its own perimeter fence, separate from fencing for other areas. The new solar energy generation facilities and the BESS will connect to the grid via existing CGS transmission infrastructure. The proposed substation will be built near an existing electrical transmission dead-end structure, which formerly served the BCP. The new substation will connect to the existing dead-end structure and then to the existing CGS Grassland Switchyard via the existing 500-kilovolt (kV) transmission line that formerly served the BCP. From the Grassland Switchyard, electrical energy from the Carty Solar Farm with proposed RFA 4 changes will be routed to the existing Bonneville Power Administration (BPA) Slatt Substation through the existing 500-kV Grassland to Slatt transmission line (approximately 17 miles long).

1.3 Background and Procedural History

The Facility site was originally used for PGE's BCP. PGE received an approved site certificate for the coal plant in March 1975. Commercial operation of the coal plant began in August 1980 and the plant ceased burning coal on October 15, 2020. Demolition of the plant was completed in December of 2023. The closure fulfilled a groundbreaking agreement PGE reached with stakeholders, customer groups, and regulators in 2010 to significantly reduce air emissions from power production in Oregon by ending operations at Boardman 20 years ahead of schedule and transitioning to cleaner energy resources.

The Oregon Energy Facility Siting Council (Council) originally issued a Site Certificate to PGE for the CGS, effective July 2, 2012.[2] The Facility, as originally approved, consisted of a natural gas-fueled combined-cycle electric power generating plant. The Site Certificate has since been amended three times as described below:

[2] Site Certificate for the Carty Generating Station (June 2012). Available at: https://www.oregon.gov/energy/facilities-safety/facilities/Facilities library/CGS_site_certificate_070212.pdf.

- The Council issued Amendment 1 to the Site Certificate on December 14, 2018, to add the Carty Solar Farm, a photovoltaic solar energy generation facility with up to 50 MW of nominal generating capacity in one area to the south of the Carty Reservoir.[3]
- The Council issued Amendment 2 to the Site Certificate on November 19, 2020, to increase the CGS Site Boundary; incorporate existing related and supporting facilities formerly permitted under the BCP Site Certificate that are to remain in place for use within CGS once the BCP is demolished; and allow for the construction of a few new related or supporting facilities. The last of the new related or supporting facilities (a new administrative building) was completed in November 2023.[4]
- The Council issued Amendment 3 to the Site Certificate on July 22, 2022, to extend the construction commencement and completion deadlines for the 50-MW Carty Solar Farm by three years, with conditions requiring construction to commence by February 4, 2025, and requiring construction to be completed by February 4, 2028.[5] Note that the 50-MW solar facility was not constructed before the construction commencement date and therefore is no longer authorized.

[3] First Amended Site Certificate for the Carty Generating Station (December 2018). Available at: https://www.oregon.gov/energy/facilities-safety/facilities/Facilities library/2018-12-14-CGS-AMD1-Amended-Site-Certificate.pdf.
[4] Second Amended Site Certificate for the Carty Generating Station (November 2020). Available at: https://www.oregon.gov/energy/facilities-safety/facilities/Facilities library/2020-11-19-CGS-AMD2-SIGNED-Second-Amended-Site-Certificate-Attachment-1.pdf.
[5] Third Amended Site Certificate for the Carty Generating Station (July 2022). Available at: https://www.oregon.gov/energy/facilities-safety/facilities/Facilities%20library/2022-08-07-CGS-AMD3-Site-Certificate.pdf.

2.0 Amendment Required under OAR 345-027-0350 and Review Process under OAR 345-027-0351

OAR 345-027-0350 – Changes Requiring an Amendment

Except for changes allowed under OAR 345-027-0353, an amendment to a site certificate is required to:

(1) Transfer ownership of the facility or the certificate holder as described in OAR 345-027-0400;

(2) Apply later-adopted law(s) as described in OAR 345-027-0390;

(3) Extend the construction beginning or completion deadline as described in OAR 345-027-0385;

(4) Design, construct or operate a facility in a manner different from the description in the site certificate, if the proposed change:

(a) Could result in a significant adverse impact that the Council has not addressed in an earlier order and the impact affects a resource or interest protected by an applicable law or Council standard;

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

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

The changes the Certificate Holder proposes require an amendment under Oregon Administrative Rules (OAR) 345-027-0350(4)(a) and (c). The Northern Solar Area will place the vast majority of the solar generation components, BESS, and proposed collector substation in areas formerly used for the BCP (see Figure 2). The Southern Solar Area is generally proposed where the expired 50-MW Carty Solar Farm was approved. However, the Southern Solar Area changes are proposed to maximize the buildable area for solar generation by expanding the solar modules beyond the footprint approved for the expired 50-MW Carty Solar Farm.

The overall changes proposed by RFA 4 could result in impacts that have not previously been reviewed, including limited adverse impacts (e.g., modified footprint, addition of solar modules, addition of BESS, proposed collector substation), that were not previously addressed by the Council for the Facility. Therefore, these changes require modifications to the Facility description and new or modified conditions in the Site Certificate (see Attachment 1). Moreover, the Certificate Holder anticipates that the proposed changes may generate interest from reviewing agencies or from the public.

Based on the applicability of OAR 340-027-0350(4), the Certificate Holder anticipates the review process for RFA 4 to be Type A. Pursuant to OAR 345-027-0351(2), the Type A review process consists of the following OARs: OAR 345-027-0359, OAR 345-027-0360, OAR 345-027-0363, OAR

345-027-0365, OAR 345-027-0367, OAR 345-027-0371, and OAR 345-027-0375. Note that in October 2025 and April 2026, the State of Oregon updated sections of Division 27. The Certificate Holder submitted the pRFA prior to the OAR updates, and this final RFA does not reflect the changes in the OAR.

The requirements of OAR 345-027-0360 are addressed in the following sections and document attachments.

3.0 Certificate Holder Information – OAR 345-027-0360(1)(a)

OAR 345-027-0360 Preliminary Request for Amendment

(1) To request an amendment to the site certificate required by OAR 345-027-0050(3) or (4), the certificate holder must submit a written preliminary request for amendment to the Department that includes the following:

(a) The name of the facility, the name and mailing address of the certificate holder, and the name, mailing address, email address and phone number of the individual responsible for submitting the request;

3.1 Name of the Facility

The name of the Facility is Carty Generating Station and the Certificate Holder is Portland General Electric Company.

3.2 Name and Mailing Address of the Certificate Holder

Portland General Electric Company

121 SW Salmon Street, 3WTC0403

Portland, OR 97204

3.3 Name and Mailing Address of the Individuals Responsible for Submitting the Request

Forrest Carithers

Senior Director, Environmental Health and Safety

Portland General Electric Company

121 SW Salmon Street, 3WTC0403

Portland, OR 97204

972-400-2936

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4.0 Detailed Description of the Proposed Change – OAR 345-027-0360(1)(b)

OAR 345-027-0360 Preliminary Request for Amendment

(1) To request an amendment to the site certificate required by OAR 345-027-0350(3) or (4), the certificate holder shall submit a written preliminary request for amendment to the Department that includes the following:

*****

(b) A detailed description of the proposed change, including:

The Certificate Holder proposes various changes to the approved Facility as part of RFA 4. Table 1 provides a summary of those changes, and a more detailed description of the changes follows below the table. Table 1 will be updated based on final design prior to starting construction. Section 4.1 provides a detailed project description of the Facility components, structures, systems, and related or supporting facilities included with RFA 4.

Table 1. Approved and Proposed Facility Components

Facility Component	Facility Approved in RFA 1[1]	Proposed Modifications
Site Boundary	4,997 acres[2]	5,249 acres (6% increase)
Micrositing Area	N/A	901.9[3]
Solar Photovoltaic Modules	198,450 modules occupying 315 acres	390,879 modules occupying 849.7 acres (includes total for single axis and fixed tilt racking systems)
Solar Inverter (quantity)	25	44
Solar Step-up Transformers (quantity)	25	44
Underground Collector/Conductor line	121,792 feet	132,000 feet[4]
Aboveground 34.5-kV electrical line	Up to 3 miles[5]	Up to 2 miles[6]
Substation	Three interconnection options with various disturbance sizes up to 6.5 acres	One new collector substation (3.2 acres)
Battery energy storage system (BESS)	None	200 MW in approximately 330 battery containers (6.2 acres)[7]
BESS inverters	None	Approximately 58[7]
BESS transformers	None	Approximately 30[7]

Facility Component	Facility Approved in RFA 1[1]	Proposed Modifications
Access Roads	New Roads: All new access roads limited to gravel roads inside the perimeter fence and array field Existing Road Improvements: None needed	New Roads: No change Existing Road Improvements: No change
Operations and Maintenance (O&M) Building	None proposed – O&M to occur using existing CGS infrastructure	One new O&M building (0.9 acres)
Temporary Construction Areas (Staging, Laydown, Parking, etc.)	Five areas up to 79.7 total acres	One area approximately 21.4 acres
Temporary and Permanent Impacts for the Facility	Temporary: 107.4 acres (RFA 1); Permanent: 321.5 acres (RFA 1)	Temporary: 43.5 acres; Permanent: 859.9 acres[8]

1. All values for the Approved Facility were approved in the Final Order on RFA 1 for the Carty Generating Station (addition of Carty Solar Farm) unless individually specified otherwise. Note that the Carty Solar Farm approved in RFA 1 construction commencement authorization has expired; for purposes of comparison, this table includes the specifications previously approved for the 50-MW Carty Solar Farm.

2. The Final Order on RFA 2 amended the Site Boundary, which is the current Approved Site Boundary; RFA 3 did not request any changes.

3. Approximately 21.3 acres within the 901.9-acre micrositing area have not been fully surveyed. These areas are identified on Figure 2. For example, approximately 6.1 acres along the western edge of the micrositing area as shown on Figure 2 were not surveyed for rare plants. If the final layout for Carty Solar Farm with proposed RFA 4 changes shows disturbance for any portion of this 21.3 acres, that specific area will be fully surveyed prior to initiating construction.

4. Length of underground collector line between the transformers and proposed collector substation.

5. The Final Order on RFA 1 approved five different alternative routes for the 34.5-kV transmission line between the Carty Solar Farm and three different interconnection points. The five alternative routes ranged in length from 2.25 to 3 miles.

6. RFA 4 proposes up to 2 miles of aboveground 34.5-kV collector line as part of the overall electrical cable collection system that connects the Southern Solar Area to an existing transmission line (via the proposed collector substation). This aboveground segment of 34.5-kV collector line is part of the overall electrical cable collection system consistent with OAR 660-033-0130(38)(f). The aboveground 34.5-kV collector line segment is proposed using the same pole design approved for RFA 1. However, the aboveground electrical line extending north from the Carty Solar Farm in RFA 1 was proposed and approved as a transmission line because three different interconnection design options were included.

7. Estimated numbers will be finalized during pre-construction.

8. See Section 4.4.3 below.

1. **Amend the Site Boundary.** The Certificate Holder proposes to amend the Approved Site Boundary as shown on Figure 3. The Amended Site Boundary adds three areas and removes one area currently in the Approved Site Boundary. The three areas proposed for inclusion were not previously incorporated into the Approved Site Boundary because they were used extensively for the BCP. The Approved Site Boundary encompasses approximately 4,997 acres. RFA 4 increases the area within the Approved Site Boundary to approximately 5,249 acres, but reuses former coal plant areas for solar energy generation and does not result in expanding the outer limits of the Approved Site Boundary. A more detailed description of the changes proposed for the Amended Site Boundary is included below in Section 4.1.1.1.

   For the Carty Solar Farm with proposed RFA 4 changes, Figure 2 shows the micrositing area that includes approximately 901.9 acres, located fully within the Amended Site Boundary,

within which construction of the infrastructure identified in Section 4.0 of this document may occur subject to Site Certificate conditions. The Certificate Holder requests flexibility to site the RFA 4 changes anywhere within the micrositing area as long as they do not exceed the disturbance acreages described in Section 4.4.3.

Areas of ground disturbance within the proposed micrositing area associated with the improvements proposed with RFA 4 have been surveyed for biological and cultural resources as demonstrated in Exhibits P, Q, and S. Approximately 21.3 acres within the 901.9-acre micrositing area have not been fully surveyed. In other words, at least one of the field surveys (e.g., rare plants survey, wetland delineation, etc.) was not completed in these areas. These 21.3 acres are identified on Figure 2. For example, approximately 6.1 acres along the western edge of the micrositing area as shown on Figure 2 were not surveyed for rare plants. If the final layout for the Carty Solar Farm with proposed RFA 4 changes shows disturbance for any portion of this 21.3 acres, that specific disturbance area will be fully surveyed prior to initiating construction. Section 4.4 provides a description of the anticipated worst-case scenario impacts associated with RFA 4.

2. **Propose a maximum peak generating capacity of 200 MW from photovoltaic solar energy generation and increase to 650 MW for the total Facility.** The Certificate Holder proposes an increase of 200 MW to the approved 450-MW energy generation facility (up to 450 MW from the natural gas fueled combined-cycle unit [Unit 1], and up to 200 MW from the solar photovoltaic generating unit). This results in a total amended Facility generating capacity of up to 650 MW.
3. **Amend Facility description to include approximately 849.7 acres of photovoltaic solar energy generation.** The Certificate Holder proposes approximately 849.7 acres of solar energy generation within CGS. To maximize the renewable energy output at CGS by reusing areas made available by demolition of the BCP, the Certificate Holder proposes distributing the approximately 849.7 acres of solar energy generation in two separate locations: (1) 491.8 acres to the south of the Carty Reservoir to fully utilize the land inside the Approved Site Boundary in that area; and (2) 357.9 acres to the north of the Carty Reservoir to reuse an area made available by demolition of the BCP.
4. **Add a BESS as a related and supporting facility.** As part of improving the reliability of the renewable energy provided by the solar generation components of CGS, the Certificate Holder proposes adding a BESS capable of storing up to 200 MW over a duration to be determined, for the purpose of stabilizing the solar resource. The Certificate Holder proposes an AC-coupled BESS located in the Northern Solar Area adjacent to the proposed collector substation.
5. **Propose construction commencement and completion deadlines for all solar energy generation.** The proposed amendments to the Site Certificate include construction deadlines for Carty Solar Farm with proposed RFA 4 changes. As is now standard for initial construction commencement deadlines, the Certificate Holder requests six years from the

effective date of the Fourth Amended Site Certificate, and a construction completion deadline three years from the construction commencement date.

6. **Make amendments to Site Certificate Conditions**. The Certificate Holder proposes edits to existing Site Certificate Conditions as described below in Section 6.0 and proposed in redline on the Fourth Amended Site Certificate (Attachment 1). The proposed edits provide more clarity regarding responsibility, timing, and implementation for compliance. The Certificate Holder recognizes that the format of the Site Certificate may be modified and reorganized as part of RFA 4.

4.1 Project Description

The description of the Carty Solar Farm with proposed RFA 4 changes is included as required to meet the submittal requirements of OAR 345-021-0010(1)(b) paragraphs (A) through (F). OAR 345 Division 22 does not provide an approval standard specific to Exhibit B.

Note that the proposed components for the Carty Solar Farm with proposed RFA 4 changes are representative and technology advancements may alter their given specifications; however, these potential alterations are not anticipated to create an impact that has not already been addressed, mitigated through existing Site Certificate Conditions, or authorized by the Council with approval of RFA 4.

4.1.1 Overview of Proposed Facility

As currently approved, the Facility is an electrical generation facility capable of generating up to 450 MW of electrical power on 4,997 acres in Morrow County, Oregon. CGS consists of the operating 450-MW natural gas-fueled combined-cycle unit (Unit 1) and its associated components; the 500-kV Grassland to Slatt transmission line (approximately 17 miles long); the 230-kV BCP to Dalreed transmission line (approximately 16 miles long); the 34.5-kV BCP to the railroad crossing at Tower Road transmission line; and Carty Reservoir.

In RFA 4, the Certificate Holder proposes to amend the Third Amended Site Certificate to allow up to 200 MW AC of nominal and average generating capacity as defined in ORS 469.300(4)(c) for solar energy generation, amend the Facility's Approved Site Boundary to expand into areas formerly used for the BCP, and add BESS with the capability of storing up to 200 MW. The Carty Solar Farm with proposed RFA 4 changes is proposed as a complete reconfiguration to the previously approved and expired 50-MW Carty Solar Farm.

The Carty Solar Farm with proposed RFA 4 changes will generate electricity using solar modules wired in series and in parallel to form an array, which in turn is connected to electrical infrastructure. Additionally, the Facility will include a BESS for the purpose of stabilizing the solar resource. The Carty Solar Farm with proposed RFA 4 changes will connect to the grid via a proposed collector substation and existing transmission line infrastructure, which used to serve the BCP. Ultimately, electrical energy will be sent to the existing BPA Slatt Substation through the

existing 500-kV Grassland to Slatt transmission line (approximately 17 miles long). These components are all described in greater detail in Section 4.1.2.

This RFA 4 demonstrates that the Carty Solar Farm with proposed RFA 4 changes will be designed, constructed, and operated consistent with the relevant Council siting criteria and standards.

4.1.1.1 Definition of the Amended Site Boundary

The Facility Approved Site Boundary is approximately 4,997 acres, which encompasses all approved CGS components described above. The Certificate Holder proposes an Amended Site Boundary of approximately 5,249 acres by adding areas formerly used by the BCP (see Figure 3). Figure 3 shows that these areas currently exist as islands within, but not previously included in, the Approved Site Boundary for CGS. Thus, the addition of these areas does not result in expanding the outer limits of the Approved Site Boundary.

The differences between the Approved and Amended Site Boundary include the following (Figure 3):

1. Incorporate three areas not within any of the previously approved site boundaries so they can be used for siting solar modules. These areas were not included previously because they were used extensively for the BCP: two areas in the northeast located within the rail loop and used for coal plant operations, and a third area to the southeast of the Carty Reservoir used as the BCP Ash Disposal Area (and wholly within the area approved for the Carty Solar Farm in the First Amended Site Certificate).
2. Remove one area (approximately 88 acres) in the far northeast corner from the Approved Site Boundary. RFA 4 proposes removal because Washington ground squirrel was observed during field surveys in this area, and PGE has no future plans to develop it.

The modifications to the Approved Site Boundary as described above do not result in an expansion of the Approved Site Boundary's outer limits, and in fact retract the site boundary in the northeast corner.

4.1.1.2 Amended Site Boundary for RFA 4

Consistent with OAR 345-027-0360(3), the Oregon Department of Energy (ODOE) concurred with the Certificate Holder's use[6] of the site boundary area shown on Figure 3 to establish study area boundaries for RFA 4 under OAR 345-001-0010(35) and the boundary to develop the property owner list and map under OAR 345-027-0360(1)(f) for RFA 4. This site boundary subject to RFA 4 incorporates the overall changes to the Approved Site Boundary described directly above in Section 4.1.1.1 but excludes the 500-kV Grassland to Slatt transmission line (approximately 17 miles long) and 230-kV BCP to Dalreed transmission line (approximately 16 miles long). ODOE concurred with excluding the transmission lines from the site boundary area on Figure 3 and property owner list

[6] Sarah Esterson, Senior Policy Advisor at ODOE, pers. comm., e-mail message, September 7, 2023.

and map because they are existing infrastructure, and no changes are proposed to them as part of RFA 4. Therefore, this version of the site boundary is referred to for the remainder of RFA 4, including throughout the various exhibits in Attachment 4, as the "Amended Site Boundary" since it is used for all of the RFA 4 analyses, and is the site boundary area specific to the components that are the subject of the RFA 4 evaluation. The Amended Site Boundary encompasses approximately 3,603 acres.

4.1.1.3 Site Plan and General Arrangement

The layout for the Carty Solar Farm with proposed RFA 4 changes with the general arrangement of buildings, equipment, and structures is shown in Figure 2. As noted above, this layout is provided for analysis purposes; although the final design may differ from the preliminary site plan provided, the actual solar equipment and layout selected will not exceed the impacts analyzed and will occur in the micrositing area.

4.1.2 Major Components, Structures, and Systems

Solar energy will be generated by using multiple arrays of solar panels connected to electrical infrastructure. The term "array" refers to solar panels wired in series and in parallel. Solar panels generate electricity by means of a photovoltaic effect, whereby the materials in the panels absorb the sun's energy in the form of photons and release electrons. The capture of these free electrons produces an electrical current that can be collected and supplied to the electrical power grid. The solar panels, known in the industry as modules, will be installed to form module blocks.

The major components of the proposed solar energy generation system include the solar modules, racking systems, posts/piles, and related electrical equipment (i.e., inverters and transformers). These components are combined to form a solar array. The layout of the solar array can vary depending on project size, technology, topography, and other constraints. Therefore, PGE seeks to permit a range of technology to preserve design flexibility. The solar modules and associated equipment, as well as the precise layout of the solar array and related or supporting facilities, have not yet been finalized. Because technology is changing rapidly, this RFA 4 analyzes impacts associated with the largest anticipated footprint and the actual solar equipment and layout selected will not exceed the impacts analyzed.

As described in Section 1.2 above, the solar array is proposed in two separate areas: the Northern Solar Area and Southern Solar Area. Each area will be enclosed by its own perimeter fence. The maximum solar array fence line area depicted for the Northern and Southern solar areas includes the solar energy generation system components (i.e., modules, inverters, transformers, tracking systems, posts, underground collector lines, and other associated equipment) (see Figure 2). The BESS, proposed collector substation, and connection between the proposed substation and existing dead-end structure will each be individually fenced separately from the two solar areas. The area inside the solar fence line for both the Northern and Southern solar areas is all considered permanent impact (see Section 4.4). The substrate on the ground inside the solar array fence line

will be a mix of gravel where needed for maintenance and access roads or where gravel already exists, and vegetation.

During final design, PGE will consider all solar technologies available to ensure the most efficient and productive solar array layout. Although changes in the exact layout and technology could occur, the actual solar array equipment and layout selected will not exceed the impacts analyzed. Therefore, the following description of major components is based on the best available design information at this time and the largest anticipated footprint but may not reflect the final design.

PGE proposes to construct the Carty Solar Farm with proposed RFA 4 changes over the course of approximately 24 months (see Section 4.1.5).

4.1.2.1 Solar Modules and Racking

Solar modules use mono- or poly-crystalline cells to generate electricity by converting sunlight into direct current (DC) electrical energy. The electrical energy generation from one module varies by module size and the number of cells per module. As technology evolves, final module specification can be in flux until late in the design and development process. The modules used in current preliminary site design each have a nameplate rating of 545 watts (W) and measure 7.4 feet by 3.7 feet by 1.4 inches. Solar modules consist of a crystalline cellglass with an antireflective coating, a metal frame, and factory installed "quick connect" wire connectors. The modules will be connected in series to form rows or strings. The rows of modules are then connected via combiners, cables, and switchboards. The configuration of multiple rows (the array) can vary depending on the module technology, topography, spacing, mounting equipment, and other design criteria, which are subject to change during detailed design by the engineering, procurement, and construction (EPC) contractor. Each string of panels using the single-axis tracking system described below is expected to be separated by at least 10 to 15 feet of open space that will be either graveled (e.g., for access roads) or revegetated. Each string of panels using the fixed tilt tracking system described below is expected to be separated by approximately 25 to 30 feet. Spacing between strings of panels will depend on the racking configuration and manufacturer's specifications, which will be determined during detailed design.

Figure 2 depicts the solar layout developed for purposes of analyzing impacts, using approximately 390,879 modules arranged in one-, two-, or three-string racks and 14,477 strings. Again, solar modules are proposed in both the Northern and Southern solar areas. The actual number of modules will vary depending on the module technology, energy output, spacing, mounting equipment, phase of the Facility, and other design criteria, which are subject to change during detailed design. The impact analysis throughout RFA 4 assumes all areas within the solar fence line for the Northern and Southern solar areas will be permanently impacted. See Section 4.4.3 for disturbance calculations.

4.1.2.2 Racking Systems

Strings of solar modules are expected to be mounted on fixed-tilt systems in the area formerly used for the BCP Ash Disposal Area and on single-axis tracker systems for all other areas where panels

are proposed as part of RFA 4 (see Figure 2). The single-axis tracker system optimizes electricity production by rotating the solar modules to follow the path of the sun throughout the day.

Single-Axis Tracking System

The length of each single-axis tracker string may vary by topography and the number of modules that the tracker can hold. The actual number of tracker systems and modules will depend on the racking system selected. The depicted layout in Figure 2 assumes 27 modules per one-string rack, 54 modules per two-string rack, and 81 modules per three-string rack. The drive unit for the tracking system can control a single row or multiple rows of modules through a series of mechanical linkages and gearboxes. As the solar modules tilt throughout the day, the height of their top edges will shift accordingly, anticipated to be approximately 9 to 12 feet in height from the ground surface. The visual impact analysis in this RFA 4 uses a maximum top edge height of 12 feet. Each set of modules are expected to be mounted approximately 5 feet off the ground on a single-axis tracker that rotates 60 degrees to the east and west. The tracker system and associated posts are expected to be specifically designed to withstand wind, snow, and seismic loads anticipated at the site.

Fixed Tilt System

The length of each fixed tilt string may vary by topography and the number of modules that the racking can hold. The actual number of racking systems and modules will depend on the racking system selected. The depicted layout in Figure 2 assumes 54 modules per two-string rack. The top edge of the solar modules on the fixed tilt system is anticipated to be approximately 9 to 12 feet in height from the ground surface. The visual impact analysis in this RFA 4 uses a maximum top edge height of 12 feet. Each set of modules is anticipated to be mounted approximately 2 to 5 feet above the ground surface. The racking system and associated concrete ballast foundations for the fixed tilt system, are expected to be specifically designed to be compatible with the synthetic cap installed on the BCP Ash Disposal Area and to withstand wind, snow, and seismic loads anticipated at the site.

4.1.2.3 Foundations

Posts

Each single-axis tracking string will be supported by multiple steel posts, which could be hollow steel sections, screw piles, or pile-type posts. Post depth could vary depending on soil conditions, but the posts are typically installed 5 to 9 feet below the surface and extend approximately 5 feet above grade. Posts at the end of tracker rows (exterior) are usually installed to greater depth to withstand acclimate weather including high wind conditions. In some soil conditions, concrete grouting may be used as backfill, as required. For the purposes of RFA 4, PGE assumes that approximately 72,000 posts will be installed for the single-axis tracker system and that all of the posts may require pre-drilling and/or concrete grouting as backfill. The actual number of posts and foundation installation method may vary depending on the final tracker system, ground coverage ratio, topography, height of the solar modules, and site-specific geological conditions. Post locations

will be determined during detailed design of the tracker system and future geotechnical investigations.

Concrete Ballast

Each fixed-tilt string is anticipated to be supported on concrete ballasted racking systems in the BCP Ash Disposal Area, as the disposal area is capped with a liner system(s). Therefore, direct-driven, post-style systems cannot be used. For the purposes of RFA 4, PGE assumes that approximately 9,750 posts will be installed and supported on concrete ballast for the fixed-tilt strings. The actual number of posts and foundation geometry may vary depending on the final racking system, ground coverage ratio, landfill topography, and height of the solar modules.

4.1.2.4 Cabling

The solar modules produce DC electrical current. Cables will collect and aggregate the DC before it is converted to AC by the inverters and sent to the proposed collector substation. Cables will connect to inverters via either a combiner box or a harness technology.

If combiner box technology is used, low-voltage cabling will connect the solar modules of each tracker string in parallel and combine at a single combiner box. Cabling from multiple combiner boxes will connect to a single inverter, which will convert the DC to AC and connect to the buried AC collection system. For example, the cabling system for the site plan shown on Figure 2 connects 27 modules in series per string, 54 modules (two strings), or 81 modules (three strings) per tracker rack, for approximately 660 combiner boxes. A larger DC cable will run between each combiner box and then to the module block inverter. This cable will hang underneath the modules. Cabling can be mounted to the tracker system, placed in cable trays, or buried. The buried cables associated with the solar array are located within the solar array fence line area and are included in the estimated total permanent impact associated with the solar array (i.e., no temporary impacts are calculated for buried cable inside the solar array fence line area).

Using harness technology involves an aboveground aluminum trunk system that combines the functionality of cable assemblies, combiner boxes, and fusing into one system. If harnesses are used, the amount of cabling will be similar to the amount of cabling used with combiner box technology, but the cables would be above ground, attached in parallel to the panel racking.

4.1.2.5 Inverters

The solar modules will be arranged into blocks, with each block connecting via collector lines to a modular inverter enclosure. In order to be sent to the electrical grid, the DC electrical current collected from the solar modules must be converted into AC electrical current before connecting to the proposed collector substation. Inverters convert DC to AC in accordance with electrical regulatory requirements. Inverters employ several advanced control systems, switching algorithms, and ancillary services for both the input and output stages. Low-voltage cabling will link each solar module to inverters. Each solar inverter will be positioned on the same concrete pad next to a step-up transformer. The combination of the inverters and transformers is sometimes referred to as a

power conversion station (PCS). Figure 2 depicts a solar site plan with 44 PCS to convert the DC from the modules to AC. The final number of inverters will vary depending on the actual generation output of the solar array. In addition to inverters proposed for the solar array, the BESS will include 58 inverters to convert DC power from each BESS to AC power. The inverters for solar and BESS are anticipated to be approximately 6 to 9 feet in height.

The inverter specification will comply with the applicable requirements and standards of the National Electric Code and Institute of Electrical and Electronics Engineers standards.

4.1.2.6 Inverter Step-Up Transformers

The AC power from the inverters will be routed to inverter step-up (ISU) transformers. The ISU transformers will increase the output voltage from the inverter (typically 660 volts) to the collector substation feed voltage (34.5-kV AC). For the purposes of analysis, the site plan in Figure 2 shows 44 PCS. Each ISU transformer will contain approximately 640 gallons of mineral or biodegradable oil. From the step-up transformers, the AC electricity is aggregated via underground 34.5-kV cables to the underground collector lines (see Section 4.1.3 below). In addition to ISU transformers proposed for the solar array, the BESS will include 30 ISU transformers to increase the output voltage from the inverter (typically 660 volts) to the substation feed voltage (34.5-kV AC). The transformers for solar and BESS are anticipated to be approximately 6 to 10 feet in height.

One generator step-up (GSU) transformer is expected to be located at the proposed collector substation to step up power from 34.5 kV to 500 kV. See Section 4.1.3.2 for additional information on the collector substation.

4.1.3 Related or Supporting Facilities

Related or supporting facilities consist of 34.5-kV electrical collector lines; a proposed collector substation; connection from the proposed substation to the existing BCP transmission dead-end structure; BESS; an operations and maintenance (O&M) building; a communication and supervisory control and data acquisition (SCADA) system; service roads, perimeter fencing, and gates; and temporary construction area. As noted earlier, PGE is requesting flexibility for the solar modules and various associated equipment. Therefore, the following descriptions are based on the best available information at this time.

4.1.3.1 Collector Lines

The transformers will connect the generation output of the solar modules to the high-capacity 34.5-kV collector lines, the majority of which will be within the solar perimeter fencing. The collector lines will carry power to the proposed collector substation.

The collector lines will be buried to a minimum of 3 feet, with junction splice boxes positioned intermittently along the lines for maintenance access. In this maximum footprint layout for analysis,

approximately 25 miles of 34.5-kV collector line will be installed underground between the transformers and collector substation (Figure 2).

One segment of collector line will be installed aboveground. This segment will extend from the perimeter fence on the north side of the Southern Solar Area, along the eastern shore of the Carty Reservoir, to where the line enters the proposed collector substation (Figure 2). The aboveground segment will be approximately 2 miles long, in the center of a new 80-foot-wide right-of-way. The aboveground line will be constructed on direct buried wood poles with polymer post insulators in a delta configuration. The phase spacing and clearances will be established per PGE's standards for 115-kV sub-transmission lines. Each support pole will be buried up to approximately 12 feet in the ground and will extend to a height of up to approximately 70 feet above ground. Approximately 60 support poles will be installed, spaced approximately 140 feet apart, depending on specific site conditions.

The majority of the underground collector lines will be installed inside the Northern and Southern solar area fence lines. Again, all areas within the solar area fence lines are considered permanent impact (Figure 2). For the purposes of calculating impacts, for underground collector line segments that are outside of the solar fence lines, the Certificate Holder assumes a temporary impact corridor approximately 25 feet wide for trench installation. There will be permanent impacts only in the locations of the support poles for the aboveground segment described above. Aside from the pole footprints, there will be no permanent impacts associated with the collector line corridor for the aboveground segment. Installation of the aboveground segment will require installation areas around each pole location encompassing 80 feet by 100 feet of temporary impact. In addition, a 10-foot-wide temporary vehicle access path will be required from pole to pole along the entire 2-mile-long segment. Temporary impacts from collector line construction will be restored and revegetated following construction in accordance with the Draft Vegetation and Soil Management Plan (VSMP; Exhibit I, Attachment I-2). Section 4.4.3 presents the temporary and permanent impacts of the collector lines where they are outside of the solar fence lines.

4.1.3.2 Collector Substation

Energy generated by the Carty Solar Farm with proposed RFA 4 changes will be sent via the 34.5-kV collection system to the proposed collector substation. The new substation will step up the energy from 34.5-kV to 500-kV and then interconnect with the existing transmission system remaining from the BCP (Figure 2). The collector substation will be located in area formerly used for the BCP on the west side of the Northern Solar Area and next to the BESS. The substation will be approximately 3.2 acres of graveled and fenced area. The impact analysis throughout RFA 4 assumes the 3.2 acres within the substation fence line will be permanently impacted. See Section 4.4.3 for disturbance calculations.

The collector substation will have one GSU to step up the electrical output. Additional substation equipment may include a 34.5-kV switch, 34.5-kV feeder breakers, 500-kV breaker, 500-kV switch, surge arrestors, control enclosure, metering equipment, grounding, and associated control wiring.

The height of specific pieces of equipment within the substation fence line will range between approximately 6 and 20 feet above the ground surface.

The collector substation is proposed adjacent to an existing electrical transmission dead-end structure for a 500-kV transmission line, which used to serve the BCP. The new substation will connect to the existing dead-end structure, which is 100 feet tall, via new lines that will be approximately 300 feet in length. The new lines are within the fence line of the collector substation and considered part of the substation, not a separate related or supporting facility. On the existing dead-end structure, old switch components and operators will be replaced with new equipment, but there will be no modifications made to the structure. Once connected to the existing dead-end structure the energy will be conveyed through the existing BCP 500-kV transmission line to the existing Grassland Switchyard. The existing approximately 1-mile-long BCP 500-kV transmission line to the existing Grassland Switchyard is mounted on five steel lattice towers that are between 100 and 150 feet tall and spaced approximately between 800 and 1,300 feet apart. From the Grassland Switchyard, electrical output from the Carty Solar Farm with proposed RFA 4 changes will be routed to BPA's existing Slatt Substation through the existing 500-kV Grassland to Slatt transmission line (approximately 17 miles long).

4.1.3.3 Battery Energy Storage System

The precise scope of the BESS will be determined by the EPC contractor during detailed design prior to start of construction and is dependent on several factors, including but not limited to the availability and cost-effectiveness of suitable systems. As stated earlier, all technology described is preliminary and, while final design may differ, impacts will not exceed those analyzed in this RFA 4.

The BESS will be designed with the capability of storing up to 200 MW over a duration to be determined based on final design and technology, using Li-ion technology (see subsections below for a detailed description of the proposed BESS equipment). The components associated with 200 MW of BESS will include approximately 264 containers, 44 inverters, and 22 ISU transformers.[7] The batteries and associated equipment would be periodically augmented as needed to maintain 200 MW of energy storage capability over the life of the BESS (20 years), taking into account natural degradation of the batteries over time.

The augmentation will require an increase in the total quantity of containers, inverters, and transformers. Augmentation will result in approximately 330 containers, 58 inverters, and 30 ISU transformers.[11] Figure 2 shows the containers, inverters, and transformers associated with 200 MW and full augmentation. The impact analyses and modeling included throughout RFA 4 assesses the total number of BESS containers, inverters, and transformers associated with full augmentation.

PGE proposes to construct the BESS as a concentrated AC-coupled BESS park in a single location (see Figure 2). The system will use a series of modular containers. Each container will be placed on a concrete slab-on-grade foundation and the BESS park area is expected to be surfaced with stone

[7] Estimated numbers will be finalized during pre-construction.

aggregate. Each container will be approximately 33 feet in length, 6 feet in width, and 10 feet[11] in height. The containers are rated for outdoor environments and holds the batteries and a battery management system. The Li-ion system includes a fire prevention system and cooling units placed either on top of the containers or along the side. See Section 4.1.4 below and Exhibit V for fire prevention and control methods.

At full augmentation, the AC-coupled BESS park will also include 58 inverters to convert DC power from each BESS to AC power and 30 transformers[8] to increase the output voltage from the inverter to the substation feed voltage (34.5 kV AC).

Figure 2 shows that the containers and the associated inverters and transformers are grouped into three separately fenced areas within the BESS park. The total fenced area for BESS is approximately 6.2 acres, which is considered permanent disturbance. See Section 4.4.3 for temporary and permanent disturbance calculations.

Battery Type – Lithium-ion Batteries

Currently, Li-ion batteries are the most common type of utility-scale BESS technology, although other technologies are used and are being developed. Li-ion batteries are a type of rechargeable battery where lithium ions, suspended in an electrolyte, move from negative to positive electrodes and back when recharging. A variety of chemistries fall under the "Li-ion" term, each with varying performance, cost, and safety characteristics (Energy Storage Association 2022). Li-ion batteries experience degradation of performance over their useful lifespan, which depends on several factors including battery technology, rate/number of charge and discharge cycles, and temperature. Li-ion batteries typically have an expected useful life of 20 years. Li-ion batteries are generally used in utility-scale applications when rapid, short-term (minute) deployments of power are needed. For example, Li-ion batteries can smooth the fluctuating generation from solar arrays, which can vary based on time of day and cloud cover, to deliver consistent and predictable power to the grid.

Li-ion battery systems are modular systems in which each module contains multiple smaller battery pouch cells. The cells are the primary containment for the gel or liquid electrolyte materials. The module containing the cells is relatively small, generally about the size of a desktop computer processer, and serves as leak-proof secondary containment. The cells are contained within a module, which is collected in a pack, and then wired into a string, and finally into the full modular unit. The quantities per modular unit could change based on the most current model procured for the Facility, but the general framework is typical for utility-scale Li-ion systems. Again, the BESS will be designed with the capability of storing up to 200 MW over a duration to be determined based on final design and technology.

[8] Estimated numbers will be finalized during pre-construction.

Battery Energy Storage System Equipment

The BESS design will include, but not be limited to, the following elements:

- BESS equipment, including batteries and racks or containers, inverters, isolation transformers, and switchboards;
- Balance of plant equipment, which may include medium-voltage and low-voltage electrical systems, HVAC or liquid cooling systems, building auxiliary electrical systems, and network/SCADA systems;
- Cooling system, which may include a separate chiller plant integrated into a purpose-built enclosure with the battery racks, chillers, pumps, and heat exchangers; and
- High-voltage (HV) equipment, including a step-up transformer, HV circuit breaker, HV current transformers and voltage transformers, a packaged control building for the HV breaker and transformer equipment, HV towers, structures, and HV cabling if underground or conductors if overhead.

The battery containers will be placed on slab-on-grade concrete foundations. Each container holds the batteries, a battery management system, and a fire prevention system. Cooling units will be placed either on top of the containers or along the side. By connecting multiple containers, the BESS can be scaled to the desired capacity during detailed design by the EPC contractor.

Battery Energy Storage System Operations and Maintenance

The batteries and other materials for the BESS will be manufactured off-site and transported to the Facility by truck. As applicable, defective or decommissioned parts will be disposed of or recycled in compliance with 49 Code of Federal Regulations (CFR) 173 Subpart E, which regulates the transportation of batteries.

The O&M activities typically consist of minimal procedures that do not require tampering with the battery cell components. For the purposes of analysis, it is assumed the Li-ion battery system could require replacement of the batteries on average every 20 years.

The BESS will be stored in completely contained, leak-proof modules, which will be inspected monthly according to the manufacturer's recommendations.

4.1.3.4 Operations and Maintenance Building

One new O&M building is proposed to be approximately 20,000 square feet (0.5 acres) with additional area for parking, maneuvering, and buffer (Figure 2). The pre-fabricated metal building will include approximately 10,000 square feet of office space and 10,000 square feet of warehouse space. The building will be approximately 20 feet in height and resemble the other existing buildings in the Facility. The building will include parking, electricity, heating, ventilation, and air conditioning (HVAC), potable water, and a sewer connection for toilets. The potable water will be obtained from the Facility's existing potable water system, with an expected usage of approximately 250 gallons per day (gpd). The potable water is supplied by an existing well located within the

Approved Site Boundary. The sanitary sewer will be collected and treated by the Facility's existing sanitary septic system. Once the number of additional employees is determined, if the existing system capacity is not sufficient a septic system alteration permit would be obtained from the Umatilla County Public Health Department, which issues alteration permits for septic systems in Morrow County, to increase the capacity of the existing septic system..

4.1.3.5 Communication and SCADA System

A communication system consisting of fiber optic and copper communication lines will connect the solar areas, BESS, and substation to the SCADA control rooms and to the internet service provider. The control rooms located within the proposed O&M building and proposed collector substation will have the capability of communicating with the existing CGS control room and with PGE offices in Portland.

These communication lines as well as the on-site sensors will be buried or overhead within a cable management system. Where buried, the communication lines are placed above the collector lines in the same trench and, where overhead, run alongside the collector lines/conductors. This communication system allows each solar string, BESS, and the substation to be monitored by a SCADA system, in the control rooms or PGE Portland offices as described above. This system monitors these components for variables such as meteorological conditions, critical operating parameters, and power output. The solar array is controlled and monitored via the SCADA system, and can be controlled remotely. SCADA software is tuned specifically to the needs of each project by the solar module manufacturer or a third-party SCADA vendor. This system will be monitored 24 hours per day, 7 days per week.

4.1.3.6 Internal Access Roads, Perimeter Fencing, and Gates

The Carty Solar Farm with proposed RFA 4 changes will utilize existing access roads to the extent practicable. The Carty Solar Farm with proposed RFA 4 changes will be accessed from U.S. Interstate 84 (I-84), which generally runs east to west approximately 10 miles to the north. From I-84, construction and operations personnel will travel south on Tower Road and then into the Facility site along existing access roads. Once constructed, the Northern and Southern solar areas will include new internal access roads. Approximately 9.9 miles of new access roads are expected to be constructed within the solar perimeter fencing to access infrastructure (see Figure 2). Existing roads outside the solar areas are not anticipated to require improvements or alterations.

All newly constructed roads within the solar areas will be graveled to meet load requirements for all equipment. These internal access roads are expected to be approximately 14 feet in width.

The locations of specific access points and gates will depend on the final configuration of the solar areas and related infrastructure. The perimeter fencing will have lockable vehicle access gates, a minimum of four access gates total (three gates for the Northern Solar Area and a minimum of one gate for the Southern Solar Area); additional gates may be included for emergency exits or for removal of wildlife. Chain-link perimeter fencing, up to 8 feet in height, will enclose each of the two solar areas and the BESS park as shown on Figure 2. Chain-link perimeter fencing, up to 11 feet in

height, will enclose the proposed collector substation. The top of the fencing for the solar areas, BESS, and proposed substation will include an additional 1-foot of razor or barb wire. The length of proposed fence will total approximately 14.7 miles (77,794 feet) of fence.

4.1.3.7 Temporary Construction Area

During construction, one temporary construction area (laydown area) will be used to support construction, store supplies and equipment, and facilitate the delivery and assembly of materials and equipment (Figure 2). The construction area is approximately 21.4 acres and may contain up to five temporary aboveground 1,000-gallon diesel tanks located within designated secondary containment areas. Depending on the pre-existing ground surface conditions, the construction area will consist of either a crushed gravel surface that will be removed following construction, crushed gravel surface that will remain following construction because that was the pre-existing surface condition, or vegetation that is left in place for which the need to revegetate would be evaluated following construction. Additional temporary construction areas may be used as determined by the EPC, but these would be within the solar areas considered permanent disturbance; therefore, maximum impact is evaluated in RFA 4.

4.1.4 Other Systems and Information

4.1.4.1 Fuel and Chemical Storage

The Carty Solar Farm with proposed RFA 4 changes will not require fuel or chemicals for the generation of electricity. During construction, small quantities of a few hazardous materials may be utilized or stored in the temporary construction yards. Such materials may include herbicides, insecticides, paint, cleaners, or solvents. None will be present in substantial, reportable quantities, and all materials will be handled in accordance with state and federal standards. When not in use these would be stored in a secure location within the temporary construction yards.

Fuels would be the only hazardous material that may be stored in substantial quantities on-site during construction. The Certificate Holder anticipates that up to 5,000 gallons of diesel fuel may be kept on-site for fueling of construction equipment. The diesel fuel will be stored in up to five 1,000-gallon temporary, aboveground tanks in the temporary construction area, within an area that provides for secondary containment. Secondary containment and refueling procedures for on-site fuel storage will follow the Spill Prevention, Control, and Countermeasure (SPCC) Plan. Secondary containment will be compliant with requirements in 40 CFR §112.7(c), which requires secondary containment for all aboveground, buried, and partially buried containers. Fuels would be delivered to the temporary construction yards by a licensed specialized tanker vehicle. The fuel tanks are expected to be filled once per month.

There will be no substantial quantities of lubricating oils, hydraulic fluid for construction equipment, or other hazardous materials maintained on-site during construction. Lubricating oil or hydraulic fluids for construction equipment will be brought in on an as-needed basis for equipment maintenance by a licensed contractor using a specialized vehicle, and waste oils removed by the same maintenance contractor. Dielectric oils for the transformers will similarly arrive on an as-

needed basis and transferred into the receiving components, such that none would be stored on-site. Potentially hazardous substances will not be permanently present within the construction areas in quantities that exceed Oregon State Fire Marshal Reportable Quantities (see Exhibit G).[9]

During operations, qualified oil-filled equipment, including the substation GSU transformer, will contain oil. The ISU transformers will contain biodegradable oil.

The primary chemical storage during operations is expected to be the GSU transformer in the substation, which will use oil for cooling. The GSU transformer is expected to be a ground-mounted unit constructed on a concrete pad with secondary spill containment traps designed to minimize the possibility of accidental leakage. The concrete catchment system is typically sized to contain the amount of oil inside the transformer plus deluge water and required freeboard. Transformers typically use mineral oil or seed oil that is considered nontoxic. Transformer coolant does not contain polychlorinated biphenyls (PCBs) or compounds listed as extremely hazardous by the U.S. Environmental Protection Agency (EPA). The small quantity and nontoxic nature of the oils combined with the fact that the transformer is expected to be included in secondary containment on a concrete pad will minimize risk effects of potential spills on soil. In the unlikely event of a spill, PGE will follow response measures outlined in its construction or operations SPCC Plan. As part of this plan, equipment containing oil or hazardous materials will be regularly monitored for leaks, and measures will be put in place if any are found to quickly control and remove spills. ISU transformers will use smaller quantities of biodegradable oil and will not require secondary containment.

Small quantities of lubricants, degreasers, herbicides, or other chemicals may be stored in the proposed O&M building. Storage of these chemicals will follow label instructions. No underground storage tanks are expected to be installed at the proposed O&M building. No extremely hazardous materials (as defined by 40 CFR 355) are anticipated to be produced, used, stored, transported, or disposed of for the Carty Solar Farm with proposed RFA 4 changes during operations.

While not considered an extremely hazardous material, electrolyte solution will be contained within the BESS for the Li-ion battery technology. Li-ion battery systems are modular systems that contain multiple smaller battery cells. The cells are the primary containment for the gel or liquid electrolyte materials. The module containing the cells is relatively small, generally about the size of a desktop computer processer, and serves as leak-proof secondary containment. Modules are placed in anchored racks within the steel containers. The risk of leaking is very low because battery cells are hermetically sealed. Electrolyte can only escape (as vapor) in the unlikely case that a battery cell ruptures, though it would be contained in the BESS steel container. Note that used Li-ion batteries can sometimes be considered hazardous waste by the EPA and will be disposed of

[9] "Reportable quantity" refers to the amount of hazardous substance that has to be released into the environment before the U.S. Environmental Protection Agency requires notification of the release to the National Response Center pursuant to the Comprehensive Environmental Release, Compensation, and Liability Act, also known as Superfund. These numerical designations are listed under 49 Code of Federal Regulations 172.101 Appendix A, Table 1 and Table 2.

according to the most current guidelines at end of life. See Section 4.1.3.3 for additional description and discussion of the BESS.

As further described in Exhibit G, PGE will prepare and maintain an SPCC Plan to outline preventative measures and practices to reduce the likelihood of an accidental spill, and to expedite the response to and remediation of a spill, should one occur.

4.1.4.2 Fire Prevention and Control

Exhibit V provides information on wildfire risks and prevention and describes the Certificate Holder's existing Wildfire Mitigation Plan. This section provides a summary of these topics.

Solar facilities do not pose a significant fire risk. The greatest risk of fire is during construction, when welding and metal cutting will take place, and vehicles and construction equipment may be used in areas of tall, dry grass. In order to prevent fires from occurring, the construction contractor will implement a number of systems and procedures. These will include requirements to conduct welding or metal cutting only in areas cleared of vegetation, and to keep emergency firefighting equipment on-site. Construction workers will keep vehicles on roads during the dry months of the year, unless offroad activities are required for emergency purposes, in which case fire precautions will be observed. Construction workers will be prohibited from parking vehicles in areas of tall, dry vegetation to prevent fires caused by contact with hot mufflers or catalytic converters. Fire extinguishers and shovels will be kept in all vehicles. In the event of a large fire, emergency responders will be dispatched.

Fire prevention specific to solar arrays is dependent on proper installation and maintenance of electrical equipment to prevent short-circuits and consequent sparking, and reduction in fuel to reduce the chance of fire spreading. PGE will employ qualified employees to install and maintain electrical equipment. The solar array will have shielded electrical cabling, as required by applicable code, to prevent electrical fires. All electrical equipment will meet National Electrical Code and Institute of Electrical and Electronics Engineers standards and will not pose a significant fire risk. With proper maintenance and safety checks, the electrical collection system and 300-foot-long transmission line are unlikely to cause a fire. The substrate on the ground inside the solar array fence line will be gravel where needed for maintenance and access roads or where gravel already exists, and vegetation where gravel isn't needed or already present. Weeds will be managed in accordance with the weed management procedures described in the Draft VSMP (see Exhibit I, Attachment I-2). Additional fire prevention and response measures for the Facility as a whole—including best management practices related to worker activities, maintenance of fire suppression equipment, and coordination with the local fire district—are described in Exhibit U.

The existing roads providing access to and throughout the Facility, as well as new roads proposed within the Northern and Southern solar area fence lines, are sufficiently sized for emergency vehicle access in accordance with 2019 Oregon Fire Code requirements, including Section 503 and Appendix D - Fire Apparatus Access Roads. Specifically, the new roads proposed within the solar area fence lines will be approximately 14 feet in width. The areas immediately around the O&M

building, proposed substation, and BESS will be graveled, with no vegetation present. See Exhibit U for additional discussion of fire prevention measures and coordination with local emergency responders.

Smoke/fire detectors will be placed around the site and tied to the SCADA system and will contact local firefighting services. The proposed O&M building will have basic firefighting equipment for use on-site during maintenance activities, such as shovels, beaters, portable water for hand sprayers, fire extinguishers, and other equipment.

Battery Energy Storage System

The following paragraphs summarize the information pertinent to fire prevention and control for a BESS with Li-ion technology.

The chemicals used in Li-ion batteries are nontoxic but do present a flammability hazard. Li-ion batteries are susceptible to overheating and require cooling systems dedicated to each BESS enclosure, especially at the utility scale (LAZARD 2021). The gas released by an overheating Li-ion cell is mainly carbon dioxide. The electrolyte solution, usually consisting of ethylene or propylene, may also vaporize and vent if the cell overheats (Battery University 2022).

The Certificate Holder will implement the following fire prevention and control methods to minimize fire and safety risks for the Li-ion batteries proposed for the BESS:

- The batteries will be stored in completely contained, leak-proof modules.
- The lithium-ion battery system will be kept in a temperature-controlled facility with individual battery modules isolated to prevent the spread of fire if it were to occur.
- Ample working space will be provided around the battery energy storage system for maintenance and safety purposes.
- 24-hour monitoring of the BESS will be implemented and will include shutdown capabilities.
- Transportation of Li-ion batteries is subject to 49 CFR 173.185 – Department of Transportation Pipeline and Hazardous Material Administration. This regulation contains requirements for prevention of a dangerous evolution of heat, prevention of short circuits, prevention of damage to the terminals, and prevention of batteries coming into contact with other batteries or conductive materials. Adherence to the requirements and regulations, personnel training, safe interim storage, and segregation from other potential waste streams will minimize any public hazard related to transport, use, or disposal of batteries.
- Design of the BESS will be in accordance with applicable Underwriters Laboratories (UL 2023; specifically, 1642, 1741, 1973, 9540A), National Electric Code, and National Fire Protection Association (specifically 855) standards, which require rigorous industry testing

and certification related to fire safety and/or other regulatory requirements applicable to battery storage at the time of construction.

- Additionally, the Certificate Holder will employ the following design practices, as applicable to the available technology and design at time of construction:
    - Use of Li-ion phosphate battery chemistry, which is a more thermally stable Li-ion cathode chemistry;
    - Employment of an advanced and proven battery management system;
    - Qualification testing of battery systems in accordance with UL 9540A (Revision 4);
    - Installation of fire sensors, smoke and hydrogen and/or CO detectors, alarms, emergency ventilation systems, cooling systems;
    - Employment of fire control panels with 24-hour battery backup;
    - Installation of doors that locked with restricted access to authorized personnel only;
    - Installation of thermal insulation sheets between each individual battery cell;
    - Implementation of locks and fencing to prevent entry of unauthorized personnel;
    - Installation of remote power disconnect switches; and
    - Clear and visible signs to identify remote power disconnect switches.

4.1.5 Construction Schedule

Construction is planned to begin in Q3 of 2027 (mobilization) and continue through Q3 of 2029 for a duration of approximately 24 months. Additional engineering and geotechnical investigations may occur prior to issuance of the Amended Site Certificate. As defined in ORS 469.300(6), surveying and exploration activities (such as geotechnical investigations) are excluded from the definition of construction work. No other construction work is anticipated to begin prior to issuance of the Amended Site Certificate.

4.1.5.1 Construction Schedule Amendment Request

Existing Site Certificate Condition 4.1(ii) in the Third Amended Site Certificate requires that construction of the 50-MW Carty Solar Farm begin by February 4, 2025 (Council 2022); the 50-MW facility was not constructed before the construction commencement date and therefore is no longer authorized. Therefore, the proposed amendments to the Site Certificate include construction deadlines for the Carty Solar Farm with proposed RFA 4 changes. As is now standard for initial construction commencement deadlines, the Certificate Holder requests six years from the effective date of the Fourth Amended Site Certificate, and a construction completion deadline three years from the construction commencement date.

Conditions 4.1(ii) and 4.2(ii) are proposed to be modified as follows:

4.1. *The certificate holder shall:*

***

ii *Begin construction of the Carty Solar Farm ~~by February 4, 2025~~within six years after the effective date of the amended site certificate, or MONTH DAY, 20XX. The amended site certificate is effective upon execution by the council Chair and the certificate holder.*
[AMD1; AMD3; AMD4]

4.2. *The certificate holder must:*

***

ii *Complete construction of the Carty Solar Farm within three years of the construction commencement date ~~by February 4, 2028~~. The certificate holder shall promptly notify the Department of the date of completion of construction of the Carty Solar Farm and its supporting facilities.*
[AMD1; AMD3; AMD4]

4.2 Effect of Proposed Changes on the Facility – OAR 345-027-0360(1)(b)(A)

OAR 345-027-0360 Preliminary Request for Amendment

(1) To request an amendment to the site certificate required by OAR 345-027-0350(3) or (4), the certificate holder shall submit a written preliminary request for amendment to the Department that includes the following:

***

(b) A detailed description of the proposed change, including:

(A) A description of how the proposed change affects the facility;

RFA 4 proposes to add 200 MW of solar energy generation and BESS with the capability of storing up to 200 MW AC at CGS by expanding into areas formerly used for the BCP and maximizing use of the buildable area on PGE-owned property southeast of Carty Reservoir. The proposed changes will increase the amount of renewable energy generated at CGS proposed mainly through reuse of areas formerly occupied by the coal power plant, and with the addition of BESS, will maximize reliability and customer value, to deliver energy and capacity to PGE customers and to help achieve Oregon's ambitious decarbonization targets.

As detailed in the following sections and in the attachments, the proposed changes will not result in any significant impacts to resources. In most cases, impacts to resources resulting from the proposed changes will be similar to what has already been approved for the Facility.

The Certificate Holder can still comply with all Site Certificate Conditions previously adopted by the Council for the Facility with the changes proposed in Attachment 1. Ultimately, the proposed

changes will maximize use of the latest technology to minimize impacts, while supporting renewable energy production in the region and helping the state meet its renewable energy goals.

A summary of proposed changes to the Facility is provided in Table 1, most significant of which are increases in the following: permanent and temporary acreages used for solar energy generation, solar modules, inverters, and step-up transformers. The changes result in a reduction in the mileage of aboveground transmission line and include the addition of BESS.

4.3 Applicable Laws and Council Rules – OAR 345-027-0360(1)(b)(B)

OAR 345-027-0360 Preliminary Request for Amendment

(1) To request an amendment to the site certificate required by OAR 345-027-0350(3) or (4), the certificate holder shall submit a written preliminary request for amendment to the Department that includes the following:

*****

(b) A detailed description of the proposed change, including:

(B) A description of how the proposed change affects those resources or interests protected by applicable laws and Council standards, and

In general, the proposed changes for RFA 4 do not affect the resources or interests protected by applicable laws and Council standards in a substantially different way than what the Council already approved for the Facility. The Certificate Holder has reviewed and considered current local, state, and federal law in developing the layout proposed with RFA 4. No laws were identified that would prohibit the proposed changes requested in RFA 4. Compliance with applicable laws is integrated into the existing and proposed modified Site Certificate Conditions, including conditions related to pre-construction biological surveys, preparation of an archaeological monitoring plan, the National Pollutant Discharge Elimination System (NPDES) 1200-C permit, and consultation with the Oregon Department of Fish and Wildlife and Department of Geology and Mineral Industries, among others. The proposed changes do not alter the Certificate Holder's ability to comply with the Site Certificate Conditions for the Facility except as noted in the exhibits (Attachment 4) and the proposed condition modifications (Attachment 1). Ultimately, although the Facility may be operated in a different manner than previously approved by the Council as a result of RFA 4, substantial changes to the Third Amended Site Certificate are not necessary to incorporate and meet Council standards and other applicable laws. The Certificate Holder recognizes that the format of the Site Certificate may be modified and reorganized as part of RFA 4. The exhibits provided in Attachment 4 further demonstrate how the proposed changes would continue to comply with Council standards and are consistent with the Council's previous findings for the Facility.

4.4 Location of the Proposed Change – OAR 345-027-0360(1)(b)(C)

OAR 345-027-0360 Preliminary Request for Amendment

(1) To request an amendment to the site certificate required by OAR 345-027-0350(3) or (4), the certificate holder shall submit a written preliminary request for amendment to the Department that includes the following:

*****

(b) A detailed description of the proposed change, including:

(C) The specific location of the proposed change, and any updated maps and/or geospatial data layers relevant to the proposed change;

The Facility description in Sections 4.4.1 through 4.4.3 below is included as required to meet the submittal requirements of OAR 345-021-0010(1)(c), paragraphs (A) through (C). OAR 345 Division 22 does not provide an approval standard specific to Exhibit C.

4.4.1 Facility Location

The Facility continues to be located entirely in rural Morrow County, approximately 13 miles southwest of Boardman, Oregon, as shown on Figure 1. The Facility is located in the following Public Land Survey System sections: Township 2 north, Range 24 east, Sections 2, 3, 4, 5, 8, 9, 10, and 11; and Township 3 north, Range 24 east, Sections 32, 33, 34, and 35, Willamette Meridian. The Certificate Holder proposes to add approximately 252 acres of land to the Approved Site Boundary by expanding to include areas previously used for the BCP. However, the increase in area does not result from expanding the outer limits of the Approved Site Boundary. Sections 1.2 and 4.0 describe the Certificate Holder's more specific plans for the proposed changes within the Site Boundary.

4.4.2 Specific Location of Major and Supporting Facilities

The following figures show the specific location of the major and supporting facilities proposed with RFA 4.

- Figure 1 is a vicinity map showing the location of the Facility in relation to nearby cities and towns, county boundaries, public roads, and other geographic features.
- Figure 2 provides the preliminary site plan for RFA 4 and is the basis for the permanent and temporary disturbance calculations in Table 2.
- Figure 3 displays the proposed changes to the Approved Site Boundary for the Facility, which constitute the Amended Site Boundary, as well as the Site Boundary used for RFA 4 evaluation.
- Figure 4 shows the location of the Facility in relation to other energy generation facilities that are known to be permitted at the state or local level within 10 miles of the Amended Site Boundary.

Updated geospatial data layers used to create the maps in RFA 4 will be provided to ODOE on request.

4.4.3 Permanent and Temporary Disturbance Areas

Table 2 provides a maximum impact scenario for permanent and temporary disturbances associated with RFA 4, as well as any assumptions used to calculate these impact amounts. The Certificate Holder requests flexibility to site the RFA 4 components anywhere within the micrositing boundary as long as it does not exceed the disturbance acreages described in Table 2. The individual component disturbance areas (for solar areas, BESS, temporary construction area, etc.) were calculated using preliminary design data and represent the Certificate Holder's best estimate of preliminary impacts for each component. Because this analysis uses the largest anticipated footprint, the final equipment and layout selected will not exceed the impacts analyzed.

Table 2 presents the impact by disturbance type. However, some disturbance types may overlap by the nature of their development. Therefore, the last row in the table provides the disturbance area with any development overlap removed. For purposes of analysis, the Certificate Holder considered a total solar area that will occupy approximately 849.7 acres enclosed within the two separately fenced areas, using the proposed solar technology. This entire solar area is considered permanently disturbed and includes all solar components (i.e., modules, inverters, transformers, tracking systems, posts, underground collector lines, internal access roads, and other associated equipment). All other permanent impacts are listed as separate line items and include permanent impacts from the collector substation, BESS, aboveground collector line poles, and O&M building. Any temporary disturbance impacts will only occur outside of the perimeter fencing for the solar areas, BESS, and collector substation and include temporary impacts from the underground collector lines, aboveground collector line, installation of perimeter fencing, construction of the O&M building, and use of the temporary construction area. This layout represents the maximum scenario for purposes of analyzing land use and habitat impacts.

Table 2. Permanent and Temporary Disturbances

Disturbance Type	Permanent (Acres)	Temporary (Acres)
Solar Areas (Northern and Southern)[1]	849.7	4.9
Underground 34.5-kV Collector Lines[2]	0	4.5
Aboveground 34.5-Collector Line[3]	0.01	12.6
Collector Substation[4]	3.2	0.2
Battery Energy Storage System[5]	6.2	0.6
O&M Building[6]	0.9	0.5
Temporary Construction Area[7]	0	21.4
TOTAL[8]	**859.9**	**43.5**

1. Permanent disturbance includes all area inside the perimeter fence for both the Northern and Southern solar areas (Northern is 357.9 acres; and Southern is 491.8 acres). Temporary disturbance is for installation of the solar area fence line and assumes a 6-foot temporary disturbance corridor on the outer side of the fence multiplied by the linear footage of fence for temporary workspace to install the fence. Assumes an approximate total of 71,808 feet of solar fence.
2. Temporary disturbance assumes a 25-foot temporary disturbance corridor for all collector line located outside the solar perimeter fence to accommodate trench width, vehicle traffic, and equipment laydown.
3. Permanent disturbance assumes 60 poles for the 2-mile segment of aboveground collector line, with a 3-foot-diameter permanent disturbance area around each pole. Temporary disturbance assumes 60 poles, with an 80-foot by 100-foot temporary disturbance area around each pole and a 10-foot-wide temporary vehicle access path along the entire 1-mile-long segment.
4. Permanent disturbance includes all area inside the perimeter fence for the proposed collector substation. Temporary disturbance is for the installation of the substation fence line and assumes a 6-foot temporary disturbance corridor on the outer side of the fence multiplied by the linear footage of fence for temporary workspace to install the fence. Assumes an approximate total of 1,472 feet of substation fence. The acreage within the fence includes the 300-foot-long line connecting the proposed substation to the existing dead-end structure to the existing 500-kV transmission line, both remaining from the Boardman Coal Plant.
5. Permanent disturbance includes all area inside the perimeter fence for the BESS park. Temporary disturbance is for the installation of the BESS fence line area and assumes a 6-foot temporary disturbance corridor on the outer side of the fence multiplied by the linear footage of fence for temporary workspace to install the fence. Assumes an approximate total of 4,514 feet of BESS fence.
6. Permanent disturbance for 20,000 square foot building (permanent disturbance includes additional area for parking, maneuvering, and buffer. Temporary disturbance is for construction of the building and assumes a 25-foot temporary disturbance corridor located around the permanent disturbance footprint.
7. Temporary disturbance for one central construction area. No permanent disturbance, the construction area will be reclaimed following construction. Additional temporary construction areas may be used as determined by the EPC, but these would be within the solar areas and are already accounted for as permanent disturbance.
8. Totals eliminate any overlap of features (e.g., overlapping temporary workspace, disturbance types within fence line(s), etc.).

5.0 Division 21 Requirements – OAR 345-027-0360(1)(c)

OAR 345-027-0360 Preliminary Request for Amendment

(1) To request an amendment to the site certificate required by OAR 345-027-0350(3) or (4), the certificate holder shall submit a written preliminary request for amendment to the Department that includes the following:

*****

(c) References to any specific Division 21 information that may be required for the Department to make its findings;

The Certificate Holder has addressed applicable specific Division 21 information in response to Division 27 requirements[10] and in exhibits included in Attachment 4. Exhibit labeling reflects the requirements of OAR 345-021-0010. However, in April 2025 and 2026, the State of Oregon updated the OARs. The Certificate Holder submitted the pRFA prior to the OAR updates, and the RFA does not reflect the changes in the OAR. Table 3 below outlines the updated OAR requirements and where the corresponding information can be found in this final RFA. However, not all exhibits apply to solar and BESS, so some are not included (see Table 3).[11]

Table 3. Crosswalk Between Current OARs and Carty Generating Station RFA 4

OAR[1]	RFA 4 Exhibit/Location
OAR 345-021-0010(3)	Division 27 Sections 3.0-3.3 (Certificate Holder Information) and 5.1-5.2 (Other Participants and Affiliations), 4.1 (Project Description and Schedule), 4.4 (Location), 5.4 (Required Permits), 8.0 (Property Owners of Record), Figures (Site Plan) Exhibits CC (Applicable Rules) Exhibit G (Materials Analysis)
OAR 345-022-0000 General Standard of Review	This Application
OAR 345-022-0010 Organizational Expertise	Division 27 Section 5.3 (Organizational Expertise)
OAR 345-022-0020 Structural Standard	Exhibit H (Geologic and Soil Stability)
OAR 345-022-0022 Soil Protection	Exhibit I (Soil Conditions)
OAR 345-022-0030 Land Use	Exhibit K (Land Use)
OAR 345-022-0040 Protected Areas	Exhibit L (Protected Areas)
OAR 345-022-0050 Retirement and Financial Assurance	Exhibit M (Financial Capability) Exhibit X (Retirement)

[10] Note that in October 2025 and April 2026, the State of Oregon updated sections of Division 27. The Certificate Holder submitted the pRFA prior to the OAR updates, and this final RFA does not reflect the changes in the OAR.
[11] Exhibits not applicable to RFA 4 are Exhibit N – Non-generating Facility Information, Exhibit Z – Cooling Towers, and Exhibit BB – Other Information.

OAR[1]	RFA 4 Exhibit/Location
OAR 345-022-0060 Fish and Wildlife Habitat	Exhibit P (Fish and Wildlife)
OAR 345-022-0070 Threatened and Endangered Species	Exhibit Q (Threatened and Endangered Species)
OAR 345-022-0080 Scenic Resources	Exhibit R (Scenic)
OAR 345-022-0090 Historic, Cultural and Archaeological Resources	Exhibit S (Historic, Cultural and Archaeological Resources)
OAR 345-022-0100 Recreation	Exhibit T (Recreation)
OAR 345-022-0110 Public Services	Exhibit U (Public Services)
OAR 345-022-0115 Wildfire Prevention and Risk Management	Exhibit V (Wildfire)
OAR 345-022-0120 Waste Minimization	Exhibit W (Waste Minimization)
OAR 345-022-0160 State and Local Laws and Regulations	Exhibits J (Wetlands), O (Water Requirements), Y (Noise)
OAR 345-024-0090 Siting Standards for Transmission Lines	Exhibits AA (EMF), DD (Specific Standards)
[1]Updated April 2025 with subsequent updates; the pRFA4 was submitted in February 2024.	

Together, this document and the exhibits provide the necessary information for ODOE to make its findings, and based on those findings, that the Council can find that the Facility, as proposed, continues to comply with the requirements of the Oregon Energy Facility Site Statutes, ORS 469.300 to 469.520.

5.1 Other Participants – OAR 345-021-0010(1)(a)(B)

No other participants are anticipated at this time, with the exception of potential third-party permits that will be obtained by the construction firm for build-out of the Carty Solar Farm with proposed RFA 4 changes. These third-party permits include permits for construction materials, transporting materials to the site, and other building-related permits that are typically obtained immediately prior to construction activities. See Section 5.4.3 for all anticipated third-party permits.

5.2 Other Affiliations – OAR 345-021-0010(1)(a)(C) through (F)

The Portland General Electric Company is a corporation and the information required by OAR 345-021-0010(1)(a)(C) is provided in Section 3.0. The information required by OAR 345-021-0010(1)(a)(D) through (F) is not applicable to PGE.

5.3 Organizational Expertise – OAR 345-021-0010(1)(d)

PGE is a fully integrated energy company based in Portland, Oregon, serving over 900,000 customers in 51 cities. PGE generates electricity from plants it owns, and purchases power on the wholesale market. PGE operates wholly and jointly owned hydroelectric, natural gas, wind, and

solar generating plants. For over 130 years, PGE has been delivering energy to residents of the state of Oregon. PGE has significant experience in constructing, supervising the construction of, and operating generation projects.

The Council previously found that the Certificate Holder has the ability to design, construct, operate, and retire the Carty Solar Farm, in compliance with all Council standards and conditions, as required by the Organizational Expertise standard.

For the period from January 2022 to September 2026:

- On August 14, 2023, PGE received a pre-enforcement notice from ODEQ regarding oil and grease releases from the Biglow Canyon Wind Farm (BCWF) Phase 1 turbines. The pre-enforcement notice was the result of an inspection conducted by Oregon Department of Environmental Quality (ODEQ) on May 12, 2023, at the request of ODOE. PGE responded to ODEQ for the pre-enforcement notice on August 28, 2023, and documented that PGE has completed cleanup of affected soils including those specifically cited in the notice and outlined steps PGE would take to prevent and address future releases. On October 13, 2023, PGE provided a report to ODOE in the format required by OAR 345-029-0010(3) at ODOE's request. On April 12, 2024, PGE received an expedited enforcement offer from ODEQ, which PGE accepted and paid a fine of $2,400 for. PGE continues to work to address the failing components at the Phase 1 turbines which result in the oil and grease releases through implementation of a wind enhancement program to replace components and improved operational practices to address any releases that do occur while implementation of the wind enhancement program occurs.
- PGE continues to report incidents that occur at our facilities in accordance with guidance issued by ODOE on October 27, 2022. None of these incident reports have resulted in a violation or citation being issued to PGE; however, several of them have required PGE to implement corrective action plans to reduce the likelihood of recurrence. Incidents reported since the beginning of 2022 include a blade detachment, various broken fasteners, failed hatches, an open turbine door, vandalism, and transformer failures. Corrective actions plans have been implemented to address these issues. PGE meets regularly with ODOE to ensure issues are adequately being addressed.
- There have been three incidents reported to ODOE that were a potential violation of a site certificate condition:
    - In March 2025 PGE notified ODOE that the 5-year true up report for Port Westward Unit 2 Carbon Standard was not submitted within the required timeframe. Upon discovery the issue was reported to ODOE within the required 72-hour timeline and the late true up report and Report by a Responsible party was submitted to ODOE. Corrective actions included reviewing PGE compliance software to make sure all 5-year reports were entered correctly.
    - In June 2026 PGE notified ODOE that the total amount of water used out of the onsite exempt well at the Biglow Canyon Wind Farm on June 16, 2026, exceeded the

allowed 5,000 gallons per day due to a leaking toilet. Upon discovery the issue was reported to ODOE within the required 72-hour timeline and the leaking toilet was immediately repaired and the Report by a Responsible party was submitted to ODOE. Corrective actions included replacement of the toilet and setting the SCADA to alarm once a certain amount of water had been used in any one day.

- In July 2026 PGE notified ODOE of an unauthorized water source being used during construction of the Biglow Solar Project. It was discovered on July 29, 2026, that a subcontractor obtained permission from the landowner to use a well; but the well was not authorized for construction dust control activities. Use of the well was immediately stopped and the Report by a Responsible party was submitted to ODOE. Corrective actions included retraining of subcontractors and clarifying that approval from the landowner is not sufficient and all approvals have to be routed through the EPC contractor for approval from ODOE.

Table 4 lists major projects that PGE currently operates.

Table 4. Portland General Electric Company's Generation Facilities

Project Name (Commercial Operation Date)	Technology	Maximum Generation Name Plate (MW)
Carty Generating Station Unit 1 (2016)	Natural Gas Combined-Cycle Combustion Turbine	503
Port Westward Generating Plant Unit 2 (2014)	Natural Gas Reciprocating Engines	225
Port Westward Generating Plant Unit 1 (2007)	Natural Gas Combined-Cycle Combustion Turbine	483
Beaver Generating Facility (1974, 1977)	Natural Gas and Distillate Oil Combined-Cycle Combustion Turbine	570
Beaver Unit 8 (2001)	Natural Gas Simple-Cycle Combustion Turbine	24.9
Coyote Springs Unit 1 (1995)	Natural Gas and Distillate Oil Combined-Cycle Combustion Turbine	296
Faraday (1907/1958)	Hydroelectric	50
North Fork (1958)	Hydroelectric	62
Oak Grove (1924)	Hydroelectric	51
River Mill (1911/1952)	Hydroelectric	21
Sullivan (1895)	Hydroelectric	17
Round Butte (1964)	Hydroelectric (jointly owned)	373
Pelton (1957)	Hydroelectric (jointly owned)	110

Project Name (Commercial Operation Date)	Technology	Maximum Generation Name Plate (MW)
Wheatridge Renewable Energy Facility I (2018)	Wind	100
Tucannon River Wind Farm (2014)	Wind	267
Biglow Canyon Wind Farm (2007, 2009, 2010 [2027 pending])	Wind (Phases I, II, and III; operating), Solar and BESS (under construction, COD 11/2027)	450 (wind, operating); 125 (solar, approved)
Clearwater Wind Energy Center (2024)	Wind	208
Portland Public Schools (2015)	Solar	9 (combined for these 5 facilities)
Baldock Solar Station (2012)	Solar	
Sunway 3 (2010)	Solar	
Sunway 2 (2009)	Solar	
Sunway 1 (2009)	Solar	
Coffee Creek (2024)	BESS	17
Constable (2024)	BESS	75
Port Westward BESS (2021)	BESS	5
Seaside (2025)	BESS	200
IOC Battery (2025)	BESS	2
Salem Smart Power Center (repower) (2026)	BESS	3.9
Three additional projects less than 1 MW each	BESS	0.75/0.5/0.25
Retired, Decommissioned, and Demolished		
Boardman Coal Plant	Coal (jointly owned)	N/A
Trojan	Nuclear	N/A
Original Salem Smart Power Center	BESS	N/A

1. The Salem Smart Power Center was originally built as part of the Pacific Northwest Smart Grid Demonstration Project, a U.S. Department of Energy research effort. The Project ended in mid-2015 and PGE continued to operate the facility until its end of life. The original Salem Smart Power Center has been fully decommissioned, and a new project is in service.

The Certificate Holder has not received any regulatory citations for any solar facilities. The CGS is currently operated in compliance with its respective Site Certificate Conditions and in a manner that protects public health and safety. Given the Certificate Holder's successful expansion of their renewable energy generation portfolio, their successful operation of the CGS in compliance with Site Certificate Conditions, their demonstrated ability to restore the Carty Solar Farm to a useful, non-hazardous condition (see Conditions 15.1 through 15.7), the Council may conclude that the Facility, as amended by RFA 4, will continue to comply with OAR 345-022-0010.

With regard to avoidance and mitigation of Category 2 habitat within the Facility, the Certificate Holder successfully implemented the Boardman PGE Multi-Species Candidate Conservation

Agreement with Assurances (MSCCAA) Management Plan. The Plan included Washington ground squirrel and specific measures such as protecting and maintaining the mostly native grassland to benefit Washington ground squirrels and prohibition on ground disturbance and development that could harm Washington ground squirrels. PGE continues to manage and protect the PGE Conservation Area and larger Boardman Coal Plant property for the benefit of Washington ground squirrels, sensitive species, and other wildlife in the spirit of the MSCCAA and in cooperation with the other signatories. The Certificate Holder also manages the 78-acre Carty Unit 1 habitat mitigation area (HMA) in accordance with the Wildlife and Habitat Monitoring and Mitigation Plan (WHMMP). This plan is largely based on the Boardman MSCCAA to protect populations of Washington ground squirrels and other covered species as well as the habitats they rely on. The Unit 1 HMA objectives are to protect habitat from degradation and improve the habitat quality through noxious weed prevention and control, access control, off-road vehicle use prohibition, livestock grazing prohibition, removal of unneeded fencing, use of wildlife-compatible fencing along adjacent property boundaries, and revegetation in the event of wildfires. The HMA, which is contiguous with the Boardman Conservation Area and within the Boardman Conservation Opportunity Area, is largely composed of Category 1 and Category 2 habitat based on current and former Washington ground squirrel colony presence. The HMA management measures have been effective at recovering native habitat following a July 2008 wildfire. There has been no known take or negative impact on Washington ground squirrels, Lawrence's milkvetch, or any other sensitive species identified in the Carty Site Certificate since Unit 1 became operational.

There are no circumstances that would alter the basis for the Council's earlier findings regarding PGE's organizational expertise. Therefore, Council may find that PGE continues to have the organizational expertise to construct, operate, and retire the Facility in compliance with Council standards and Site Certificate Conditions.

5.4 Required Permits – OAR 345-021-0010(1)(e)

This section provides information about permits that the Certificate Holder will need for construction and operation of the Carty Solar Farm with proposed RFA 4 changes to meet the submittal requirements of OAR 345-021-0010(1)(e) paragraphs (A) through (G). While OAR 345 Division 22 does not provide an approval standard specific to Exhibit E, permits identified in Table 5 (OAR 345-021-0010(1)(e)(A) and (B)) are identified in each applicable exhibit included in Attachment 4. The changes proposed with RFA 4 do not require any new permits, nor any new Site Certificate Conditions for permits, which were not previously considered by the Council.

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Table 5. Permits

Permit	Agency Name and Contact	Authority	Description
Federal Permits			
Notice of Proposed Construction or Alteration (Form 7460-1)	Federal Aviation Administration (FAA) Attn: Dan Shoemaker, Airspace Specialist Seattle Obstruction Evaluation Group 1601 Lind Avenue SW Renton, WA 98057 (425) 227-2791 Dan.shoemaker@faa.gov	Federal Aviation Act of 1958 (14 U.S. Code [U.S.C.] § 44718); 14 Code of Federal Regulations (CFR) § 77	Description: Required for construction or alterations that may affect navigable airspace (e.g., pertaining to potential glare from the Facility's solar arrays), or for construction of structures within specified distances of runways or helipads. No permit is issued by the FAA. The Certificate Holder used the FAA Notice Criteria Tool to confirm that the Carty Solar Farm with proposed RFA 4 changes does not exceed notice criteria for the FAA. The Certificate Holder entered into discussions with the U.S. Navy regarding the nearby Boardman Bombing Range and associated flight paths prior to RFA 4, to ensure that there are no significant impacts related to potential glare that could result from construction and operation of the Carty Solar Farm with proposed RFA 4 changes. The Navy confirmed that the previously completed glint/glare study was adequate for the Carty Solar Farm with proposed RFA 4 changes. The Certificate Holder received the Department of Defense's Military Aviation and Installation Assurance Siting Clearinghouse Informal Review response which confirmed there is no impact to the nearby Boardman Bombing Range; see Attachment U-2 in Exhibit U for the response. This federal process is not within the jurisdiction of the Energy Facility Siting Council (Council) and therefore should not be included in the Site Certificate.
State Permits Not Federally Delegated			
Energy Facility Site Certificate	Oregon Department of Energy and Energy Facility Siting Council Attn: Sarah Esterson, Senior Policy Advisor 550 Capitol Street NE Salem, OR 97301 (800) 221-8035 sarah.esterson@energy.oregon.gov	Oregon Revised Statute (ORS) 469.300 et seq.; Oregon Administrative Rules (OAR) Chapter 345, Divisions 1, 21-24	Description: This Site Certificate is the subject of this amendment request.
Individual Industrial Water Pollution Control Facility (WPCF) Permit, WPCF	Oregon Department of Environmental Quality (ODEQ), Eastern Region Attn: Patty Isaak, Permit Coordinator for Eastern Region 800 SE Emigrant Avenue, Suite 330 Pendleton, OR 97801 (541) 278-4605 Patty.Isaak@state.or.us	ORS 468B; OAR Chapter 340, Division 45	Description: Addendum 1 to the Facility's Water Pollution Control Facility (WPCF) Permit (Permit No. 100189) allows: (1) wastewater disposal through evaporation and seepage of construction wastewater; and (2) the disposal of wash water for operational solar panel wash water. The WPCF permit is governed and incorporated into the Site Certificate. See Section 5.4.1 below for further details.
Water Right Permit or Water Use Authorization	Oregon Water Resources Department, Water Rights Section, District 5 Attn: Greg Silbernagel, District 5 Watermaster 116 SE Dorion Avenue Pendleton, OR 97801 (541) 278-5456 Greg.M.Silbernagel@oregon.gov	ORS 537 and 540.505-589; OAR 690, Divisions 310, 340, and 410	Description: Water for construction and decommissioning will be obtained by a third-party contractor through a limited water use license to be applied for prior to starting construction. The proposed source of water for the limited water use license will be Carty Reservoir storage under PGE Certificate 86056. Water for operations will be obtained from the Carty Reservoir under PGE's existing water permit and/or certificated water right. Potable water used by operational personnel at the O&M building will be obtained from the Carty potable water system sourced from an existing on-site well or a private provider. The Facility, as amended in RFA 4, does not need a groundwater permit, surface water permit, or water right transfer. See Section 5.4.1 below for further details.

Permit	Agency Name and Contact	Authority	Description
Archaeological Excavation Permit	Oregon Parks and Recreation Department, State Historic Preservation Office Attn: John Pouley, State Archaeologist 725 Summer Street NE, Suite C Salem, OR 97301 (503) 480-9164 John.Pouley@oprd.oregon.gov	ORS Chapters 97, 358, and 390; OAR Chapter 736, Division 51	Description: Ground-disturbing activity that may affect a known or unknown archaeological resource on public or private lands requires a permit issued by the Oregon Parks and Recreation Department. If the permit is needed, the Certificate Holder will obtain it from the State Historic Preservation Office and therefore this permit should not be included in and governed by the Site Certificate.
Oversize Load Movement Permit/Load Registration	Oregon Department of Transportation (ODOT) Attn: Thomas Lapp, Permit Specialist ODOT District 12 1327 SE Third Street Pendleton, OR 97801 (503) 278-3450 Thomas.Lapp@odot.state.or.us	ORS 818.030; OAR Chapter 734, Division 82	Description: Authorization for oversized loads. Movement of construction cranes and other equipment and materials may require this permit. If needed, the Certificate Holder's third-party contractor will obtain this permit and load registration from ODOT and therefore this permit should not be included in and governed by the Site Certificate.
State Permits Federally Delegated			
National Pollutant Discharge Elimination System (NPDES) Construction Stormwater Discharge General Permit 1200-C	ODEQ, Eastern Region Attn: Patty Isaak, Permit Coordinator for Eastern Region 800 SE Emigrant Avenue, Suite 330 Pendleton, OR 97801 (541) 278-4605 Patty.Isaak@state.or.us	Clean Water Act, Section 402 (33 U.S.C. § 1342); 40 CFR § 122; ORS 468 and 468B; OAR Chapter 340, Division 45	Description: An NPDES permit is required for construction activities that will disturb one or more acres of land and has a potential to impact Waters of the State. The Certificate Holder will obtain this permit for RFA 4 directly from ODEQ and it should not be included in and governed by the Site Certificate. A draft Erosion and Sediment Control Plan to be included in the application for the NPDES permit is included as Attachment I-1 to Exhibit I.
Local Permits			
Conditional Use Permit and Zoning Permit	Morrow County Planning Department Attn: Tamra Mabbott, Planning Director P.O. Box 40 205 Third Street NE Irrigon, OR 97844 (541) 922-4624 tmabbott@co.morrow.or.us	Morrow County Comprehensive Plan; Morrow County Zoning Ordinance Article 1, Section 1.050; Article 3, Section 3.010(C)-(D) and 3.010(K)(3); Article 6	Description: The Certificate Holder elects to obtain a Council determination under ORS Chapter 469.504(1)(b). Under ORS 469.401(3), following issuance of the Site Certificate, the County, upon the Certificate Holder's submission of the proper application and fee, shall issue the permits addressed in the Site Certificate, subject only to the conditions set forth in the Site Certificate and without hearings or other proceedings. Because the Council will make the land use determination, this permit should be included in and governed by the Site Certificate.

Permit	Agency Name and Contact	Authority	Description
Building Permit	City of Boardman Building Department (provides services for building projects within Morrow County) Attn: Glenn McIntire, Building Official 200 City Center Circle P.O. Box 229 Boardman, OR 97818 (541) 626-7011 mcintireg@cityofboardman.com	ORS 455; OAR Chapter 734, Division 51	Description: A building permit is required prior to beginning construction. Morrow County does not have its own building department, so relies on the City of Boardman Building Department for review and approval of all building permits in the county. A building permit will be obtained by the third-party contractor prior to construction of each component for which a building permit will be required; therefore, this permit should not be included in and governed by the Site Certificate.
Oversize Load Movement Permit	Morrow County Public Works Attn: Eric Imes, Public Works Director P.O. Box 428 Lexington, OR 97839 (541) 989-9500 eimes@co.morrow.or.us	Morrow County Zoning Ordinance Section 4.010(B)	Description: This permit will be required to transport loads that exceed standard size and/or weight limits on county roads. If required, this permit will be obtained by the construction contractor prior to construction. Therefore, this permit should not be included in and governed by the Site Certificate.
Septic System Alteration Permit	Umatilla County Public Health Department (provides septic system services for projects within Morrow County) 200 SE 3rd Street Pendleton, OR 97801 (541) 278-6394 Health@umatillacounty.net		Description: If the existing CGS septic system capacity is not sufficient a septic system alteration permit would be obtained from the Umatilla County Public Health Department, which issues alteration permits for septic systems in Morrow County, to increase the capacity of the existing septic system. If required, this permit will be obtained by the construction contractor prior to construction. Therefore, this permit should not be included in and governed by the Site Certificate.

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5.4.1 Permit Applications Not Federally Delegated – OAR 345-021-0010(1)(e)(C)

The changes proposed under RFA 4 are covered under the terms and conditions of the Facility's Water Pollution Control Facility (WPCF) Permit (100189) issued May 2, 2013. ODEQ approved Addendum 1 to WPCF Permit 100189 on January 24, 2019, to allow construction and operation of a photovoltaic solar generating unit at the CGS site. The issuance of Addendum 1 to WPCF Permit 100189 addressed Site Certificate Condition 10.28(ii) requiring PGE to demonstrate that ODEQ has issued a modified WPCF Permit 100189 that specifically addresses solar panel wash water. Addendum 2 to the WPCF Permit 100189 was issued on November 5, 2020, as part of RFA 2; however, none of the modified permit conditions in Addendum 2 are related to solar.

The WPCF permit and Addendum 1 and Addendum 2 expired on April 30, 2023, but remain in effect until ODEQ acts on PGE's renewal application, which was submitted to ODEQ on February 28, 2023. The renewal application primarily requests that ODEQ remove permit conditions that were applicable only to the operation of the Boardman Coal Plant. The renewed WPCF permit will retain Condition 21 in Schedule A and Condition 1(e) in Schedule B, which allows for management and disposal of solar panel wash water by evaporation or infiltration as long as no soaps, detergents, or chemicals are added and outlines required monitoring after panel washing events.

The WPCF authorizes wastewater disposal through evaporation and seepage of construction wastewater and the disposal of wash water for operational solar panel wash water. Under Site Certificate Condition 10.28(ii), solar panel wash water is permitted to be discharged through evaporation or infiltration into the ground at the point of application and the use of chemicals, soaps, detergents, and heated water is prohibited. Because the permit already includes conditions related to construction stormwater and solar panel wash water, no WPCF permit modifications are proposed as part of RFA 4.

(i) In Exhibit J for permits related to wetlands; or

The Carty Solar Farm with proposed RFA 4 changes has been sited such that no impacts to wetlands and Waters of the State or of the U.S. are anticipated. Therefore, no permits related to wetlands are required. Please see Exhibit J for further details, in accordance with OAR 345-021-0010(1)(e)(C)(i).

(ii) In Exhibit O for permits related to water rights.

Water for construction and operation will be obtained from the Carty Reservoir under PGE's existing water right. Water used for construction will be sourced from the Carty Reservoir under PGE's existing water right and obtained by a third-party contractor through a limited water use license. [12] Site Certificate Condition 2.14 will continue to apply, which requires evidence prior to construction that a limited water use license has been obtained from the Oregon Water Resources

[12] Water necessary for construction would be obtained by a third-party contractor through a limited water use license to be applied for prior to starting construction. The proposed source of water for the limited water use license would be Carty Reservoir storage under PGE Certificate 86056.

Department by the Certificate Holder's third-party contractor. Water for solar panel washing during operations will also be obtained from the Carty Reservoir under PGE's existing water right.[13] Potable water used by operational personnel at the O&M building will be obtained from the Carty potable water system sourced from an existing onsite well, or a private provider. Please see Exhibit O for further details.

The changes proposed with RFA 4 do not affect the Certificate Holder's ability to comply with the Site Certificate, and OAR Chapter 690 Divisions 310 and 380. The Council may conclude that the Facility, as amended in RFA 4, does not need a groundwater permit, surface water permit, or water right transfer.

5.4.2 Permit Applications Federally Delegated – OAR 345-021-0010(1)(e)(D)

The U.S. Environmental Protection Agency has delegated authority to the ODEQ to issue NPDES stormwater discharge permits for construction and operations activities. The Certificate Holder previously provided an application for NPDES 1200-C Construction Stormwater Discharge General Permit and an associated Erosion and Sediment Control Plan (ESCP) as Appendix I-1, Exhibit I, in RFA 1. The Certificate Holder will obtain an updated NPDES permit prior to construction via the ODEQ's Your DEQ Online platform.[14] The draft updated ESCP, which forms the basis for the updated ODEQ NPDES 1200-C Construction Stormwater Discharge General Permit, has been provided as Attachment I-1 to Exhibit I. The Certificate Holder anticipates that this permit will be pursued during preconstruction and that confirmation of permit receipt and a permit decision from ODEQ will be received prior to the start of construction. Construction work will be conducted in compliance with the ESCP approved under the NPDES 1200-C permit, which is consistent with Site Certificate Condition 9.1. In addition, the Certificate Holder will complete monitoring of the best management practices implemented under the NPDES 1200-C permit to ensure there are no significant potential adverse impacts to soil consistent with Site Certificate Condition 9.4.

5.4.3 Third Party State or Local Permits – OAR 345-021-0010(1)(e)(E)

> *(i) Evidence that the applicant has, or has a reasonable likelihood of entering into, a contract or other agreement with the third party for access to the resource or service to be secured by that permit.*
>
> *(ii) Evidence that the third party has, or has a reasonable likelihood of obtaining, the necessary permit;*

[13] Water use for operations would come from an existing PGE held permit and/or certificated water right (Permit S-54925; 3,736 acre-feet per year from Carty Reservoir) and/or (Certificate 86057; 135.0 cubic feet per second from Columbia River or Carty Reservoir) which already cover all necessary Place of Use areas for operations.

[14] https://ordeq-edms-public.govonlinesaas.com/pub/login?web=1.

(iii) An assessment of the impact of the proposed facility on any permits that a third party has obtained and on which the applicant relies to comply with any applicable Council standard;

The Certificate Holder has experience working in various permitting regimes across Oregon and typically relies on its construction contractors to obtain third-party permits. The Certificate Holder maintains relationships with reputable construction firms with successful track records and reasonable likelihood of securing permits and completing compliant work. For each permit identified, the Certificate Holder has worked with contractors familiar with constructing or operating renewable energy facilities, and who are knowledgeable of the requirements for applications and activities under such permits. The Certificate Holder will select the same, or similar, contractors who have the necessary experience to likely obtain the necessary permits.

The Certificate Holder may rely on its third-party contractors to obtain the following permits as listed in Table 5 and summarized below in Table 6.

These permits are routine and common permits in Oregon and are not dependent on a unique resource or location. The contractors would be responsible for acquiring these permits prior to construction.

Table 6. Potential Third-Party State or Local Permits

Permit Name	Facility Phase	Description
Oregon Water Resources Department, Water Right Permit, or Water Use Authorization	Construction and Operation	Water for construction and decommissioning will be obtained by a third-party contractor through a limited water use license to be applied for prior to starting construction. The proposed source of water for the limited water use license will be Carty Reservoir storage under PGE Certificate 86056.
ODOT Oversized Load Movement Permit/Load Registration	Construction	Movement of construction cranes and other equipment and materials may require an oversize load movement permit/load registration.
Morrow County (City of Boardman Building Department) Building Permit	Construction	A building permit is required prior to beginning construction. Morrow County does not have its own building department, so relies on the City of Boardman Building Department for review and approval of all building permits in the county. A building permit will be obtained by the third-party contractor prior to construction of each component for which a building permit will be required.
Morrow County Public Works Oversize Load Movement Permit	Construction	This permit will be required to transport loads that exceed standard size and/or weight limits on county roads. If required, this permit will be obtained by the construction contractor prior to construction.
Septic System Alteration Permit	Construction	If the existing CGS septic system capacity is not sufficient a septic system alteration permit would be obtained to increase the capacity of the existing septic system. If required, this permit will be obtained by the construction contractor prior to construction.

5.4.4 Third Party Federally Delegated Permits – OAR 345-021-0010(1)(e)(F)

The Certificate Holder is not relying on any third-party federally delegated permits. The Certificate Holder will directly obtain the NPDES 1200-C permit from ODEQ. Additionally, permits associated with temporary concrete batch plants (i.e., Basic Air Containment Discharge Permit; Clean Air Act [42 U.S.C. Section 7401 et seq.]; 40 CFR Parts 50, 51, and 52; ORS Chapters 468 and 468A; OAR Chapter 340, Division 216) are also common permits that are obtained by a third party. However, the Certificate Holder does not expect to need a temporary concrete batch plant and plans to obtain concrete from existing local batch plants.

5.4.5 Monitoring – OAR 345-021-0010(1)(e)(G)

To the extent that monitoring may be required for any permit conditions, monitoring programs are discussed in the specific exhibit to which the permits pertain. The Certificate Holder will comply with monitoring requirements imposed by the Council and other jurisdictions responsible for granting permits or authorizations for the Facility.

6.0 Site Certificate Revisions – OAR 345-027-0360(1)(d)

OAR 345-027-0360 Preliminary Request for Amendment

(1) To request an amendment to the site certificate required by OAR 345-027-0350(3) or (4), the certificate holder shall submit a written preliminary request for amendment to the Department that includes the following:

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(d) The specific language of the site certificate, including conditions, that the certificate holder proposes to change, add or delete through the amendment;

A redlined Site Certificate is included as Attachment 1. Generally, the proposed changes to language in the Site Certificate fall into three categories. The conditions in Category 1 are discussed further in the appropriate exhibit (see Attachment 4). The conditions in Categories 2 and 3 are clarifications that are summarized below, and the proposed changes are presented in Attachment 1.

1) **Modifications to incorporate the Certificate Holder's proposed amendments to the Carty Solar Farm with proposed RFA 4 changes**. These changes include amending the Facility description to incorporate the Amended Site Boundary, increasing the peak generating capacity for solar energy generation, increasing the area of solar photovoltaic energy generation, adding battery energy storage, and modifying the construction start and completion dates. The Site Certificate Conditions affected in this category include:

   - 4.1(ii), 4.2 (ii) to update construction start and completion deadlines associated with the 50-MW solar farm that never started construction.

- 5.3 to require submittal of a final parking lot plan for the Carty Solar Farm O&M building.
- 5.5 to require consultation with Morrow County Weed Control Supervisor and obtain approval of the Vegetation and Soil Management Plan prior to construction of Facility components approved in Final Order on RFA 4. Note that 9.6 and 9.7 are also modified to incorporate the VSMP.
- 7.2 to include reference to BESS.
- 8.8 to incorporate RFA 4.
- 8.9, 8.10, 8.11, and 8.12 to include requirements for Construction and Operational Wildfire Mitigation Plans (WMPs).
- 10.1, 10.2, 10.4, and 10.5 to add the Carty Solar Farm Habitat Mitigation Plan.
- In Condition 10.7, the requirement to complete raptor nest surveys for the Carty Solar Farm is proposed to be land based rather than aerial. Land-based surveys have been conducted in the area for decades and were adequate to support biological monitoring for the now-demolished Boardman Coal Plant; there are limited trees for nesting and the area can be covered by driving, walking, and using binoculars. The entire area is within the Boardman Military Operations Area Restricted Special Use Airspace (R-5701) that can only be flown with prior authorization from the U.S. Navy, creating logistical issues for conducting aerial surveys.
- 10.25 to require Oregon Department of State Lands' approval of the wetlands delineation report prior to construction.
- Adding 11.7 to require consultation with Confederated Tribes of the Umatilla Indian Reservation prior to starting construction of the Carty Solar Farm.
- 15.1 to reflect new retirement cost estimates for the Carty Solar Farm.

2) **Remove related or supporting facilities that were previously authorized but no longer required.** Section 3.2 of the Site Certificate has been revised to remove these facilities and the associated conditions proposed for removal are listed below, along with the reason:

- 3.45-kV Carty Solar Farm transmission line is being deleted because it is being replaced by the 34.5-kV aboveground collector line (2-mile-long segment) for the Carty Solar Farm.
- Remove Condition 6.26 because the three route options for the 34.5-kV transmission line are no longer authorized by the Site Certificate because construction commencement deadline was not achieved. There are below ground and aboveground 34.5-kV collector lines and a 300-foot transmission line that are included in the Facility description, and therefore already part of what is authorized to be constructed.

- Remove the security guard station because it was not constructed within the allowed construction timeline and PGE is not seeking an amendment to construct the guard station.

3) **Remove related or supporting facilities related to the now retired and demolished Boardman Coal Plant and its associated components**:

   - In 10.24, remove reference to the BCP and sewage lagoons that were demolished and no longer exist.
   - Remove Condition 10.30 because the settling ponds, vehicle wash water pond, and coal yard ponds referenced were all removed during the BCP demolition.
   - Remove the evaporation ponds approved in the original site certificate for the Carty Generating Station. The Boardman Coal Plant evaporation ponds were never connected to the Carty Generating Station and PGE is not seeking an amendment to construct the required interconnections.
   - Remove the 300,000-gallon water storage tank, adjacent pumphouse, and associated water pipeline because the Carty Generating Station was never connected to these Boardman facilities and PGE is not seeking an amendment to construct the required interconnections.

4) **Modifications to clearly distinguish between applicable requirements for Unit 1 and Carty Solar Farm and clarify use of sub-bullets (i) and (ii).**

   - Applies to the following Site Certificate Conditions: 5.4, 6.17, 9.6, 9.7, 10.1, 10.7, 10.14, and 11.6. Note that the bifurcation established in Amendment 1 for Condition 10.7 did not establish the same preconstruction requirements for Unit 1 and the Carty Solar Farm; Attachment 1 proposes further redlines to address this issue for Condition 10.7.
   - In Condition 10.14 the delineation format appears to have inadvertently removed Washington ground squirrel requirements from the Carty Solar Farm. Suggested revisions to 10.14 clarify that Washington ground squirrel requirements are applicable to the Carty Solar Farm.
   - Note that the Certificate Holder is aware that the format and organization of the Site Certificate may be modified during the Proposed Order to also distinguish more clearly between applicable requirements for Unit 1 and Carty Solar Farm.

5) **Modifications requested by either ODOE or the Certificate Holder for clarity, scrivener error correction, or to reflect updated information.** ODOE has requested modifications to conditions to which the Certificate Holder has agreed and has included in RFA 4. The Certificate Holder has also proposed minor edits. The Site Certificate Conditions affected in this category include:

   - 6.17 to correct reference to the appropriate Site Certificate Condition (from 6.26 to 6.27).

- 6.25 to be deleted based on recommendation by ODOE following review of the CGS 2022 annual report and review of similar conditions in other site certificates issued by the Council. The intent of the condition appears to be to make sure waste is appropriately disposed of and type/quantity of waste is reported for the wasteshed. Condition 6.24 (which requires the use of franchised solid waste hauler or otherwise compliance with the Morrow County Solid Waste Management Ordinance) and Condition 2.3 (which requires compliance with local ordinances and state law) are sufficient to ensure proper disposal. State laws require waste to be disposed of only at permitted waste disposal facilities; those permitted waste disposal facilities have requirements as part of their permits to accurately report the type and weight of each material, broken down by wasteshed of origin; and that information is reported to ODEQ annually. Therefore, Condition 6.25 is not necessary.
- 6.27 to update OAR reference in Division 27.
- 8.7 to update the Boardman Rural Fire Protection District to Boardman Fire Rescue District to reflect name change.
- 10.15 to correct when the speed limit of 10 mph is required. As written the condition states the speed limit applies from one hour before sunset to one hour after sunrise. The correct timeframe is from one hour before sunrise to one hour after sunset.
- 10.29 to clarify description of the septic system.

7.0 Other Standards and Permits – OAR 345-027-0360(1)(e)

OAR 345-027-0360 Preliminary Request for Amendment

(1) To request an amendment to the site certificate required by OAR 345-027-0350(3) or (4), the certificate holder shall submit a written preliminary request for amendment to the Department that includes the following:

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(e) A list of all Council standards and other laws, including statutes, rules and ordinances, applicable to the proposed change, and an analysis of whether the facility, with the proposed change, would comply with those applicable laws and Council standards. For the purpose of this rule, a law or Council standard is "applicable" if the Council would apply or consider the law or Council standard under OAR 345-027-0375(2); and

A list of statutes, administrative rules, and local government ordinances relevant to amending the Site Certificate for the Facility is provided in Attachment 4, Exhibit CC. No additional statutes, rules, or ordinances need to be added based on the proposed changes.

Council standards relevant to RFA 4 include Division 22 (General Standards for Siting Facilities) and Division 24 (Specific Standards for Siting Facilities). Division 23, which applies to non-

generating facilities, does not apply to solar power generating facilities. Similarly, inapplicable provisions of Division 24 (e.g., standards applicable to gas plants, gas storage, non-generating facilities) are not discussed.

The Facility as amended by RFA 4 would comply with applicable laws and Council standards. The proposed changes to the Facility do not alter the basis for the Council's earlier findings for the Facility. The primary purpose of RFA 4 is to increase the amount of non-emitting energy generation provided by the facility, and the addition of battery storage to maximize reliability and customer value and to help achieve Oregon's ambitious decarbonization targets. Table 7 identifies Council standards and other laws reviewed as part of RFA 4 and their applicability to RFA 4. The Facility will comply with all existing applicable Site Certificate Conditions, with proposed modifications as identified in Attachment 1. The appended exhibits (see Attachment 4) contain the information necessary for the Council to find that the Facility, with the proposed changes, continues to meet the standards of the relevant laws.

Table 7. Standards and Laws Relevant to Proposed Amendment

Standard	Applicability & Compliance
OAR 345-022-0000 General Standard of Review	Applicable and complies. The Council previously found that the Facility complies with the General Standard of Review. The Facility continues to comply with the requirements of the Oregon Energy Facility Siting statutes and standards adopted by the Council. The changes proposed with RFA 4 will not result in any significant impacts to resources. In most cases, impacts to resources resulting from the proposed changes will be similar to what has already been approved for the Facility. RFA 4 does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions.
OAR 345-022-0010 Organizational Expertise	Applicable and complies. The Council has previously found that the Certificate Holder has the ability to construct, operate, and retire the Facility. RFA 4 does not alter the basis for the Council's prior findings regarding organizational expertise and does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Section 5.3 above for accompanying analysis.
OAR 345-022-0020 Structural Standard	Applicable and complies. RFA 4 does not alter the basis for the Council's prior findings regarding the structural standard and does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Exhibit H in Attachment 4 for accompanying analysis.
OAR 345-022-0022 Soil Protection	Applicable and complies. Permanent and temporary disturbance will occur as a result of the components proposed in RFA 4 including the solar modules, BESS, and proposed substation. However, RFA 4 does not alter the basis for the Council's prior findings regarding soil protection and does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Exhibit I in Attachment 4 for accompanying analysis.
OAR 345-022-0030 Land Use	Applicable and complies with updated Morrow County zoning code. The Carty Solar Farm with proposed RFA 4 changes, as proposed, will not force a significant change in accepted farm practices, nor will it significantly increase the cost of farm practices. RFA 4 includes a request for a Goal 3 exception to allow inclusion of the solar energy generation facility on agricultural land but does not otherwise alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Exhibit K in Attachment 4 for accompanying analysis.

Standard	Applicability & Compliance
OAR 345-022-0040 Protected Areas	Applicable and complies. Visual, noise and traffic impacts were reviewed for the proposed changes. RFA 4 does not alter the basis for the Council's prior findings regarding protected areas and does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Exhibit L in Attachment 4 for accompanying analysis.
OAR 345-022-0050 Retirement and Financial Assurance	Applicable and complies. With the proposed changes, the Certificate Holder is still able to restore the site to a useful, nonhazardous condition following permanent cessation of construction or operation of the Facility. RFA 4 does not alter the basis for the Council's prior findings regarding retirement and financial assurance and does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Exhibits M and X in Attachment 4 for accompanying analyses.
OAR 345-022-0060 Fish and Wildlife Habitat	Applicable and complies. The amended site boundary is in areas surveyed for fish and wildlife habitat as documented in Exhibit P. The Amended Wildlife and Habitat Monitoring and Mitigation Plan has been updated to address the layout of the Carty Solar Farm with proposed RFA 4 changes and will be finalized after final design to account for impacts per Condition 10.1. RFA 4 does not alter the basis for the Council's prior findings regarding fish and wildlife habitat and does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Exhibit P in Attachment 4 for accompanying analysis.
OAR 345-022-0070 Threatened and Endangered Species	Applicable and complies. The Facility will be constructed within the amended site boundary where impacts to threatened and endangered species have been reviewed. RFA 4 does not alter the basis for the Council's prior findings regarding threatened and endangered species and does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Exhibit Q in Attachment 4 for accompanying analysis.
OAR 345-022-0080 Scenic Resources	Applicable and complies. The ASC reviewed visual impacts for the Facility on Scenic Resources. The components proposed in RFA 4 including the solar modules, BESS, and proposed substation do not alter the basis for the Council's prior findings regarding scenic resources and does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Exhibit R in Attachment 4 for accompanying analysis.
OAR 345-022-0090 Historic, Cultural and Archaeological Resources	Applicable and complies. A cultural resources survey was conducted in October 2023 for all areas where ground disturbance may occur as part of RFA 4. Some of these areas had previously been surveyed in 2016. No new cultural resources were identified. Cultural resources will be protected per Site Certificate conditions and an Archaeological Monitoring Plan. RFA 4 does not alter the basis for the Council's prior findings regarding historical, cultural, or archeological resources and does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Exhibit S in Attachment 4 for accompanying analysis.
OAR 345-022-0100 Recreation	Applicable and complies. RFA 4 does not alter the basis for the Council's prior findings regarding recreation areas and does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Exhibit T in Attachment 4 for accompanying analysis.
OAR 345-022-0110 Public Services	Applicable and complies. The proposed changes are not anticipated to substantially increase the demand of public services generated by the Facility. RFA 4 does not alter the basis for the Council's prior findings regarding public services and does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Exhibit U in Attachment 4 for accompanying analysis.

Standard	Applicability & Compliance
OAR 345-022-0115 Wildfire Prevention and Risk Mitigation	OAR 345-022-0115 is a new standard introduced in 2022 and therefore was not previously addressed in the original Application for Site Certificate or subsequent amendments for the approved Facility. The design, construction, and operation of the Facility, taking into account mitigation, is not likely to result in significant adverse impacts to areas subject to a heightened risk of wildfire or high-fire consequence areas addressed under OAR 345-022-0115. PGE has a Wildfire Mitigation Plan that has been approved by the Oregon Public Utility Commission in compliance with OAR 860, Division 300. See Exhibit V in Attachment 4 for accompanying analysis and facility specific Wildfire Mitigation Plan.
OAR 345-022-0120 Waste Minimization	Applicable and complies. The Certificate Holder has plans to minimize the generation of solid waste and wastewater and to recycle or reuse solid waste and wastewater generated by the Carty Solar Farm with proposed RFA 4 changes. RFA 4 does not alter the basis for the Council's prior findings regarding waste minimization and does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Exhibit W in Attachment 4 for accompanying analysis.
OAR 345-024-0010 Public Health and Safety Standards for Wind Energy Facilities	These standards do not apply.
OAR 345-024-0015 Siting Standards for Wind Energy Facilities	These standards do not apply.
OAR 345-024-0090 Transmission Lines	Applicable and complies. RFA 4 does not alter the basis for the Council's prior findings regarding transmission line standards and does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Exhibit DD in Attachment 4.
OAR 340-035-0035 Noise	Applicable and complies. The Certificate Holder modeled noise generating components proposed with RFA 4 and the results show the Facility will comply with noise requirements in OAR 340-035-0035. RFA 4 does not alter the basis for the Council's prior findings regarding noise and does not alter the Certificate Holder's ability to comply with the Site Certificate conditions. See Exhibit Y in Attachment 4 for accompanying analysis.
Removal-Fill Law	Applicable and complies. A removal-fill permit is not needed for the Facility because the Facility will not temporarily or permanently impact waters of the state. RFA 4 does not alter the basis for the Council's prior findings regarding the removal-fill law and does not alter the Certificate Holder's ability to comply with the Site Certificate conditions. See Exhibit J in Attachment 4 for accompanying analysis.
Water Rights	Applicable and complies. The anticipated construction water demand from the amended facility will be more than the amount previously anticipated for the Facility as currently approved; however, the water sources remain the same as for the approved Facility and the existing water permits and certificates can accommodate the additional water use. RFA 4 does not alter the basis for the Council's prior findings regarding water rights and does not alter the Certificate Holder's ability to comply with the Site Certificate Conditions. See Exhibit O in Attachment 4 for accompanying analysis.

8.0 Property Owners of Record – OAR 345-027-0360(1)(f))

OAR 345-027-0360 Preliminary Request for Amendment

(1) To request an amendment to the site certificate required by OAR 345-027-0350(3) or (4), the certificate holder shall submit a written preliminary request for amendment to the Department that includes the following:

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(f) A list of the names and mailing addresses of property owners, as described in this rule:

(A) The list must include all owners of record, as shown on the most recent property tax assessment roll, of property located:

(i) Within 100 feet of property which the subject of the request for amendment, where the subject property is wholly or in part within an urban growth boundary;

(ii) Within 250 feet of property which is the subject of the request for amendment, where the subject property is outside an urban growth boundary and not within a farm or forest zone; or

(iii) Within 500 feet of property which is the subject of the request for amendment, where the subject property is within a farm or forest zone; and

(B) In addition to incorporating the list in the request for amendment, the applicant must submit the list to the Department in an electronic format acceptable to the Department.

A property owner list and accompanying map is provided as part of Attachment 3, received October 16, 2026.

9.0 Conclusion

As detailed above, the proposed changes to the Facility will utilize the latest technology to improve grid reliability, while continuing to provide critical renewable energy for the state. Based on this submittal and attached exhibits (see Attachment 4), the Facility, as modified by RFA 4, continues to comply with the requirements of the Oregon Energy Facility Site Statutes, ORS 469.300 to 469.520, and all other applicable Oregon statutes and administrative rules within the Council's jurisdiction. Moreover, the existing and amended Site Certificate Conditions ensure that the Facility will continue to comply with the applicable laws, standards, and rules. For these reasons, the Certificate Holder respectfully requests approval of RFA 4.

10.0 References

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UL Solutions. 2023. UL 9540A Test Method. Available online at: https://www.ul.com/services/ul-9540a-test-method

Figures

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Carty Generating Station Request for Amendment 4

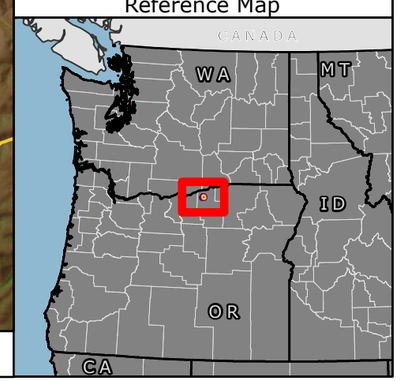
Figure 1
Vicinity Map

MORROW COUNTY, OR

- Amended Site Boundary
- City/Town
- County Boundary
- State Boundary
- Interstate Highway
- US Highway
- State Highway
- County Highway
- Airports
- Boardman Naval Bombing Range
- Umatilla Chemical Depot
- Confederated Tribes of the Umatilla Indian Reservation
- Confederated Tribes of the Warm Springs

TETRA TECH PGE

Reference Map



1:300,000 WGS 1984 UTM Zone 11N 0 3 6 12 18 24 Miles NOT FOR CONSTRUCTION

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Carty Generating Station Request for Amendment 4

Figure 2
Preliminary Site Plan

MORROW COUNTY, OR

Figure 2A

Figure 2B

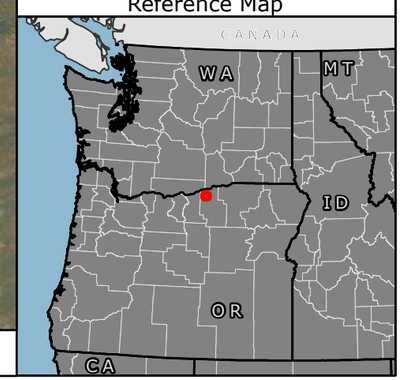
Carty Reservoir

- Grid Index
- Amended Site Boundary
- Micrositing Area
- Unsurveyed Micrositing Area
- Solar Fence
- Solar Modules
- Solar Inverters/ Transformers
- Below Ground Collector Line
- Above Ground Collector Line
- Proposed Road
- Collector Substation
- BESS Fence
- BESS Units
- BESS Inverters/ Transformers
- O&M Building
- Temporary Construction Area

TETRA TECH

PGE

Reference Map



1:24,000 1 inch equals 2,000 feet WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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Carty Generating Station Request for Amendment 4

Figure 2A Preliminary Site Plan

MORROW COUNTY, OR

Tower Rd

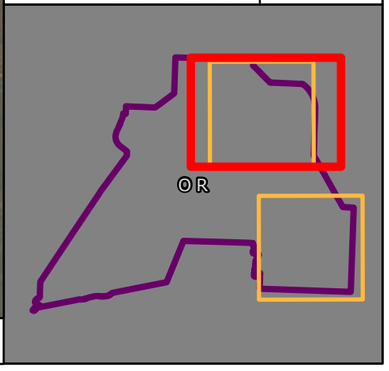
Overhead Connection Between Proposed Substation and Existing Dead-end

- Amended Site Boundary
- Micrositing Area
- Unsurveyed Micrositing Area
- Solar Fence
- Solar Modules
- Solar Inverters/ Transformers
- Below Ground Collector Line
- Above Ground Collector Line
- Proposed Road
- Collector Substation
- BESS Fence
- BESS Units
- BESS Inverters/ Transformers
- O&M Building
- Temporary Construction Area

TETRA TECH

PGE

Reference Map



1:7,500 1 inch equals 625 feet WGS 1984 UTM Zone 11N

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Carty Generating Station Request for Amendment 4

Figure 2B Preliminary Site Plan

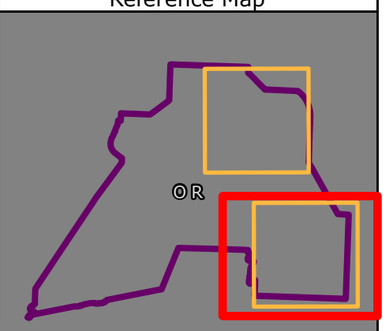
MORROW COUNTY, OR

- Amended Site Boundary
- Micrositing Area
- Unsurveyed Micrositing Area
- Solar Fence
- Solar Modules
- Solar Inverters/ Transformers
- Below Ground Collector Line
- Above Ground Collector Line
- Proposed Road

TETRA TECH

PGE

Reference Map



1:7,500 1 inch equals 625 feet WGS 1984 UTM Zone 11N

0 0.13 0.25 0.5 Miles

NOT FOR CONSTRUCTION

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Carty Generating Station Request for Amendment 4

Figure 3
Area Subject to Request for Amendment 4

MORROW COUNTY, OR

230-kV BCP to Dalreed transmission line

Area Removed from Site Boundary Due to Washington Ground Squirrel

Areas Previously Used for Boardman Coal Plant

500-kV Grassland to Slatt transmission line

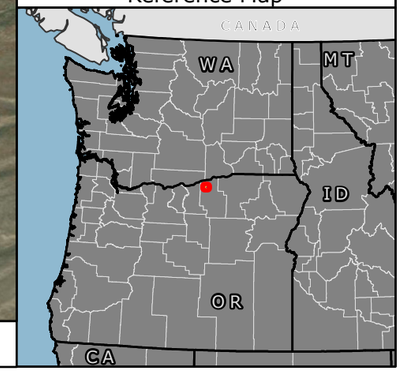
Area Previously Used for Boardman Ash Disposal Pile

- Approved Facility Site Boundary
- Areas Surrounded by Approved Site Boundary for Carty Generating Station, but Not Previously Included
- Site Boundary Subject to Request for Amendment 4

TETRA TECH

PGE

Reference Map



1:24,000

WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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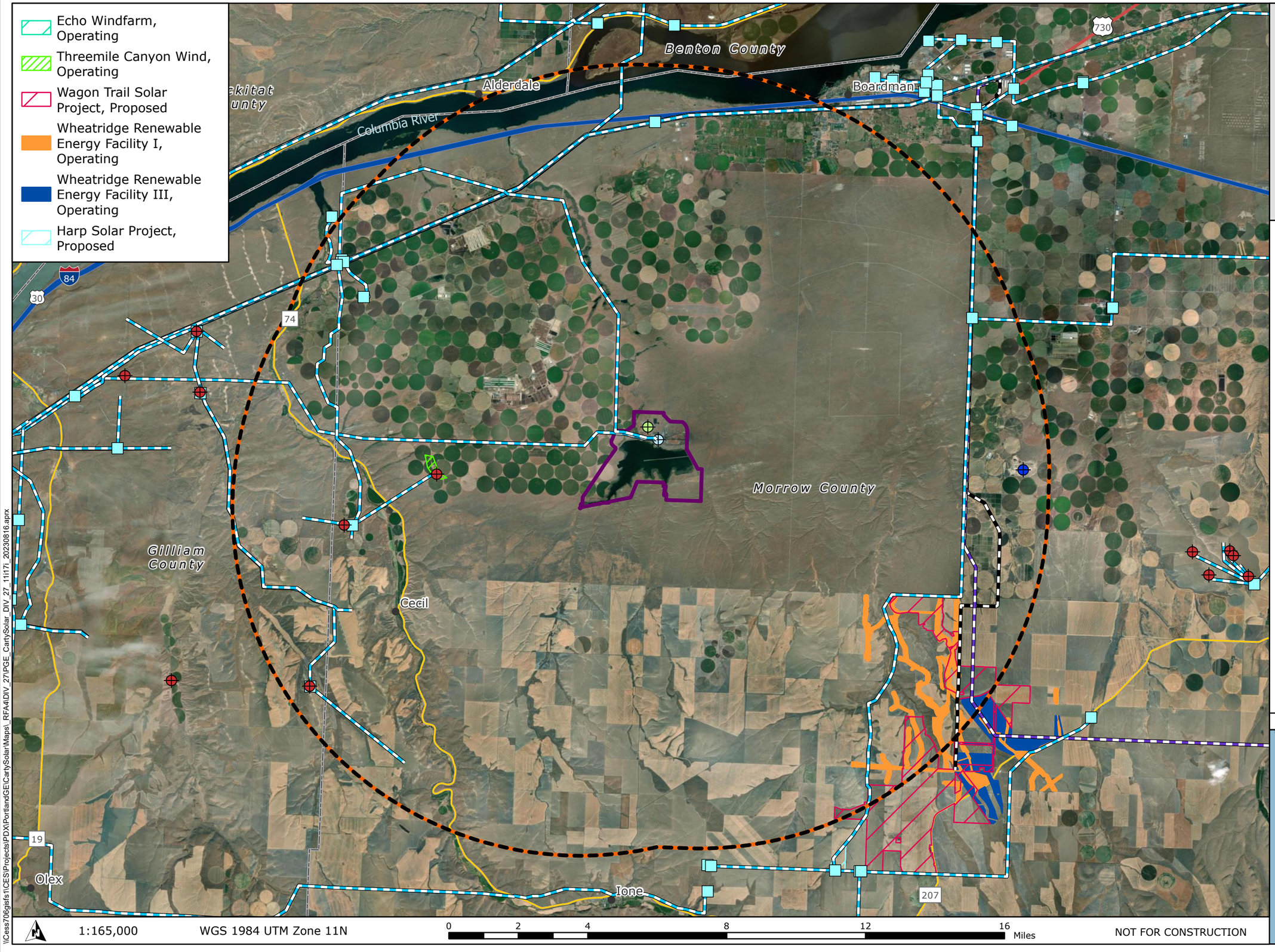
Carty Generating Station Request for Amendment 4

Figure 4
Energy Facilities within 10 miles

MORROW COUNTY, OR

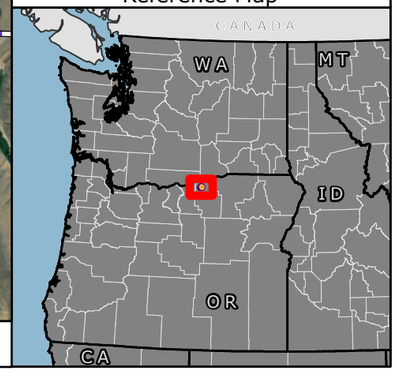


- Amended Site Boundary
- Analysis Area (10-mile Buffer)
- City/Town
- County Boundary
- Interstate Highway
- US Highway
- State Highway
- Boardman Coal Plant (Closed)
- Finley Butte Energy Facility
- Wind
- Solar
- Natural Gas
- Substations
- In Service Transmission Lines
- Proposed B2H Transmission Line
- Wheatridge Transmission Lines

TETRA TECH

PGE

Reference Map



1:165,000 WGS 1984 UTM Zone 11N

0 2 4 8 12 16 Miles

NOT FOR CONSTRUCTION

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Attachment 1. Redlined Site Certificate

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ENERGY FACILITY SITING COUNCIL

OF THE

STATE OF OREGON

~~Third~~ Fourth Amended Site Certificate for the Carty Generating Station

ISSUE DATES

Site Certificate	July 2, 2012
First Amended Site Certificate	December 14, 2018
Second Amended Site Certificate	November 19, 2020
Third Amended Site Certificate	July 22, 2022
Fourth Amended Site Certificate	DATE

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CARTY GENERATING STATION SITE CERTIFICATE
TABLE OF CONTENTS

Page

1.0 INTRODUCTION 1

2.0 SITE CERTIFICATION 2

3.0 DESCRIPTION OF FACILITY 4
3.1 Location and Site Boundary 4
3.2 The Energy Facility 5

4.0 GENERAL ADMINISTRATIVE CONDITIONS 14

5.0 PRE-CONSTRUCTION REQUIREMENTS 15

6.0 DESIGN, CONSTRUCTION AND OPERATIONS 18

7.0 PUBLIC HEALTH AND SAFETY 24

8.0 ON-SITE SAFETY AND SECURITY 26

9.0 PROTECTION OF SOIL 28

10.0 PROTECTION OF NATURAL RESOURCES 30

11.0 PROTECTION OF HISTORIC, CULTURAL AND ARCHAEOLOGICAL RESOURCES 42

12.0 Carbon Dioxide Emissions 44

13.0 NOISE CONTROL AND NOISE COMPLAINT RESPONSE 50

14.0 MONITORING AND REPORTING REQUIREMENTS - GENERAL 51

15.0 RETIREMENT AND FINANCIAL ASSURANCE 52

16. SUCCESSORS AND ASSIGNS 55

17. SEVERABILITY AND CONSTRUCTION 55

18. GOVERNING LAW AND FORUM 55

19. EXECUTION 55

Acronyms and Abbreviations

AC	alternating current
ACEC	Area of Critical Environmental Concern
ADA	Americans with Disabilities Act
AMD1	Final Order on Amendment No. 1
AMD2	Final Order on Amendment No. 2
AMD3	Final Order on Amendment No. 3
AMD4	Final Order on Amendment No. 4
Btu	British Thermal Unit
BCP	Boardman Coal Plant
Carty	Carty Generating Station
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
Council	Oregon Energy Facility Siting Council
CTG	combustion turbine generator
CTUIR	Confederated Tribes of the Umatilla Indian Reservation
DC	direct current
Department	Oregon Department of Energy
DEQ	Oregon Department of Environmental Quality
DOGAMI	Oregon Department of Geology and Mineral Industries
DPO	Draft Proposed Order
EPCRA	Emergency Planning and Community Right-to-Know Act
ESCP	Erosion and Sediment Control Plan
FAA	Federal Aviation Administration
FERC	Federal Energy Regulatory Commission
GTN	Gas Transmission Northwest LLC
HMA	Habitat Mitigation Area
HRSG	Heat Recovery Steam Generator

kV	kilovolt
MCZO	Morrow County Zoning Ordinance
MOU	Memorandum of Understanding
MSL	mean sea level
MW	megawatt
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and Maintenance
OAR	Oregon Administrative Rule
ODFW	Oregon Department of Fish and Wildlife
ORS	Oregon Revised Statutes
OSSC	Oregon Structural Specialty Code
PGE	Portland General Electric Company
PV	photovoltaic
SHPO	Oregon State Historic Preservation Office
SPCC	Spill Prevention, Control, and Countermeasure
STG	Steam Turbine Generator
USFWS	United Stated Fish and Wildlife Service
Unit 1	450 megawatt natural gas-fueled, combined-cycle, combustion turbine generator
WGS	Washington Ground Squirrel
WPCF	Water Pollution Control Facilities

1.0 INTRODUCTION

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

The findings of fact, reasoning, and conclusions of law underlying the terms and conditions of this site certificate are set forth in the following documents, which by this reference are incorporated herein: (a) the Council's *Final Order in the Matter of the Application for a Site Certificate for the Carty Generating Station* (Final Order on the Application) issued on June 29, 2012, (b) the Council's *Final Order in the Matter of the Site Certificate for the Carty Generating Station Request for Amendment No.1* (Final Order on Amendment No. 1 [AMD1]), (c) the Council's *Final Order in the Matter of the Site Certificate for the Carty Generating Station Request for Amendment No.2* (Final Order on Amendment No. 2 [AMD2]), ~~and~~(d) the Council's *Final Order in the Matter of the Site Certificate for the Carty Generating Station Request for Amendment No. 3* (Final Order on Amendment No. 3 [AMD3]), and (e) the Council's Final Order on Request for Amendment No. 4 (Final Order on Amendment No. 4 [AMD4]) issued on DATE. In interpreting this site certificate, any ambiguity will be clarified by reference to the following, in order of priority: (1) this Site Certificate (issued ~~July 22, 2022~~ DATE, effective ~~July 22, 2022~~ DATE), (2) the Final Order on Amendment No. 4, (3) the record of the proceedings that led to the Final Order on Amendment No. 4, (~~2~~4) the Final Order on Amendment No. 3, (~~3~~5) the record of the proceedings that led to the Final Order on Amendment No. 3, (~~4~~6) the Final Order on Amendment No. 2, (~~5~~7) the record of the proceedings that led to the Final Order on Amendment No. 2, (~~6~~8) the Final Order on Amendment No. 1, (~~7~~9) the record of the proceedings that led to the Final Order on Amendment No. 1, (~~8~~10) the Final Order on the Application, and (~~9~~11) the record of the proceedings that led to the Final Order on the Application.

This Site Certificate does not address, and is not binding with respect to, matters that were not addressed in the Council's Final Order on the Application, Final Order on Amendment No. 1, Final Order on Amendment No. 2, ~~or~~ Final Order on Amendment No. 3, or Final Order on Amendment No. 4. Such matters include, but are not limited to: building code compliance; wage; hour; and other labor regulations; local government fees and charges; other design or

operational issues that do not relate to siting the facility [ORS 469.401(4)]; and permits issued under statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council. ORS 469.503(3).

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

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

2.0 SITE CERTIFICATION

2.1 To the extent authorized by state law and subject to the conditions set forth herein, the State authorizes the certificate holder to construct, operate, and retire a facility that includes a natural gas-fueled electrical generating unit and a photovoltaic (PV) solar electrical generating unit, together with certain related or supporting facilities, at the site in Morrow County and Gilliam County, Oregon, as described in Section 3.0 of this site certificate.
[ORS 469.401(1)][AMD1; AMD2]

2.2 This site certificate is effective until 1) it is terminated under OAR 345-027-0110 or the rules in effect on the date that termination is sought; or 2) until the site certificate is revoked under ORS 469.440 and OAR 345-029-0100 or the statutes and rules in effect on the date that revocation is ordered.
[ORS 469.401(1)]

2.3 Both the State and the certificate holder shall abide by local ordinances, state law, and the rules of the Council in effect on the date this site certificate is executed. ORS

469.401(2). In addition, upon a clear showing of a significant threat to public health, safety, or the environment that requires application of later-adopted laws or rules, the Council may require compliance with such later-adopted laws or rules.
[ORS 469.401(2)]

2.4 For a permit, license, or other approval addressed in and governed by this site certificate, the certificate holder shall comply with applicable state and federal laws adopted in the future to the extent that such compliance is required under the respective state agency statutes and rules.
[ORS 469.401(2)]

2.5 Subject to the conditions herein, this site certificate binds the State and all counties, cities, and political subdivisions in Oregon as to the approval of the site and the construction, operation, and retirement of the facility as to matters that are addressed in and governed by this site certificate.
[ORS 469.401(3)]

2.6 Each affected state agency, county, city, and political subdivision in Oregon with authority to issue a permit, license, or other approval addressed in or governed by this site certificate shall, upon submission of the proper application and payment of the proper fees, but without hearings or other proceedings, issue such permit, license, or other approval subject only to conditions set forth in this site certificate.
[ORS 469.401(3)]

2.7 After issuance of this site certificate, each state agency or local government agency that issues a permit, license, or other approval for the facility shall continue to exercise enforcement authority over such permit, license, or other approval.
[ORS 469.401(3)]

2.8 After issuance of this site certificate, the Council shall have continuing authority over the site and may inspect, or direct the Oregon Department of Energy (Department) to inspect, or request another state agency or local government to inspect, the site at any time in order to ensure that the facility is being operated consistently with the terms and conditions of this site certificate.
[ORS 469.430]

2.9 The certificate holder shall design, construct, operate and retire the facility:
a. Substantially as described in the site certificate;
b. In compliance with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances in effect at the time the site certificate is issued; and
c. In compliance with all applicable permit requirements of other state agencies.
[Final Order III.D.2] [Mandatory Condition OAR 345-025-0006(3)]

2.10 Before any transfer of ownership of any unit of the facility or ownership of the site certificate holder, the certificate holder shall inform the Department of the proposed new owners. The requirements of OAR 345-027-0400 apply to any transfer of ownership that requires a transfer of the site certificate.
[Final Order IV.B.2.8] [Mandatory Condition OAR 345-025-0006(15)] [AMD1; AMD2]

2.11 Any matter of non-compliance under the site certificate shall be the responsibility of the certificate holder. Any notice of violation issued under the site certificate shall be issued to the certificate holder. Any civil penalties assessed under the site certificate shall be levied on the certificate holder.
[Final Order IV.B.2.5]

2.12 Within 72 hours after discovery of conditions or circumstances that may violate the terms or conditions of the site certificate, the certificate holder shall report the conditions or circumstances to the Department.
[Final Order IV.B.2.7]

2.13 The Council shall not change the conditions of this site certificate except as provided for in OAR Chapter 345, Division 27.
[Final Order VI.1] [Mandatory Condition OAR 345-025-0006(1)] [AMD2]

2.14 The certificate holder must:
Prior to construction of the Carty Solar Farm, provide evidence to the Department that a limited water use license from Oregon Department of Water Quality has been obtained by its third-party-contractor.

2.15 During construction of the Carty Solar Farm, provide to the Department in semi-annual reports, pursuant to OAR 345-026-0080, documentation of the record of all water use, as required by the third-party's limited water use license, demonstrating that the allowable total and per minute water use (total gallons and gallons per minute) have not been exceeded.
[AMD1]

3.0 DESCRIPTION OF FACILITY

3.1 LOCATION AND SITE BOUNDARY

The Carty Generating Station is located in Morrow and Gilliam Counties, Oregon, southwest of the City of Boardman and adjacent to the Carty Reservoir.

As defined by OAR 345-001-0010, the "site boundary" is the perimeter of the site of the energy facility, its related or supporting facilities, all temporary staging areas, and all corridors. The site boundary for the Carty Generating Station encompasses approximately ~~4,997~~ 5,249 acres.

3.2 THE ENERGY FACILITY

The Carty Generating Station includes a natural gas-fueled combined-cycle unit and a solar photovoltaic (PV) electric power generating unit. The Carty Generating Station is capable of generating up to ~~500~~650 megawatts (MW) of electrical power (up to 450 MW from the natural gas-fueled combined-cycle unit [Unit 1], and up to ~~50~~200 MW from the solar PV generating unit).

Unit 1 of the Carty Generating Station includes one natural-gas-fueled generating unit consisting of one high efficiency combustion turbine generator (CTG), heat recovery steam generator (HRSG), and a steam turbine generator (STG). Within this unit, the natural gas CTG produces electricity, with the exhaust gases from the CTG supplying heat to the HRSG. Steam produced in the HRSG is used to power the STG to produce additional electricity. Duct burners fueled by natural gas in the HRSG allow for production of additional steam and additional electricity from the STG. Steam exhausted from the STG is condensed in a water-cooled condenser, with the resultant condensate returned to the HRSG to produce additional steam. Water used for cooling in the water-cooled condenser is routed to a cooling tower, where the water is cooled and then pumped back through the condenser. If required for starting the CTG or to maintain the plant in a ready-to-start condition, a natural gas-fueled auxiliary boiler will be used to supply steam when none is available from the HRSG. The CTG and STG are located within a generating building to control noise during operation and to allow a controlled atmosphere for maintenance activities. A separate water treatment building houses the equipment necessary to purify raw water, producing de-mineralized water for use in the steam cycle of the unit.

Generator transformers step up the voltage produced by the gas-fueled unit to 500 kilovolts (kV). A 500-kV transmission line connects the generator transformers to a 500-kV switchyard, the Grassland Switchyard. From the switchyard, Portland General Electric Company (PGE) utilizes the existing 500-kV Boardman to Slatt transmission line to connect to the Slatt Substation.

The Carty Generating Station consumes about 75 million cubic feet of natural gas per day during operation of the gas-fired generating unit. Natural gas is supplied to the facility through a lateral pipeline operated by Gas Transmission Northwest LLC (GTN). This lateral pipeline is owned and operated by GTN and is outside the jurisdiction of the Council. This natural gas pipeline was permitted by the Federal Energy Regulatory Commission (FERC).

In addition to Unit 1, the Carty Generating Station also includes a ~~50~~200 MW solar PV power generating unit, the Carty Solar Farm, occupying ~~a 315~~859.9 ~~-~~acres, ~~site~~ and located in two separate solar generation areas to the north and south of the Carty Reservoir. The two solar areas are fenced separately and referred to as~~:~~ the Northern Solar Area~~;~~ and Southern Solar Area. The Carty Solar Farm was permitted through the ~~First, and Third~~ Fourth Amended Site Certificates, and consists of multiple solar modules mounted on racking systems, connected in series strings, to produce direct current (DC) electricity from sunlight. The DC electricity is then routed to inverters and step-up transformers to be converted to alternating current (AC)

electricity and voltage increased to the appropriate collector circuit potential. The inverters and step-up transformers are located amongst the solar modules within the same perimeter fence for each solar area. Electrical power produced by the Carty Solar Farm would be collected and routed via a new 34.5 kV ~~transmission line to one of three interconnection options located north of the Carty Reservoir. Five potential transmission line routes from the Carty Solar Farm to the three interconnection options are currently permitted under the First and Third Amended Site Certificate for Carty Generating Station. Each route would be of the same approximate design and would be approximately 2 to 3 miles long, depending on the route selected. If an interconnection to the Grassland Switchyard is selected, the switchyard would be enlarged to 15 acres, as approved in the original Site Certificate and the First Amended Site Certificate for Carty Generating Station~~ collection system to an interconnection with a ~~proposed~~ collector substation located to the north of the Carty Reservoir. The 34.5-kV collector lines between the two solar areas and the collector substation are entirely underground, except for a single ~~2~~1-mile-long segment. This aboveground segment of collector line extends from the perimeter fence on the north side of the Southern Solar Area, along the eastern shore of the Carty Reservoir, to a ~~point just south of the Northern Solar Area,~~ where the line ~~goes back underground until~~ enter~~ings~~ the proposed collector substation. The collector substation is located near an existing electrical transmission dead-end structure, which formerly served the decommissioned and demolished Boardman Coal Plant (BCP). The collector substation connects to the existing dead-end structure and then to the Grassland Switchyard via the existing 500-kilovolt (kV) transmission line that formerly served the BCP.

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

Unit 1:

- Carty Reservoir and portions of the raw water intake system (includes 400-gallon sodium hypochlorite tank, 1,100-gallon anti-scalant; and 400-gallon sodium hypochlorite tote) and associated electrical connection
- 500-kV transmission line from Unit 1 to the Grassland Switchyard
- 230-kV transmission line from the Carty Substation to the Dalreed substation
- 34.5-kV construction substation to railroad crossing transmission line
- Cooling tower
- Liquid storage facilities
- Water Discharge Channel and piping[1]

[1] Facility modification reported by certificate holder in 2022 Annual Report.

- Construction Substation
- Irrigation Pump Station and 34.5 kV transmission line
-

Shared Facilities:

- Grassland Switchyard
- 500-kV transmission line from Grassland Switchyard to the Slatt Substation
- 34.5-kV Grassland Switchyard backup station transmission line
- 7.2-kV Carty Generating Station backup transmission line
- 4.2-kV Grassland ~~substation~~ Switchyard service line
- Interconnecting water pipelines
- Well (Boeing Well) / pump house and associated 12.5-kV power line
- Sanitary sewer (~~sewer lagoons and~~ septic system)
- Accessory buildings
- Utility and communication lines
- Access Roads
- Office and warehouse buildings; and 35x40 work station[2]
- Carty Substation and associated distribution lines
- Operations and Maintenance building for Carty Solar Farm

Carty Solar Farm:

- Additional temporary construction areas
- 34.5-kV underground collector lines for the Carty Solar Farm
- 34.5-kV aboveground collector line (~~21~~-mile-long segment) for the Carty Solar Farm

[2] Facility modification reported by certificate holder in 2021 Annual Report.

- Collector substation for Carty Solar Farm (including approximately 300 feet of aboveground collector line)
- 500-kV transmission line from collector substation for Carty Solar Farm to the Grassland Switchyard
- Battery Energy Storage System

~~Two~~ Up to three control and administrative buildings will provide space for plant controls and offices for plant personnel for Unit 1 and the Carty Solar Farm. A description of major components, structures, and systems of each related or supporting facility that is part of Carty Generating Station per the Site Certificate for Carty Generating Station is provided in the following subsections.

Carty Reservoir

Carty Reservoir is a wastewater and cooling pond that provides service water to the Carty Generating Station and receives cooling tower blow down and wastewater from the wastewater collection sump. The reservoir also stores water used to irrigate nearby agricultural fields. Because the area is arid, all the water for filling and maintaining the reservoir is pumped through pipes from the Columbia River, approximately 10 miles to the north. When full, at a surface elevation of 677 feet above mean sea level (MSL), the reservoir has a capacity of 38,000-acre feet, a surface area of approximately 1,450 acres (2.3 square miles), and a maximum depth of 77 feet. The average pool elevation for the reservoir since 1990 has been approximately 667 to 668 feet above MSL. At this elevation, the reservoir surface area is approximately 1,100 acres and contains approximately 26,000-acre feet of water. The reservoir is not used for recreation, and there is no public access to it.

Water leaves Carty Reservoir through withdrawals for use at the Carty Generating Station, through evaporation from the surface of the reservoir, withdrawals for irrigation, and through underground seepage from the reservoir. A buried toe drain at the West Dam captures seepage to pump back into the reservoir, and there is a concrete emergency spillway adjacent to the West Dam. There is an irrigation pump station located on the southwest arm shore of Carty Reservoir within an approximately 0.2 acre fenced area; the irrigation pump station is used to pump water out of Carty Reservoir for irrigation of nearby agricultural fields. There is a 2,600 foot-long underground 34.5 kV transmission line that powers the pump station from a PacifiCorp transmission line.

On-Site Transmission Lines

500 kV Unit 1 to Grassland Switchyard Transmission Line An approximate 1-mile long 500-kV transmission line, mounted on four steel lattice towers, connects the step-up transformers located at the gas-fueled generating unit to the Grassland Switchyard. These towers are

between 100 and 150 feet tall and are spaced approximately between 800 feet and 1,700 feet apart.

500-kV Collector Substation for Carty Solar to Grassland Switchyard Transmission Line
An approximate 1-mile long 500-kV transmission line, mounted on five steel lattice towers, connects the step-up transformers located at the collector substation for the Carty Solar Farm to the Grassland Switchyard. These towers are between 100 and 150 feet tall and are spaced approximately between 800 feet and 1,300 feet apart. They were originally constructed for the Boardman Coal Plant and incorporated into the Carty Generating Station Site Certificate with AMD4.

4.2 kV Grassland Station Service Line
A 4.2 kV station service line extends approximately 1 mile from Carty Generating Station to the Grassland Switchyard. For most of its length, this line is mounted on wood poles. However, the line runs underground for approximately 750 feet prior to entering the Grassland Switchyard to avoid clearance conflicts with the 230 kV BCP to Dalreed transmission line. This line provides power to the Grassland Switchyard from Carty Generating Station.

7.2 kV Carty Generating Station Backup Power Line
A 7.2 kV above ground backup power line extends approximately 0.5 mile from BCP or the Carty substation once constructed to Carty Generating Station. This line runs underground approximately 0.10 mile north of BCP; the remainder of the line is mounted on wood poles. Once the Carty substation is constructed the line will be entirely above ground.

34.5 kV Grassland Backup Station Service Line
A 34.5 kV line (referred to as the Grassland backup station service line) provides backup power to Grassland Switchyard via an approximately 800-foot underground line extending west and then north from the transformer within Grassland Switchyard, connecting to the existing 34.5 kV BCP to Railroad Crossing at Tower Road Transmission Line described above.

~~***34.5 Carty Solar Farm Transmission Line***~~
~~A 34.5-kV transmission line from the Carty Solar Farm will route around the eastern end of Carty Reservoir and then follow one of five potential routes to the point of interconnection at the Grassland Switchyard, Unit 1, or the Boardman Plant.~~

On-Site Collector Lines

The energy generated by the Carty Solar Farm is conveyed to the collector substation via 34.5-kV collector lines, the majority of which are within the solar perimeter fencing. The collector lines are buried to a minimum of 3 feet, with junction splice boxes positioned intermittently along the lines for maintenance access. Approximately 25 miles of 34.5-kV collector line are installed underground between the transformers and collector substation. One segment of collector line is installed aboveground. This segment extends from the perimeter fence on the north side of the Southern Solar Area, along the eastern shore of the Carty Reservoir, to ~~a point just south of the Northern Solar Area~~ where the line ~~goes back underground until~~

entersing the proposed collector substation. The aboveground segment is approximately 21- miles- long, and routed along support poles that are approximately 70 feet in height.

Off-Site Transmission Lines

500 kV BCP to Slatt Transmission Line

To access the grid, certificate holder utilizes the 500-kV Boardman to Slatt transmission line, a 500-kV single circuit transmission line, to connect the Grassland Switchyard to the Slatt Substation. The transmission line is approximately 17 miles long from Grassland Switchyard to Slatt Substation.

230 kV BCP to Dalreed Transmission Line

The 230kV BCP to Dalreed transmission line connects the Dalreed substation to the power block at BCP or the Carty substation once built. It is used to provide power to Carty Generating Station via the 7.2 kV Carty Generating Station back up transmission line and provide power to the construction substation.

34.5 kV BCP to Railroad Crossing at Tower Road Transmission Line

The 34.5 kV BCP to Railroad Crossing at Tower Road Transmission Line provides power to the railroad crossing signal at Tower Road and power to the seepage pumps for Carty Reservoir. The power for this line is provided via the construction substation.

Grassland Switchyard

A 500-kV, alternating current, open-air switchyard is located west of the Carty Generating Station. The switchyard consists of an 8.5-acre leveled and graveled area surrounded by a security fence. The switchyard was approved up to approximately 15 acres in size in the original Site Certificate, and may be expanded to that size depending on the interconnection needs of the Carty Solar Farm. The switchyard includes 500-kV circuit breakers and disconnect switches to allow for clearing faults on the connected transmission lines and for maintenance of the circuit breakers and transmission lines. Steel take-off towers terminate 500-kV overhead transmission lines that connect the switchyard with the plant generator step-up transformers and outgoing transmission lines. An additional small building provides a controlled environment for the protective relaying and communication equipment.

Carty Substation

Carty Substation is a 7.2 kV open box structure substation, with control house for relay, SCADA, communications, and DC system, dead-end structure for the existing 230 kV Boardman to Dalreed transmission line, and surrounding fence that would beis located southeast of the construction substation. It will provides backup power to Carty Generating Station via an above-ground distribution line that connects to the 7.2 kV Carty Generating Station backup transmission line, and power to the construction substation via an underground distribution line.

Construction Substation

The Construction Substation is located within a 40-foot by 80-foot fenced area that contains three wooden H-frame structures, transformers and associated electrical equipment, including a 6-foot by 8-foot control house. It was built originally to provide construction power during construction of BCP and continues to be used as part of the onsite electrical distribution system. This facility is located approximately 0.3 miles south of CGS. The construction substation is powered by an underground distribution line from Carty substation.

Collector Substation

The collector substation collects energy generated by the Carty Solar Farm and steps it up from 34.5-kV to 500-kV, and then interconnects with the existing transmission system remaining from the BCP via approximately 300 feet of new aboveground collector line contained within the substation. The collector substation is located in an area formerly used for the BCP on the west side of the Northern Solar Area and next to the BESS. The substation is approximately 3.2 acres of graveled and fenced area. The collector substation has one GSU to step up the electrical output. Additional substation equipment may include a 34.5-kV switch, 34.5-kV feeder breakers, 500/34.5-kV transformer, 500-kV breaker, 500-kV switch, surge arrestors, control enclosure, metering equipment, grounding, and associated control wiring.

Battery Energy Storage System

The battery energy storage system (BESS) associated with the Carty Solar Farm is designed with the capability of storing up to 200 MW over a duration to be determined based on final design and technology, using Li-ion technology. The system is a concentrated AC-coupled BESS park in a single location to the north of the Carty Reservoir. The BESS and associated equipment will be periodically augmented as needed to maintain 200 MW of energy storage capability over the life of the BESS (20 years), taking into account natural degradation of the batteries over time. At full augmentation, the components associated with 200 MW of BESS will include approximately 330 modular containers, 58 inverters, and 30 ISU transformers. Each container is placed on a concrete slab-on-grade foundation and the BESS park area is expected to be surfaced with stone aggregate. The BESS components include the following:

- Series of modular containers (each container approximately 33 feet long, 6 feet wide and 10 feet tall). Approximately 330 containers at full augmentation.
- Each system would contain lithium-ion batteries within battery modules placed in anchored racks within modular containers.
- Up to 58 inverters and 30 step-up transformers at full augmentation.
- Fire sensors, smoke and hydrogen and/or carbon monoxide detectors, alarms, emergency ventilation systems, and employment of fire control panels with 24-hour battery backup.
- Each system would include a cooling system placed either on top of the containers or along the side.

Battery and inverter/transformer equipment is electrically connected via a combination of underground conduit, covered cable trenches, and aboveground cable trays. The battery storage systems interconnects with the collector substation via underground feeder lines.

Water Sources and Discharges

There are four categories of water sources and discharges that serve Carty Generating Station: raw water/fire water, wastewater, potable water, and sanitary sewer.

Raw Water/Fire Water

Raw water from the Carty Reservoir is used for service water and fire water. It is withdrawn via a single intake structure located inside the Raw Water Intake Building, from which it is taken in through a channel outfitted with a traveling screen and enters a wet well. Power is provided to the intake building via an underground distribution line from Carty Generating Station to the intake building.

Wastewater

Carty Generating Station Unit 1 process waste and plant drainage waste flows are discharged into holding ponds, which can provide 7 days of holding capacity (if needed for discharge line maintenance or some other event preventing direct discharge). From the holding ponds, wastewater is discharged via an 8-inch-diameter pipeline into Water Discharge Channel and piping prior to entering Carty Reservoir ~~or to evaporation ponds located northeast of Carty Generating Station (formerly BCP evaporation ponds)~~. Wastewater from panel washing evaporates or infiltrates into the ground.

Potable Water

Potable water for drinking fountains, showers (emergency and lavatory), sinks, and flushing of lavatory fixtures comes from the Boeing Well. The Boeing Well is a groundwater extraction well located just south of Carty Generating Station. The well is 600 feet deep with a 30 horsepower pump hung at around 440 feet below ground surface. The well fills a holding tank within Carty Generating Station prior to direct distribution to the plant services building. The Boeing Well pump drive motor is powered from a 150-kilovolt-ampere 12470-480/277 V distribution transformer. This transformer is connected via a 12.5 kV ~~overhead~~ underground distribution line to the construction substation. The construction substation, in turn, derives power from a 12.5kV originating at the 1X33 transformer at BCP.

~~Carty Generating Station also includes backup potable/firewater storage in a 300,000 gallon, welded-steel water storage tank with adjacent pump house. This facility is connected to Boeing well via a 4-inch-diameter intake pipeline and to Carty Generating Station via a water pipeline.~~

Sanitary Sewer

Sanitary sewer flows at Carty Generating Station are solely from plant lavatories, sinks, and bathroom showers used by plant personnel. These flows are directly discharged to ~~the sewage lagoons via a sewer lift station, or~~ an onsite septic system. ~~There are three existing sewage lagoons: the South Lagoon and Middle Lagoon (both lined), and the North Lagoon (unlined).~~

~~The South and Middle Lagoons can also be made common by a gated pipe through the separating dike. The only connection between the lined lagoons and the unlined lagoon is overflow through a chlorinating weir at the northeast corner of the Middle Lagoon. The clay liners in the South and Middle Lagoons were replaced with new synthetic liners in the fall of 2014. The sewage lagoons are permitted under Water Pollution Control Facilities (WPCF) permit number 100189.~~

The septic system is sized per state and county standards and the Umatilla County Public Health Department requirements and is in an area deemed acceptable for a standard, non-residential septic system. Because the design flow of the system is less than 2,501 gallons per day, the facility is not governed by a permit from Oregon Department of Environmental Quality (DEQ).

Cooling Tower

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

Liquid Storage Facilities

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

Accessory Buildings

Accessory buildings at the Carty Generating Station site house boiler feed pumps, chemical feed equipment, water treatment equipment, and other equipment requiring protection from weather or noise containment. Accessory buildings common to the gas-fired generating unit and solar unit include warehouse and office space and~~,~~ administration areas~~, and security guard station~~.

Communication Lines

Communication lines supporting the Carty Generating Station originate from a Century Link vault near the northwest corner of the BCP lined evaporation ponds, run down the dirt access road, along Tower Road, and then into the Carty facility.

Access Roads

A paved loop road, approximately 24 feet wide and 2,100 feet long, connects with Tower Road at both ends of the loop to serve normal truck and operator vehicle traffic for Unit 1. This loop road has spur roads leading to individual buildings and areas that require access. An existing paved and graveled road provides access to the Northern and Southern solar areas~~permitted location of the Carty Solar Farm~~. The Northern and Southern solar areas include approximately 9.9 miles of gravel access roads within the solar perimeter fencing to access solar infrastructure. ~~The Carty Solar Farm would contain unpaved on-site access roads.~~

Additional Temporary Construction Areas

Additional areas in the vicinity of the Carty Generating Station are provided for construction offices, construction parking, construction staging, and temporary storage of soil displaced during the construction process. Similar temporary construction areas are provided in the vicinity of the Grassland Switchyard. Approximately 21 acres of temporary construction area are provided for the Carty Solar Farm.

4.0 GENERAL ADMINISTRATIVE CONDITIONS

4.1 The certificate holder shall:

i. Begin construction of Unit 1 within three years after the effective date of the site certificate. Under OAR 345-015-0085(9), a site certificate is effective upon execution by the Council Chair and the applicant. The Council may grant an extension of the deadline to begin construction in accordance with OAR 345-027-0030 or any successor rule in effect at the time the request for extension is submitted.
[Final Order III.D.3; Mandatory Condition OAR 345-027-0020(4)]

ii. Begin construction of the Carty Solar Farm ~~by February 4, 2025~~within six years after the effective date of the amended site certificate, or MONTH DAY, 20XX. The amended site certificate is effective upon execution by the council Chair and the certificate holder.
[AMD1; AMD3; AMD4]

iii. Begin construction of the facility components authorized by the Final Order on Request for Amendment 2 within three years after the effective date of the amended site certificate, or [December 9, 2020]. Under OAR 345-015-0085(8), the site certificate is effective upon execution by the Council Chair and the certificate holder.
[AMD2]

4.2. The certificate holder must:

i. Complete construction of Unit 1 of the facility within three years of beginning construction of Unit 1. Construction is complete when: 1) the facility is substantially complete as defined by the certificate holder's construction contract documents; 2) acceptance testing has been satisfactorily completed; and 3) the energy facility is

ready to begin continuous operation consistent with the site certificate. The certificate holder shall promptly notify the Department of the date of completion of construction of Unit 1. The Council may grant an extension of the deadline for completing construction in accordance with OAR 345-027-0030 or any successor rule in effect at the time the request for extension is submitted.
[Final Order III.D.4] [Mandatory Condition OAR 345-027-0020(4)] [AMD1]

ii. Complete construction of the Carty Solar Farm within three years of the construction commencement date~~by February 4, 2028~~. The certificate holder shall promptly notify the Department of the date of completion of construction of the Carty Solar Farm and its supporting facilities.
[AMD1; AMD3; AMD4]

iii. Complete construction of the facility components authorized by the Final Order on Request for Amendment 2 within six years of the effective date of the amended site certificate, or [December 9, 2020]. The certificate holder shall promptly notify the Department of the date of completion of construction of these supporting facilities.
[AMD2]

4.3. [DELETED] [AMD1]

4.4. The certificate holder shall submit a legal description of the site to the Department of Energy within 90 days after beginning operation of the facility. The legal description required by this rule means a description of metes and bounds or a description of the site by reference to a map and geographic data that clearly and specifically identifies the outer boundaries that contain all parts of the facility.
[Final Order III.D.1] [Mandatory Condition OAR 345-025-0006(2)] [AMD1]

4.5 The certificate holder shall obtain all necessary federal, state, and local permits or approvals required for construction, operation, and retirement of the facility or ensure that its contractors obtain the necessary federal, state, and local permits or approvals.
[Final Order IV.B.2.4]

4.6 The certificate holder must obtain, as required by ORS 469.401(3), all local permits, to include a Conditional Use Permit for the portion of the Carty Generating Station facility located on land zoned Exclusive Farm Use and a Zoning Permit for the entire facility located within Morrow County.
[Final Order IV.E.4.6] [AMD2]

5.0 PRE-CONSTRUCTION REQUIREMENTS

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

5.1 Before beginning construction, the certificate holder must notify the Department of the identity and qualifications of the major design, engineering, and construction

contractor(s) for the facility. The certificate holder must select contractors that have substantial experience in the design, engineering, and construction of similar facilities. The certificate holder must report to the Department any change of major contractors. [Final Order IV.B.2.1] [AMD1]

5.2 The certificate holder must contractually require all construction contractors and subcontractors involved in the construction of the facility to comply with all applicable laws and regulations and with the terms and conditions of the site certificate. Such contractual provisions do not relieve the certificate holder of responsibility under the site certificate.
[Final Order IV.B.2.3] [AMD1]

5.3 Before beginning construction of Unit 1 and before beginning construction of the Carty Solar O&M building, the certificate holder shall submit a final parking lot plan to Morrow County for approval as part of the certificate holder's building permit application for the energy facility. This parking lot plan shall comply with Section 4.040 and 4.060 of the Morrow County Zoning Ordinance (MCZO) and with Americans with Disabilities Act (ADA) requirements. For Unit 1, ~~T~~this plan shall provide a minimum of 22 parking spaces and one ADA-accessible space, or the minimum number of parking spaces required by MCZO Section 4.040 based on the number of employees on the largest shift, whichever is greater. For the Carty Solar O&M building the minimum number of parking spaces required is based on MCZO Section 4.040 and the number of employees on the largest shift. The certificate holder shall construct on-site parking in conformance with the approved parking lot plans.
[Final Order IV.E.4.2] [MCZO Section 4.040-4.060] [AMD2, AMD4]

5.4 Before beginning construction of Unit 1 and Carty Solar Farm, the certificate holder must:

i. For Unit 1, ~~C~~complete an investigation of subsurface soil and geologic conditions to identify geological or geotechnical hazards per Condition 5.4.i.a and obtain Department approval of the investigation report per Condition 5.4.i.b.
   a. The investigation must include at least the following activities:
      1. Drilling of six to eight exploratory borings up to a depth of 75 feet under proposed critical structure locations, including the gas turbine units, cooling tower, transmission structures, and switchyard. Standard penetration tests should be conducted at 2.5-foot and 5-foot intervals. Drilling of exploratory borings along transmission line corridor is not necessary if such information is available from the construction of the existing transmission line.
      2. Digging of test pits to assess the extent and thickness of any loose, surficial soil layers at the site. Key focus areas should include planned locations of critical structures, roadways, and landscaped areas where irrigation would occur.
      3. Performing laboratory testing to evaluate the engineering properties of soils, including natural water contents on all samples collected, mechanical and

hydrometer gradations, Atterberg limits, and collapsibility and consolidation tests on selected samples.

b. The certificate holder must prepare a geotechnical report with final facility design recommendations based on the investigation conducted per the requirements of Condition 5.4.a. The geotechnical report must be submitted to the Oregon Department of Geology & Mineral Industries (DOGAMI) and the Department. The certificate holder may not commence construction of the facility prior to Department approval of this report.
[Final Order IV.C.2.1] [AMD4]

ii. For Carty Solar Farm, ~~C~~complete an investigation of subsurface soil and geologic conditions, based upon a protocol reviewed and approved by the Department in consultation with DOGAMI, to identify geological or geotechnical hazards and obtain Department approval of the investigation report per Condition 5.4.i.b.

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

1. Drilling of additional borings at scattered locations across the Carty Solar Farm and associated transmission lines and access roads, up to a depth of 50 feet.

[AMD1] [AMD2] [AMD4]

5.5 i. Prior to beginning construction of Unit 1, ~~facility components approved in Final Order on RFA1, or~~ facility components approved in Final Order on RFA2~~, or facility components approved in Final Order on RFA4,~~ the certificate holder must consult with the Morrow County Weed Control Supervisor and obtain approval of a Revegetation and Noxious Weed Control Plan. The final Revegetation and Noxious Weed Control Plan must be submitted to the Department of Energy, based upon the draft amended plan provided as Attachment ~~D~~ X of the Final Order on Amendment ~~24~~, for approval prior to the start of construction.

During construction and operation of the facility, the certificate holder must implement a revegetation and weed control plan. The certificate holder must comply with the applicable provisions of the Morrow County Weed Control Ordinances, as determined by the Morrow County Weed Control Supervisor and the Gilliam County Weed Control Officer. [Final Order IV.D.2.6] [AMD1] [AMD2] [AMD4]

ii Prior to beginning construction of Carty Solar Farm and facility components approved in Final Order on AMD 4, the certificate holder must consult with the Morrow County Weed Control Supervisor and obtain approval of a Vegetation and Soil Management Plan (VSMP). The final VSMP must be submitted to the Department of Energy, based upon the draft amended plan provided as Attachment X of the Final Order on Amendment 4, for approval prior to the start of construction.

During construction and operation of the facility, the certificate holder must implement a VSMP. The certificate holder must comply with the applicable provisions of the Morrow County Weed Control Ordinances, as determined by the Morrow County Control Supervisor and the Gilliam County Weed Control Officer.[AMD4]

5.6 Before beginning construction of Unit 1, the certificate holder must submit a Notice of Proposed Construction or Alteration to the Federal Aviation Administration (FAA) and the Oregon Department of Aviation identifying the final location of the facility exhaust stack. The certificate holder must promptly notify the Department of the responses from the FAA and the Oregon Department of Aviation.
[Final Order V.D.2.5]

5.7 Except as necessary for the initial survey or as otherwise allowed for wind energy facilities, transmission lines or pipelines under OAR 345-027-0020, the certificate holder shall not begin construction, as defined in OAR 345-001-0010, or create a clearing on any part of the site until the certificate holder has construction rights on all parts of the site. For the purpose of this rule, "construction rights" means the legal right to engage in construction activities.
[Final Order III.D.6] [Mandatory Condition OAR 345-027-0020(5)]

5.8 Before beginning construction, the certificate holder must notify the Department in advance of any work on the site that does not meet the definition of "construction" in ORS 469.300 (excluding surveying, exploration, or other activities to define or characterize the site) and must provide to the Department a description of the work and evidence that its value is less than $250,000.
[Final Order IV.B.2.6]

5.9 The certificate holder shall develop and implement a Spill Prevention, Control and Countermeasure (SPCC) Plan in accordance with 40 Code of Federal Regulations (CFR) 112. A copy of this plan shall be provided to the Department prior to the commencement of operation of Carty Generating Station, and shall be updated according to the timelines provided in 40 CFR 112.
[Final Order IV.G.2.1] [AMD1] [AMD2]

5.10 Before beginning construction of the Carty Solar Farm, the certificate holder shall record in the deed records of Morrow County a document binding the certificate holder and its successors in interest, prohibiting them from pursuing a claim for relief or cause of action alleging injury from farming or forest practices as defined in ORS 30.930(2) and (4).

6.0 DESIGN, CONSTRUCTION AND OPERATIONS

6.1 During construction, the certificate holder must have a full-time, on-site manager who is qualified in environmental compliance to ensure compliance with all site certificate conditions. The certificate holder must notify the Department of the name, telephone number, and e-mail address of this person prior to the start of construction and immediately upon any change in the contact information.
[Final Order IV.B.2.2]

6.2 The certificate holder shall provide portable toilets for on-site sewage handling during construction and shall ensure that they are pumped and cleaned regularly by a licensed contractor who is qualified to pump and clean portable toilet facilities.
[Final Order IV.N.2.3]

6.3 The certificate holder shall implement a waste management plan during construction that includes but is not limited to the following measures:

a. Recycling steel and other metal scrap.
b. Recycling wood waste.
c. Recycling packaging wastes such as paper and cardboard.
d. Collecting non-recyclable waste for transport to a local landfill by a licensed waste hauler.
e. Segregating all hazardous wastes such as used oil, oily rags and oil-absorbent materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous wastes.
f. Confining concrete delivery truck rinse-out to a designated wash-out area and burying other concrete waste as part of backfilling.

[Final Order IV.N.2.1]

6.4 In advance of, and during, preparation of detailed design drawings and specifications for the 500-kV transmission line, the certificate holder shall consult with the Utility Safety and Reliability Section of the Oregon Public Utility Commission to ensure that the designs and specifications are consistent with applicable codes and standards.
[Final Order V.D.2.3]

6.5 The certificate holder must design, construct and operate the transmission lines in accordance with the requirements of the National Electrical Safety Code (American National Standards Institute, Section C2, 1997 Edition, or its successor document).
[Final Order IV.O.2.1] [Mandatory Condition OAR 345-027-0023(4)]] [AMD2]

6.6. The certificate holder must design and construct the facility in accordance with requirements of the current Oregon Structural Specialty Code and the International Building Code in effect at the time of the start of construction for each unit.
[Final Order IV.C.2.4] [AMD1]

6.7. The certificate holder must design, engineer and construct the facility to avoid dangers to human safety and the environment 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, ground failure, landslide, liquefaction, triggering and consequences (including flow failure, settlement buoyancy, and lateral spreading), cyclic softening of clays and silts, fault rupture, directivity effects and soil-structure interaction. For coastal sites, this also includes tsunami hazards and seismically-induced coastal subsidence.
[Final Order IV.C.2.5] [Mandatory Condition OAR 345-025-0006(12)][AMD2]

6.8. The certificate holder must design, engineer and construct the facility to avoid dangers to human safety presented by non-seismic hazards. As used in this condition, "non-seismic hazards" include settlement, landslides, flooding and erosion.
[Final Order IV.C.2.6]

6.9. The certificate holder shall design and construct the facility using the minimum land area necessary for safe construction and operation. The certificate holder shall locate access roads and temporary construction laydown and staging areas to minimize disturbance of farming practices.
[Final Order IV.E.4.1] [MCZO Section 3.010.D]

6.10. The certificate holder must notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate or requests for amendment. After the Department receives the notice, the Council may require the certificate holder to consult with the DOGAMI and the Building Codes Division to propose and implement corrective or mitigation actions.
[Final Order IV.C.2.2] [Mandatory Condition OAR 345-025-0006(13)] [AMD1] [AMD2]

6.11. The certificate holder must notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site. After the Department receives notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division to propose and implement corrective or mitigation actions.
[Final Order IV.C.2.3] [Mandatory Condition OAR 345-025-0006(14)][AMD2]

6.12. During construction of the facility, the certificate holder shall ensure that contractors move equipment out of the construction area when it is no longer expected to be used. To the extent practical, contractors shall lower equipment with long arms, such as cranes, bucket trucks, and backhoes when not in use, in order to minimize visibility.
[Final Order IV.J.2.1]

6.13. To reduce the visual impact of the facility, the certificate holder shall paint the buildings and structures in low-reflectivity neutral colors to blend with the surrounding landscape.
[Final Order IV.J.2.2]

6.14. The certificate holder shall not use exterior nighttime lighting except:
a. The minimum exhaust stack lighting required or recommended by the Federal Aviation Administration.
b. Safety and security lighting at the Carty Generating Station, provided that such lighting is shielded or downward-directed to reduce offsite glare.
c. Minimum lighting necessary for repairs or emergencies.

d. As required during construction.
[Final Order IV.J.2.3] [AMD1]

6.17 During construction:

i. For Unit 1, ~~T~~the certificate holder shall implement measures to reduce traffic impacts, as follows:
   a. The certificate holder shall reduce peak hour volumes during construction by staggering shift start times or implementing other measures that would significantly reduce the total number of construction worker vehicle trips through the westbound I-84/Tower Road ramp terminal; or
   b. The certificate holder shall install temporary traffic controls during peak construction to prioritize westbound left-turning vehicles at the westbound Tower Road ramp terminal during the weekday a.m. peak hour.
   [Final Order IV.M.2.9]

ii. For construction of the Carty Solar Farm, the certificate holder shall:
   a. Implement a final Construction Traffic Management Plan, as approved by the Department per Condition 6.~~26~~27.
   b. Include the requirements of the Construction Traffic Management Plan in contract specifications for construction contractors, as applicable.
   c. Maintain a monthly log, to be submitted monthly to the Department for review and confirmation of compliance with the components of the Construction Traffic Management Plan.
   d. The Department, in consultation with the Morrow County Public Works Department, may require implementation of additional traffic management measures including a Traffic Impact Assessment per MCZO Section 3.010(N)(1) if any requirement of the Construction Traffic Management Plan is determined not adequately implemented, or if additional measures are deemed necessary based on actual passenger car equivalent trips per day during facility construction. Within 30-days of submittal of the monthly compliance report required under sub(c), the certificate holder shall obtain written confirmation from the Department on any additional construction traffic management measures required to be implemented.
   [AMD1] [AMD2] [AMD4]

6.18 Unless legally permissible, the certificate holder shall ensure that no equipment or machinery associated with the construction is parked or stored on any public road within Morrow or Gilliam Counties. The certificate holder may temporarily park equipment off the road but within County rights-of-way with the approval of the County Roadmaster.
[Final Order IV.M.2.10] [AMD1] [AMD2]

6.19 The certificate holder shall cooperate with the Morrow County Public Works Department and the Gilliam County Road Department to ensure that any unusual damage or wear to county roads that is caused by construction of the facility is repaired by the certificate

holder. Upon completion of construction, the certificate holder shall restore public roads to pre-construction condition or better to the satisfaction of applicable county departments.
[Final Order IV.M.2.11] [AMD1] [AMD2]

6.20 [Deleted]
[Final Order IV.M.2.12] [AMD1]

6.21 Oversize and overweight deliveries shall be made by rail and barge when feasible, to limit impacts to the I-84/Tower Road interchange.
[Final Order IV.M.2.13]

6.22 The certificate holder shall construct all facility components in compliance with the following setback requirements. The transmission lines connecting the Carty Generating Station and the Grassland Switchyard are exempt from this condition.

a. For portions of the facility located in the Morrow County General Industrial Zoning District:
   i. The minimum setback between a structure and the right-of-way of an arterial street shall be 50 feet. The minimum setback of a structure from the right-of-way of a collector shall be 30 feet, and from all lower class streets the minimum setback shall be 20 feet.
   ii. Any sewage disposal installations such as outhouses, septic tank and drainfield systems shall be set back from the high-water line or mark along all streams and lakes a minimum of 100 feet, measured at right angles to the high-water line or mark. All structures, buildings, or similar permanent fixtures shall be set back from the high-water line or mark along all streams or lakes a minimum of 100 feet measured at right angles to the high-water line or mark.
b. For portions of the facility located in the Morrow County Exclusive Farm Use Zoning District:
   a. The front yard setback from the property line shall be a minimum of 100 feet if the property line is adjacent to an intensive agricultural use; otherwise, front yards shall be 20 feet for property fronting on a local minor collector or marginal access street right-of-way, 30 feet from a property line fronting on a major collector right-of-way, and 80 feet from an arterial right-of-way.
   ii. Each side yard shall be a minimum of 20 feet except that for parcels or lots with side yards adjacent to an intensive agricultural use the adjacent side yard shall be a minimum of 100 feet.
   iii. Rear yards shall be a minimum of 25 feet, except for parcels or lots with rear yards adjacent to an intensive agricultural use, where rear yards shall be a minimum of 100 feet.
   iv. Any sewage disposal installations such as outhouses, septic tank and drainfield systems shall be set back from the high-water line or mark along all streams and lakes a minimum of 100 feet, measured at right angles to the high-water line or mark. All structures, buildings, or similar permanent fixtures shall be set back

from the high-water line or mark along all streams or lakes a minimum of 100 feet measured at right angles to the high-water line or mark.
[Final Order IV.E.4.3] [MCZO Section 3.010(H)] [AMD1]

6.23 The certificate holder must limit signage to directional signs necessary for deliveries and general site circulation. No sign may be placed so as to interfere with visibility or effectiveness of any permanent traffic control device. No sign may be placed so as to impede the sight distance triangle at any access point or intersection as specified in Section 4.020 of the Morrow County Zoning Code. No sign shall cause glare, distraction or other driving hazards within a street or road right-of-way.
[Final Order IV.E.4.5] [MCZO Sections 4.020 and 4.070]

6.24 The certificate holder shall comply with Section 5, Public Responsibilities, of the Morrow County Solid Waste Management Ordinance. Any hauling of solid waste from the Carty Generating Station facility during construction, operation, or retirement shall be performed by a franchised solid waste hauler or otherwise comply with the Morrow County Solid Waste Management Ordinance.
[Final Order IV.E.4.7] [Morrow County Waste Management Ordinance Section 5.000] [AMD2]

6.25 ~~Recycling by the certificate holder and certificate holder's contractors during construction, operation, and retirement of the Carty Generating Station facility shall be done in accordance with Oregon Department of Environmental Quality regulations and shall be reported as part of the Morrow County wasteshed.~~[Deleted]
[Final Order IV.E.4.7] [AMD2] [AMD4]

6.26. ~~The certificate holder is authorized to construct approximately 3 miles of 34.5 kV transmission line anywhere within the approved corridors, subject to the conditions of the site certificate. The approved corridors are approximately 160 feet in width and extend between 2.25 and 3 miles of three routes as described in RFA1 Exhibit B and as presented on Figure 1 to the site certificate of the Second Amended Site Certificate for Carty Generating Station.~~[Deleted]
[Site Specific Condition OAR 345-025-0010(5); AMD1] [AMD2] [AMD4]

6.27 Prior to beginning construction of the Carty Solar Farm, the certificate holder shall:

a. Confirm whether, based on anticipated construction activities, peak construction traffic is anticipated to exceed 400 passenger car equivalent trips per day. If more than 400 passenger car equivalent trips per day is anticipated, the certificate holder shall prepare and submit to the Department and Morrow County Planning Department a Traffic Impact Assessment per MCZO Section 3.010(N) Transportation Impacts for review and approval. If a TIA is required, the certificate holder shall submit documentation to the Department in accordance with OAR 345-027-~~0057~~0357.

b. Prepare and submit to the Department a Construction Traffic Management Plan for review and approval. The certificate holder shall demonstrate that the Construction Traffic Management Plan, at a minimum, includes:
   1. Traffic management measures or other recommendations to minimize traffic impacts on Tower Road, as applicable, based upon consultation with Morrow County Public Works Department and Morrow County Sherriff's Office.
   2. Staggering shift start times or other measures that would significantly reduce the total number of construction worker vehicle trips through the westbound I-84/Tower Road ramp terminal; or
   3. Installation of temporary traffic controls during peak construction to prioritize westbound left-turning vehicles at the westbound Tower Road ramp terminal during the weekday a.m. peak hour.

   [AMD1] [AMD4]

6.28 Prior to construction of the Carty Solar Farm, the certificate holder shall record in the real property records of Morrow County a Covenant Not to Sue with regard to generally accepted farming practices on adjacent farmland consistent with MCZO 3.010.K.3(i). [AMD1] [AMD2]

7.0 PUBLIC HEALTH AND SAFETY

7.1 The certificate holder shall take the following steps to reduce or manage human exposure to electromagnetic fields:
   a. Constructing all aboveground transmission lines at least 200 feet from any residence or other occupied structure, measured from the centerline of the transmission line.
   b. For any transmission lines constructed after June 29, 2012; providing to landowners a map of underground and overhead transmission lines on their property and advising landowners of possible health risks from electric and magnetic fields.
   c. Designing and maintaining all transmission lines so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public.
   d. Designing and maintaining all transmission lines so that induced voltages during operation are as low as reasonably achievable

   [Final Order V.D.2.1] [AMD2]

7.2 To protect the public from electrical hazards, the certificate holder must enclose the facility switchyard or substations and BESS with appropriate fencing and locked gates. [Final Order V.D.2.2] [AMD2] [AMD4]

7.3 If the Council finds, at any time during facility operation, that cooling tower emissions are likely to contribute significantly to ground-level fogging or icing along public roads and to cause a significant threat to public safety, the certificate holder shall cooperate

with appropriate local public safety authorities regarding implementation of reasonable safety measures, such as posting warning signs on affected roads. Cooperation may include, but is not necessarily limited to, the reimbursement of expenses for posting warning signs and implementing other safety measures.
[Final Order V.D.2.4]

7.4 The certificate holder must comply with all emergency planning and notification requirements of Emergency Planning and Community Right-to-Know Act (EPCRA) Section 302.
[Final Order V.D.2.6]

7.5 The certificate holder must comply with all reporting requirements of the Emergency Planning and Community Right-to-Know Act (EPCRA) Section 304, including reporting of any chemical release in an amount equal to or greater than the EPCRA reportable quantity for that chemical.
[Final Order V.D.2.7]

7.6 [Deleted]
[Final Order V.D.2.8][AMD1]

7.7 The certificate holder must comply with all reporting requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), including reporting of any chemical release in an amount equal to or greater than the CERCLA reportable quantity for that chemical.
[Final Order V.D.2.9]

7.8 The certificate holder shall notify the Department of Energy and Morrow County within 72 hours of any occurrence involving the facility if:

a. There is an attempt by anyone to interfere with its safe operation;
b. A natural event such as an earthquake, flood, tsunami or tornado, or a human-caused event such as a fire or explosion affects or threatens to affect the public health and safety or the environment; or
c. There is any fatal injury at the facility.

[Final Order V.D.2.10] [Mandatory Condition OAR 345-026-0170] [AMD1]

7.9 The certificate holder must develop and implement a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the line. A current copy of the electrical protection plan must be available at the O&M building and provided upon request by ODOE staff.
[Final Order IV.O.2.2] [Mandatory Condition OAR 345-027-0023(4)]

8.0 ON-SITE SAFETY AND SECURITY

8.1 During construction and operation of the facility, the certificate holder shall provide for on-site security and shall establish good communications between on-site security personnel and the Morrow County Sheriff's Office. During operation, the certificate holder shall ensure that appropriate law enforcement agency personnel have an up-to-date list of the names and telephone numbers of facility personnel available to respond on a 24-hour basis in case of an emergency on the facility site.
[Final Order IV.M.2.1]

8.2 During construction, the certificate holder shall require that all on-site construction contractors develop and implement a site health and safety plan that informs workers and others on-site about first aid techniques and what to do in case of an emergency. The plan shall also include important telephone numbers and the locations of on-site fire extinguishers and nearby hospitals. The certificate holder shall ensure that construction contractors have personnel on-site who are first aid and CPR certified.
[Final Order IV.M.2.2]

8.3 During operation, the certificate holder shall develop and implement a site health and safety plan that informs employees and others on-site about first aid techniques and what to do in case of an emergency. The plan shall also include important telephone numbers and the locations of on-site fire extinguishers and nearby hospitals.
[Final Order IV.M.2.3]

8.4 During construction, the certificate holder shall ensure that construction vehicles and equipment are operated on graveled areas to the extent possible and that open flames, such as cutting torches, are kept away from dry grass areas.
[Final Order IV.M.2.4]

8.5 During operation, the certificate holder shall ensure that all on-site employees receive annual fire prevention and response training by qualified instructors or members of the local fire districts. The certificate holder shall ensure that all employees are instructed to keep vehicles on roads and off dry grassland, except when off-road operation is required for emergency purposes.
[Final Order IV.M.2.5]

8.6 During construction and operation, the certificate holder shall ensure that all service vehicles are equipped with shovels and portable fire extinguishers of a 4500BC or equivalent rating.
[Final Order IV.M.2.6]

8.7 During construction and operation, the certificate holder shall develop and implement fire safety plans in consultation with the Boardman ~~Rural~~ Fire ~~Protection~~ Rescue District to minimize the risk of fire and to respond appropriately to any fires that occur on the facility site. In developing the fire safety plans, the certificate holder shall take into account the dry nature of the region and shall address risks on a seasonal basis. The

certificate holder shall meet annually with local fire protection agency personnel to discuss emergency planning and shall invite local fire protection agency personnel to observe any emergency drill conducted at the facility.
[Final Order IV.M.2.7] [AMD4]

8.8 Upon the beginning of operation of Unit 1, ~~facility components approved in Final Order on RFA1, or~~ facility components approved in Final Order on RFA2, or facility components approved in Final Order on AMD4, the certificate holder shall provide a site plan to the Boardman ~~Rural~~ Fire ~~Protection~~ Rescue District. The certificate holder shall indicate the actual location of all facility structures on the site plan. The certificate holder shall provide an updated site plan if additional structures are later added to the facility. During operation, the certificate holder shall ensure that appropriate fire protection agency personnel have an up-to-date list of the names and telephone numbers of facility personnel available to respond on a 24-hour basis in case of an emergency on the facility site.
[Final Order IV.M.2.8] [AMD4]

8.9 Wildfire Prevention and Risk Mitigation Condition 1 (PRE): Prior to solar facility construction, the certificate holder shall finalize and submit a Construction Wildfire Mitigation Plan (WMP), consistent with Attachment XX to the Final Order on AMD4, to the Department for review and approval. [AMD4]

8.10 Wildfire Prevention and Risk Mitigation Condition 2 (CON): During solar facility construction, the certificate holder shall require onsite contractors and employees to adhere to the Construction Wildfire Mitigation Plan (WMP) approved under Condition 8.9. [AMD4]

8.11 Wildfire Prevention and Risk Mitigation Condition 3 (PRO):
a. Prior to operation of the solar facility, phase or component, as applicable, the certificate holder shall submit, to the Department for review and approval, an Operational Wildfire Mitigation Plan (WMP) that complies with the requirements of OAR 345-022-0115(1)(b).[AMD4]

b. The certificate holder may rely on a Wildfire Protection Plan approved by the Oregon Public Utility Commission under OAR chapter 860, division 300, or another plan approved by the Department in accordance with this Site Certificate to satisfy some or all of the requirements of this condition.[AMD4]

8.12 Wildfire Prevention and Risk Mitigation Condition 4 (OPR): During operation of the solar facility, the certificate holder must adhere to the requirements of the Operational Wildfire Mitigation Plan approved by the Department under Condition 8.11, as updated in accordance with the requirements of the plan. [AMD4]

9.0 PROTECTION OF SOIL

9.1 The certificate holder must conduct all construction work in compliance with an Erosion and Sediment Control Plan (ESCP) satisfactory to the Oregon Department of Environmental Quality and as required under the NPDES Storm Water Discharge General Permit #1200-C. The certificate holder must include in the ESCP any procedures necessary to meet local erosion and sediment control requirements or storm water management requirements.
[Final Order IV.D.2.1] [AMD2]

9.2 During construction, the certificate holder, to the extent practicable, must limit truck traffic to improved road surfaces to avoid soil compaction.
[Final Order IV.D.2.2]

9.3 During construction, the certificate holder must implement best management practices to control any dust generated by construction activities, such as applying water to roads and disturbed soil areas.
[Final Order IV.D.2.3]

9.4 During construction, 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 the unit to ensure that there are no significant potential adverse impacts to soils and: [AMD1] [AMD2]

a. [Deleted] [AMD1]
b. Deleted] [AMD1]
c. [Deleted] [AMD1]
d. [Deleted] [AMD1]
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.

[Final Order IV.D.2.4] [AMD1]

9.5 During operation, the certificate holder shall routinely inspect and maintain all transmission line corridors, roads, pads and trenched areas and, as necessary, maintain or repair erosion and sediment control measures and control the introduction and spread of noxious weeds.
[Final Order IV.D.2.5]

9.6 i. Upon completion of construction of Unit 1, the certificate holder must restore vegetation to the extent practicable and shall landscape all areas disturbed by construction in a manner compatible with the surroundings and proposed use and in

compliance with the Revegetation and Noxious Weed Control Plan. Upon completion of construction, the certificate holder must remove all temporary structures not required for facility operation and dispose of all timber, brush, refuse and flammable or combustible material resulting from clearing of land and construction of the facility.
[Final Order IV.D.2.7] [Mandatory Condition OAR 345-027-0020(11)][AMD 4]

ii. Upon completion of construction of Carty Solar Farm, the certificate holder must restore vegetation to the extent practicable and shall landscape all areas disturbed by construction in a manner compatible with the surroundings and proposed use and in compliance with the Vegetation and Soil Management Plan. Upon completion of construction, the certificate holder must remove all temporary structures not required for facility operation and dispose of all timber, brush, refuse and flammable or combustible material resulting from clearing of land and construction of the facility.[AMD 4]

9.7 i. During operation of Unit 1, the certificate holder shall restore areas that are temporarily disturbed during facility maintenance or repair activities using the same methods and monitoring procedures described in the Revegetation and Noxious Weed Control Plan.
[Final Order IV.D.2.8][AMD 4]

ii. During operation of Carty Solar Farm, the certificate holder shall restore areas that are temporarily disturbed during facility maintenance or repair activities using the same methods and monitoring procedures described in the Vegetation and Soil Management Plan.[AMD 4]

9.8 The certificate holder must dispose of all accumulated evaporation pond solids, when removed, in a landfill approved for such waste material. All residual solids deposited in evaporation ponds must be removed to an appropriate disposal facility upon closure of the facility. The certificate holder shall include protocols for solids removal and soil restoration at the location of the evaporation ponds in the retirement plan.
[Final Order IV.D.2.9] [AMD1] [AMD2]

9.9 During operation, the certificate holder must minimize drift from the cooling towers through the use of high efficiency drift eliminators that allow no more than a 0.001% drift rate.
[Final Order IV.D.2.10]

9.10 The certificate holder must handle hazardous materials used on the site in a manner that protects public health, safety and the environment and shall comply with all applicable local, state and federal environmental laws and regulations. During operation, the certificate holder may not store gasoline that is intended for fueling vehicles on the facility site.
[Final Order IV.D.2.11]

9.11 If a reportable release of hazardous substance occurs during construction or operation of the facility, the certificate holder must notify the Department within 72 hours and must clean up the spill or release and dispose of any contaminated soil or other materials according to applicable regulations. The certificate holder must make sure that spill kits containing items such as absorbent pads are located on equipment, near storage areas, and in the administrative or maintenance areas of the facility. The certificate holder must instruct employees about proper handling, storage and cleanup of hazardous materials.
[Final Order IV.D.2.12]

10.0 PROTECTION OF NATURAL RESOURCES

10.1 Prior to construction, the certificate holder shall:

i. For Unit 1, ~~C~~consult with the Oregon Department of Fish and Wildlife and prepare a final Wildlife and Habitat Monitoring Mitigation Plan and submit the plan to the Department for review and approval. The certificate holder must conduct all wildlife and habitat monitoring as described in the approved Wildlife and Habitat Monitoring and Mitigation Plan, as amended from time to time.
[Final Order IV.H.2.1] [Mandatory Condition OAR 345-027-0020(6)] [AMD4]

ii. For Carty Solar Farm, ~~S~~submit for review and approval by the Department, in consultation with the Oregon Department of Fish and Wildlife, a final Wildlife and Habitat Monitoring Mitigation Plan based upon the mitigation methodology and enhancement actions in the draft amended plan and a draft Carty Solar Farm Habitat Mitigation Plan provided in the Final Order on Amendment ~~2~~4. The certificate holder must conduct all wildlife and habitat monitoring as described in the approved Wildlife and Habitat Monitoring and Mitigation Plan, as amended from time to time.
[AMD1] [OAR 345-025-0016] [AMD1] [AMD2] [AMD4]

10.2 The certificate holder shall:

a. Prior to construction, acquire the legal right to create, enhance, maintain and protect a habitat mitigation area as long as the facility is in operation and the site certificate is in effect by means of an outright purchase, conservation easement or similar conveyance and shall provide a copy of the documentation to the Department.

b. Prior to construction of the Carty Solar Farm and its supporting facilities, and facility components approved in the Final Order on RFA2, the certificate holder shall provide a habitat assessment of the habitat mitigation area, based on a protocol approved by the Department in consultation with ODFW, which includes methodology, habitat map, and available acres by habitat category and subtype in tabular format.

c. During operations, the certificate holder shall improve and monitor the habitat quality within the habitat mitigation area, in accordance with the Wildlife and Habitat Monitoring and Mitigation Plan or Carty Solar Farm Habitat Mitigation Plan approved by the Department per Condition 10.1.

[Final Order IV.H.2.2] [AMD1] [AMD2]

10.3. The certificate holder shall consult with the Oregon Department of Fish and Wildlife prior to commencement of construction to determine the final acreage of habitat mitigation required. Mitigation shall be provided in accordance with this final acreage determination.
[Final Order IV.H.2.3] [AMD1]

10.4. ~~T~~the certificate holder shall conduct noxious weed inventories within the Habitat Mitigation Area (HMA) to identify patches of weed infestation during year one, year three and year five after construction of Unit 1, and then continue once every 5 years for the life of the project, in years divisible by five. Weeds shall be controlled as needed to maintain and enhance habitat quality within the mitigation area, with the goal of working toward eradication of targeted noxious weeds or, if eradication is not practical, decreasing their abundance to minimize impacts to native plant communities. Weed management practices shall be consistent with the Revegetation and Noxious Weed Control Plan and shall include an integrated weed management approach, using an appropriate combination of prevention and control methods. The certificate holder shall obtain ODFW approval prior to the use of pesticides. If a substantial area of soil is left bare from weed control activities, the area shall be seeded using the appropriate methods as described in the Revegetation and Noxious Weed Control Plan. For the Carty Solar Farm approved in the Final Order on AMD 4, the certificate holder shall implement the Habitat Mitigation Plan prepared specifically for the Carty Solar Farm.
[Final Order IV.H.2.5] [AMD1] [AMD2][AMD4]

10.5. ~~I~~if vegetation in the HMA is damaged from fire or from fire suppression efforts (e.g., vehicular disturbance), the area shall be seeded as necessary with the appropriate seed mix using the appropriate methods for the site, as described in the Revegetation and Noxious Weed Control Plan. For the Carty Solar Farm approved in the Final Order on AMD 4, if vegetation in the HMA is damaged from fire or fire suppression efforts, the certificate holder shall implement the Habitat Mitigation Plan prepared specifically for the Carty Solar Farm.[AMD4]

[Final Order IV.H.2.6] [AMD2]

10.6. The certificate holder shall monitor and control access to the HMA and shall post signs for the life of the facility designating the area as “protected” and including natural resources information. Access to the proposed area shall be limited to operational needs, conservation area monitoring, and noxious weed control efforts. Any fences within or bordering the HMA shall be modified to wildlife-friendly specifications. Livestock grazing shall not be permitted within the HMA. Periodic monitoring (at least annually) shall be conducted to evaluate effectiveness of access control measures and signage maintenance needs.
[Final Order IV.H.2.7] [AMD2]

10.7. The certificate holder must:

i. For Unit 1, ~~I~~implement measures to avoid or minimize temporary and permanent impacts to high quality native habitat and to retain habitat cover in the general landscape, where practicable.
   a. The certificate holder shall not construct any facility components within areas of Category 1 habitat and shall avoid temporary disturbance of Category 1 habitat.
   b. Before beginning construction, the certificate holder shall provide to the Department a map showing the final design locations of all components of the facility and the areas that would be disturbed during construction and identifying the survey areas for all plant and wildlife surveys conducted in 2010 or earlier as described in the Final Order on the Application. The certificate holder shall use a qualified professional biologist to conduct a pre-construction plant and wildlife investigation of all areas that would be disturbed during construction that lie outside of the previously surveyed areas. The certificate holder shall provide a written report of the investigation to the Department and to the Oregon Department of Fish and Wildlife. Based on consultation with the Department and ODFW, the certificate holder shall implement appropriate measures to avoid impacts to any Category 1, 2, or 3 habitat, to any State-listed threatened or endangered plant or wildlife species, and to any State Candidate plant species. If any Category 2 or 3 habitat is identified and will be impacted, the certificate holder shall work with the Department and ODFW to identify appropriate mitigation measures for such impacts.
   c. Before beginning construction, the certificate holder's qualified professional biologist shall survey the previously-identified Category 1 Washington ground squirrel habitat to ensure that the sensitive use area is correctly marked with exclusion flagging and avoided during construction. The certificate holder shall maintain the exclusion markings until construction has been completed.
   d. Before beginning construction, certificate holder's qualified professional biologist shall complete aerial raptor nest surveys within the raptor nest survey area as described in the Final Order on the Application. The purposes of the survey are to identify any sensitive raptor nests near construction areas and to provide baseline information on raptor nest use for analysis as described in the Wildlife and Habitat Monitoring and Mitigation Plan referenced in Condition 10.1. The certificate holder shall provide a written report on the raptor nest surveys to the Department and to ODFW.
   [Final Order IV.H.2.9] [AMD4]

ii. For the Carty Solar Farm, ~~I~~implement measures to avoid or minimize temporary and permanent impacts to high quality native habitat and to retain habitat cover in the general landscape, where practicable.
   a. The certificate holder shall not construct any facility components within areas of Category 1 habitat and shall avoid temporary disturbance of Category 1 habitat.
   b. Before beginning construction, the certificate holder shall provide to the Department a map showing the final design locations of all components of the facility and the areas that would be disturbed during construction and identifying the survey areas for all plant and wildlife surveys conducted ~~prior to construction~~ as described in the Final Order on Amendment 4. The certificate holder shall

use a qualified professional biologist to conduct a pre-construction habitat assessment of all areas that would be disturbed during construction. The certificate holder shall provide a written report of the habitat assessment to the Department and to the Oregon Department of Fish and Wildlife. Based on consultation with the Department and ODFW, the certificate holder shall implement appropriate measures to avoid impacts to any Category 1 habitat, to any State-listed threatened or endangered plant or wildlife species, and to any State Candidate plant species.
[AMD1]

c. Before beginning construction, the certificate holder's qualified professional biologist shall survey the previously-identified Category 1 Washington ground squirrel habitat to ensure that the sensitive use area is correctly marked with exclusion flagging and avoided during construction. The certificate holder shall maintain the exclusion markings until construction has been completed.
d. Before beginning construction, certificate holder's qualified professional biologist shall complete ~~aerial~~ raptor nest surveys within the raptor nest survey area as described in the Final Order ~~on the Application~~ on AMD 4. The purposes of the survey are to identify any sensitive raptor nests near construction areas and to provide baseline information on raptor nest use for analysis as described in the Wildlife and Habitat Monitoring and Mitigation Plan referenced in Condition 10.1. The certificate holder shall provide a written report on the raptor nest surveys to the Department and to ODFW.[AMD4]

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

Species	Sensitive Period	Early Release Date
Swainson's hawk	April 1 to August 15	May 31
Ferruginous hawk	March 15 to August 15	May 31
Bald Eagle	January 1 to August 15	May 31
Golden eagle	January 1 to July 15	May 31
Burrowing owl	April 1 to August 15	July 15
Long-billed curlew	March 8 to June 15	May 31

During all years in which construction occurs, the certificate holder shall use a protocol approved by the Oregon Department of Fish and Wildlife (ODFW) to determine whether there are any active nests of these species within 1,300 feet of any areas that would be disturbed during construction. Surveys shall be extended to one mile for golden eagle nests and 0.6 miles for ferruginous hawk nests. This construction buffer distance may be decreased with approval by ODFW and USFWS depending on the intensity of construction activity and whether there is an adequate physical barrier (i.e., vegetation, topography, etc.) between the nest site and the construction impacts or if consultation

determines a lesser distance is feasible and appropriate. The certificate holder shall begin monitoring potential nest sites by the beginning of the sensitive period, as listed above, and shall continue monitoring until at least May 31 (July 15 for golden eagle nests) to determine whether any potentially-active nest sites become active during the sensitive period.

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

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

The certificate holder may begin or resume construction activities within the buffer area before the ending day of the sensitive period with the approval of ODFW, after the young are fledged. The certificate holder shall use a protocol approved by ODFW to determine when the young are fledged (the young are independent of the core nest site).
[Final Order IV.H.2.10] [AMD1]

10.9 The certificate holder shall implement the following measures to avoid or mitigate impacts to sensitive wildlife habitat during construction:

a. Preparing maps to show exclusion areas that are off-limits to construction personnel, such as nesting or denning areas for sensitive wildlife species.
b. Avoiding unnecessary road construction, temporary disturbance, and vehicle use.
c. Limiting construction work to approved and surveyed areas shown on facility constraints maps.

d. Ensuring that all construction personnel are instructed to avoid driving cross-country or taking short-cuts within the site boundary or otherwise disturbing areas outside of the approved and surveyed construction areas.

[Final Order IV.H.2.11]

10.10 The certificate holder shall reduce the risk of injuries to avian species by designing and installing all aboveground transmission line support structures following the most current suggested practices for avian protection on power lines published by the Avian Power Line Interaction Committee.
[Final Order IV.H.2.12]

10.11 Sensitive raptor nest monitoring shall be conducted by qualified biologists in year one, year three, and year five after operations of Unit 1 have begun and then at least every five years after that for the life of the project in years divisible by five. Results of the monitoring shall be included in an annual sensitive raptor nest monitoring report provided to the Oregon Department of Fish and Wildlife, the U.S. Fish and Wildlife Service, and the Department. This report shall document the nest productivity of sensitive raptor species, including golden eagle (Aquila chrysaetos), occurring within one mile of the Carty Generating Station facility, the Ferruginous Hawk occurring within 0.6 miles, and other sensitive raptor species nests occurring within 1,300 feet of the facility site.
[Final Order IV.H.2.13] [AMD1] [AMD2]

10.12. The certificate holder shall use a qualified environmental professional to provide environmental training during construction and operation. Environmental training includes information on the sensitive species present onsite, precautions to avoid injuring or destroying wildlife or sensitive wildlife habitat, exclusion areas, permit requirements, and other environmental issues. The certificate holder shall instruct construction and operations personnel to report any injured or dead wildlife detected while on the site to the appropriate onsite environmental manager.
[Final Order IV.H.2.14]

10.13. The certificate holder shall not place any structures in jurisdictional waters of Sixmile Canyon and shall avoid new impacts to Sixmile Canyon during construction by using the existing access road for vehicle crossing only during the dry season. Impacts to jurisdictional waters in Sixmile Canyon drainages shall be avoided.
[Final Order IV.H.2.15] [AMD1]

10.14. Prior to construction, the certificate holder shall conduct surveys for Washington ground squirrel (WGS) and Lawrence's milkvetch.

i. For Unit 1 ~~T~~the certificate holder shall determine the boundaries of Category 1 Washington ground squirrel (WGS) habitat based on the locations where the squirrels were found to be active in the most recent WGS surveys prior to the beginning of construction in habitat suitable for WGS foraging or burrow establishment ("suitable habitat"). The certificate holder shall use a qualified

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

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

ii. In addition to the requirements in (i), for the Carty Solar Farm ~~T~~the certificate holder shall use a qualified professional biologist who has experience in detection of Lawrence's milkvetch to conduct plant surveys within the site boundary, using appropriate survey protocols, during the blooming season (May through August).

a. If the species is found to occur, the certificate holder must install protection flagging around the plant population and avoid any ground disturbance within this zone; and its location shall be presented on construction constraint maps showing restricted work areas.

[Final Order IV.I.2.1] [AMD1] [AMD4]

10.15 The certificate holder shall impose and enforce a construction and operation speed limit of 20 miles per hour throughout the facility site and, during the active squirrel season (February 1 to June 30), a speed limit of 10 miles per hour from one hour before ~~sunset~~ sunrise to one hour after ~~sunrise~~ sunset on private roads near known Washington

ground squirrel (WGS) colonies. The certificate holder shall ensure that all construction and operations personnel are instructed to watch out for and avoid WGS and other wildlife while driving through the facility site.
[Final Order IV.I.2.2] [AMD4]

10.16 The certificate holder shall use perch-preventing structures on Carty Generating Station components in areas identified as Category 1 habitat for Washington ground squirrels.
[Final Order IV.I.2.3]

10.17 The certificate holder shall provide environmental awareness training for all project personnel and construction contractors before such contractors or personnel enter the site to perform construction-related activities. The training program shall discuss Washington ground squirrel issues as well as other environmental issues related to the project, and include handouts with identification information and reporting procedures. Additional training sessions shall be conducted as needed for personnel that start after the beginning of construction.
[Final Order IV.I.2.4]

10.18 In order to discourage Washington ground squirrels from moving into planned construction areas the certificate holder may disc or till a minimum of an 800-ft. buffer within the perimeter of the site boundary, or implement other approved measures, in closest proximity to squirrel activity areas. Proposed measures and areas where measures will be implemented shall be reviewed by ODFW and shall be informed by the most recent Washington ground squirrel survey data.
[Final Order IV.I.2.5] [AMD1]

10.19 If the certificate holder discs or tills areas, the certificate holder shall plant dryland wheat or another cover crop in tilled areas within the site boundary. Crops to be planted shall be selected by the certificate holder in coordination with ODFW.
[Final Order IV.I.2.6] [AMD1]

10.20 Should new Washington ground squirrel burrows become established within 785 feet of the site boundary, the certificate holder shall immediately report to ODFW. The certificate holder shall coordinate with ODFW to establish additional mitigation measures or to obtain an Incidental Take Permit, as appropriate.
[Final Order IV.I.2.8] [AMD1]

10.21 The certificate holder shall conduct post-construction surveys on known Washington ground squirrel colonies in the Carty Generating Station facility area, on land owned by the certificate holder, both within the HMA and in areas where known active burrows were recorded during preconstruction field surveys. The Washington ground squirrel surveys shall be conducted by qualified biologists in year one, year three, and year five after operations of Unit 1 have begun, and then at least every five years after that for the life of the project in years divisible by five. Surveyors shall record evidence of Washington ground squirrel activity, current land use, and evidence of conditions

caused by the project that might increase erosion or result in a decline in vegetation quality and adversely affect a Washington ground squirrel colony.
[Final Order IV.I.2.9] [AMD1] [AMD2]

10.22 The certificate holder shall implement a waste management plan during operation that includes but is not limited to the following measures:

a. Training employees to minimize and recycle solid waste.
b. Recycling paper products, metals, glass and plastics.
c. Recycling used oil and hydraulic fluid.
d. Collecting non-recyclable waste for transport to a local landfill by a licensed waste hauler.
e. Segregating all hazardous wastes such as used oil, oily rags and oil-absorbent materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous wastes.

[Final Order IV.N.2.2]

10.23 During construction and operation of the Carty Generating Station, the certificate holder shall obtain potable water from the existing Boeing well or from a bottled water vendor. Water for construction and process water shall be obtained from Carty Reservoir. The certificate holder may use other sources of water for on-site uses subject to prior approval by the Department.
[Final Order V.C.2.1] [AMD1] [AMD2]

10.24 During operation, the certificate holder shall discharge sanitary wastewater generated at the facility to ~~the Boardman Coal Plant and Carty Generating Station sanitary waste facility (sewage lagoons) or~~ the Carty septic system in compliance with ~~DEQ or~~ county permit requirements.
[Final Order IV.N.2.4] [AMD2] [AMD4]

10.25 Before beginning construction of Unit 1, the certificate holder shall receive approval of the wetlands delineation report by the Department of State Lands and provide an approval letter to the Department. Before beginning construction of the Carty Solar Farm, the certificate holder shall receive approval of the wetlands delineation report by the Department of State Lands and provide an approval letter to the Department.
[Final Order V.B.2.1] [AMD2] [AMD4].

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

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

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

[Final Order V.B.2.2]

10.27 Before beginning construction, the certificate holder shall provide to the Department a map showing the final design locations of all components of the facility and the areas that would be disturbed during construction and showing the wetlands and stream channels delineated through field surveys conducted prior to construction. For areas to be disturbed during construction that lie outside of the previously-surveyed areas, the certificate holder shall hire qualified personnel to conduct a pre-construction investigation to determine whether any jurisdictional waters of the State exist in those locations. The certificate holder shall provide a written report on the pre-construction investigation to the Department and the Department of State Lands for approval before beginning construction. The certificate holder shall ensure that construction and operation of the facility will not impact any jurisdictional water identified in the pre-construction investigation in a manner that would require a Removal-Fill Permit.
[Final Order V.B.2.3] [AMD1]

10.28 The certificate holder shall demonstrate that the Oregon Department of Environmental Quality has issued to the certificate holder:

i. Prior to operation of Unit 1, a Water Pollution Control Facilities Permit substantially in the form of Exhibit 4 of the Final Order on the Application, allowing for wastewater discharge from the Carty Generating Station.

[Final Order V.E.2.1]

ii. Prior to operation of the Carty Solar Farm, Addendum 1 of the modified Water Pollution Control Facilities Permit 100189 with the following additional condition, allowing discharge of solar panel washwater:

a. Solar panel wash water is permitted to be discharged through evaporation or infiltration into the ground at the point of application. The use of chemicals, soaps, detergents and heated water is prohibited. Pressure washing is allowed, so long as it does not remove paint or other finishes. Soil erosion and runoff from the Carty Solar Farm is prohibited. Soil erosion must be repaired within 30 days of occurrence.
[AMD1]

iii. Prior to operation of facility components authorized by the Final Order on Request for Amendment 2, Addendum 2 of the modified Water Pollution Control Facilities Permit 100189, substantially in the form of Attachment E of the Final Order on Request for Amendment 2.
[AMD2]

10.29

a. The certificate holder shall comply with state laws and rules applicable to Water Pollution Control Facilities Permits that are adopted in the future to the extent that such compliance is required under the respective statutes and rules.

b. The certificate holder shall obtain and comply with a Umatilla County Public Health construction permit for the ~~(unlined)~~ septic system.

[Final Order V.E.2.2] [AMD2][AMD4]

10.30 ~~The certificate holder may not dispose of wastewater into the Boardman settling ponds, vehicle wash water pond or coal yard ponds unless the site certificate and the WPCF are amended to permit such use.~~[Deleted]
[Final Order V.E.2.3] [AMD4]

10.31 The site certificate holder must meet the compliance dates set out in the WPCF unless alternative compliance dates have been approved in advance in writing by DEQ. Either prior to or not later than 14 calendar days following any lapsed compliance date, the site certificate holder must submit a notice of noncompliance with the established schedule to the Department of Energy and DEQ. Any report of noncompliance must include the cause of noncompliance.
[Final Order V.E.2.4]

10.32 Prior to constructing or modifying wastewater management treatment and disposal facilities, detailed plans must be submitted to and approved by the Department of Environmental Quality.
[Final Order V.E.2.5]

10.34. [Deleted]
[Final Order V.E.2. [AMD1]

10.35. [Deleted]
[Final Order V.E.2.7] [AMD1]

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

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

[Final Order V.E.2.8]

10.37 The certificate holder must prepare and implement a Hazardous Materials Management and Monitoring plan approved by the Department. The plan(s) must address the handling of potentially hazardous substances (as defined by ORS 465.200) during construction and operation of the facility, measures to prevent on- and off-site contamination and documentation of plan implementation. Separate plans for the construction and operation phases are acceptable. The certificate holder must use hazardous materials in a manner that protects public health, safety and the environment

and must comply with all applicable local, state and federal environmental laws and regulations.

The Hazardous Materials Management and Monitoring Plan shall contain the same information required for a Spill Prevention, Control and Countermeasure Plan (40 CFR 112). Whereas the SPCC Plan addresses spill prevention for oil products, the materials management and monitoring plan shall address hazardous substances. The Plan shall include operating procedures to prevent hazardous substances releases, control measures to contain hazardous substance releases, countermeasures to contain, cleanup, and mitigate hazardous substance releases, and procedures for required inspections and testing. This Plan must be submitted to the Department for review and approval prior to respective construction or operation phase of the Carty Generating Station Facility.
[Final Order IV.G.2.2] [AMD1] [AMD2]

10.38. If any inspection performed in accordance with the Hazardous Materials Management and Monitoring Plan identifies improper handling or storage of hazardous substances (as defined by ORS 465.200) or improper record keeping procedures, the certificate holder must correct such deficiencies promptly and must report the corrective actions to the Department. If the certificate holder has not corrected such deficiencies within six months after the date of the inspection report, the certificate holder shall submit to the Council an independently prepared estimate of cost of correction. Upon approval of the estimate by the Council, the certificate holder shall increase the amount of the bond or letter of credit required under Condition IV.G.2.9 by the approved amount of the estimate. In no event, however, shall the certificate holder be relieved of its obligation to exercise all due diligence in correcting deficiencies identified in the course of a site inspection.
[Final Order IV.G.2.3]

10.39. The certificate holder shall report any release (as defined by ORS 465.200) of hazardous substances to the Department within 72 hours after the discovery of such release, in addition to any other reporting requirements under applicable law. If the certificate holder has not remedied a release consistent with applicable Oregon Department of Environmental Quality standards within six months after the date of the release, the certificate holder shall submit to the Council an independently prepared estimate of the cost to complete necessary remediation. Upon approval of the estimate by the Council, the certificate holder shall increase the amount of its bond or letter of credit by the approved amount of the estimate. In no event, however, shall the certificate holder be relieved of its obligation to exercise all due diligence in remedying a release of hazardous substances.
[Final Order IV.G.2.4] [AMD1]

10.40. The certificate holder shall maintain the reservoir at an elevation no lower than an annual average of 665 feet mean sea level (MSL). The certificate holder may operate the reservoir at a lower elevation without a site certificate amendment if the certificate

holder consults with the Department and ODFW to determine that the lower elevation would not result in a net loss of habitat and, therefore, does not warrant further analysis and potential mitigation through a site certificate amendment process. The certificate holder shall submit an Amendment Determination Request supporting a conclusion that a site certificate amendment is not required and receive concurrence with the conclusions of the ADR prior to operating the reservoir at a lower elevation.
[AMD2]

11.0 PROTECTION OF HISTORIC, CULTURAL AND ARCHAEOLOGICAL RESOURCES

11.1 [Deleted]
[Final Order IV.K.2.1] [AMD1]

11.2 Before beginning construction, the certificate holder shall provide to the Department a map showing the final design locations of all components of the facility, the areas that would be temporarily disturbed during construction, the areas that were surveyed in 2009 as described in the Final Order on the ASC or that have been subsequently surveyed.
[Final Order IV.K.2.2] [AMD1]

11.3 The certificate holder shall:

a. Use qualified personnel to conduct field investigation of all areas to be disturbed during construction that lie outside the previously-surveyed areas. The certificate holder shall provide a written report of the field investigation to the Department and to the Oregon State Historic Preservation Office (SHPO). If any potentially significant historic, cultural, or archaeological resource sites are found during the field investigation, the certificate holder shall instruct all construction personnel to avoid the identified sites and shall implement appropriate measures to protect the sites, including the measures described in Condition 11.5.
b. Prior to construction of facility components approved in the Final Order on RFA2, use qualified personnel to conduct field investigation of all areas to not previously disturbed or minimally disturbed. The certificate holder shall provide a written report of the field investigation to the Department and to the Oregon State Historic Preservation Office (SHPO), and shall consult with the CTUIR on whether any areas would require a cultural monitor during construction. If any potentially significant historic, cultural, or archaeological resource sites are found during the field investigation, the certificate holder shall instruct all construction personnel to avoid the identified sites and shall implement appropriate measures to protect the sites, including the measures described in Condition 11.5.

[Final Order IV.K.2.3; AMD2]

11.4. The certificate holder shall ensure that a qualified archaeologist, as defined in OAR 736-051-0070, develops a training program for cultural resources. The program will instruct construction personnel in the identification of cultural materials and avoidance of accidental damage to identified resource sites. Records of such training shall be maintained at the administration/control building and made available to authorized representatives of the Department upon request.
[Final Order IV.K.2.4] [AMD1]

11.5. The certificate holder shall ensure that construction personnel cease all ground-disturbing activities in the immediate area if any archaeological or cultural resources are found during construction of the facility until a qualified archeologist can evaluate the significance of the find. The certificate holder shall notify the Department and the SHPO of the find. If the SHPO determines that the resource is significant, the certificate holder shall make recommendations to the Council for mitigation, including avoidance, field documentation and data recovery, in consultation with the Department, SHPO, interested tribes and other appropriate parties. The certificate holder shall not restart work in the affected area until the certificate holder has demonstrated to the Department and the SHPO that it has complied with archaeological resource protection regulations.
[Final Order IV.K.2.5]

11.6. The certificate holder shall:

i. For Unit 1, ~~P~~prepare and implement an Archaeological Monitoring Plan for construction activities to address and mitigate impacts from exposure of unanticipated or previously unidentified cultural resources that may be exposed during construction of the facility. A current copy of the plan must be maintained at the administration/control building and made available to authorized representatives of the Department upon request. The Archaeological Monitoring Plan, as proposed by the certificate holder, shall include the following requirements:

a. [Deleted]
[AMD1].

b. A qualified archaeological monitor is a person who meets the "qualified archaeologist" standards defined by ORS 390.235(6)(b) or who is supervised by a "qualified archaeologist." If the latter applies, the supervising qualified archaeologist must vouch for the work of the archaeological monitor and author or co-author the archaeological monitoring report provided at the end of construction monitoring.

c. The archaeological monitor will keep a daily log of construction and monitoring activities. If intact archaeological materials are encountered during the monitoring, the archaeological monitor will initiate procedures for inadvertent discovery of archaeological resources, as specified in ORS 358.920.

d. Artifacts will be examined and documented in the field and will not be collected unless authorized under the provisions of a SHPO permit, if one is obtained in the inadvertent discovery of archaeological resources process.

e. If human remains are identified during the course of construction monitoring, the monitor will initiate the procedures for Inadvertent Discovery of Human Remains, as specified in ORS 97.740-97.760.
f. The certificate holder is responsible for providing an archaeological monitoring report to the Department and SHPO after construction work is completed. The report must detail the activities of the archaeological monitor and any inadvertent discoveries encountered, along with actions taken to address them. [Final Order IV.K.2.6] [AMD4]

ii. At least 45-days prior to construction of the Carty Solar Farm, provide to the Department for review and approval, in consultation with SHPO and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), an amended Archaeological Monitoring Plan for construction activities to address and mitigate impacts from exposure of unanticipated or previously unidentified cultural resources that may be exposed during construction of the Carty Solar Farm. The amended Archaeological Monitoring Plan shall include the following requirements:
a. The certificate holder shall coordinate with CTUIR prior to and during ground disturbing activities to determine if a tribal monitor should be onsite.
b. A qualified archeologist, as defined in 11.6(i)(b) of this condition, shall be mobilized to the site if unanticipated resources are discovered; in this event, Condition 11.6.ii(c) through (f) would then be applicable.
c. The archeological monitor will keep a daily log of construction and monitoring activities. If intact archaeological materials are encountered during the monitoring, the monitor will initiate procedures for inadvertent discovery of archaeological resources, as specified in ORS 358.920.
d. Artifacts will be examined and documented in the field and will not be collected unless authorized under the provisions of a SHPO permit, if one is obtained in the inadvertent discovery of archaeological resources process.
e. If human remains are identified during the course of construction monitoring, the monitor will initiate the procedures for Inadvertent Discovery of Human Remains, as specified in ORS 97.740-97.760.
f. The certificate holder is responsible for providing an archaeological monitoring report to the Department and SHPO after construction work is completed. The report must detail the activities of the monitor and any inadvertent discoveries encountered, along with actions taken to address them. [AMD1]

11.7 Prior to starting construction of the Carty Solar Farm, in consultation with the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) determine impact and, if necessary, mitigation regarding the Historic Property of Religious or Cultural Significance to Indian Tribes (HPRCSIT) located in the indirect analysis area. [AMD4]

12.0 CARBON DIOXIDE EMISSIONS

12.1 The net carbon dioxide emissions rate for the base load gas plant must not exceed 0.675 pounds of carbon dioxide per kilowatt-hour of net electric power output, with carbon dioxide emissions and net electric power output measured on a new and clean basis, as defined in OAR 345-001-0010.
[Final Order IV.P.2.1]

12.2 The net carbon dioxide emissions rate for incremental emissions for the facility operating with power augmentation must not exceed 0.675 pounds of carbon dioxide per kilowatt-hour of net electric power output, with carbon dioxide emissions and net electric power output measured on a new and clean basis at the site during the times of year when the facility is intended to operate with power augmentation, subject to modification under Condition 12.12.
[Final Order IV.P.2.2]

12.3 For the purposes of the site certificate, "monetary path payment requirement" means the amount of offset funds determined pursuant to OAR 345-024-0550, -0560, -0590 and -0600 and the amount of the selection and contracting funds that the certificate holder must disperse to The Climate Trust, as the qualified organization, pursuant to OAR 345-024-0710 and the site certificate. The certificate holder shall calculate the monetary path payment requirement using an offset fund rate of $1.27 per ton of carbon dioxide in 2011 dollars.

a. The certificate holder shall calculate 2011 dollars using the Index described in Condition 15.1.b.
b. The certificate holder shall increase the amount of the letter of credit described in Condition 12.9 by the percentage increase in the Index. The certificate holder shall index the funds from the date of the Council's approval of the site certificate to the date of disbursement of funds to The Climate Trust.

[Final Order IV.P.2.3]

12.4 Before beginning construction of the facility, the certificate holder shall submit to the Department information identifying its final selection of a gas turbine vendor, heat recovery steam generator vendor along with the following information, as appropriate:

a. For the base load gas plant, the certificate holder shall submit written design information, based on its contracts with vendors, sufficient to verify the plant's designed new and clean heat rate (higher heating value) and its net power output at the average annual site condition. The certificate holder shall submit an affidavit certifying the heat rate and capacity.
b. For the base load gas plant designed with power augmentation, the certificate holder shall submit written design information, based on its contracts with vendors, sufficient to verify the facility's designed new and clean heat rate (higher heating value) and its net power output at the site during the times of year when is facility is intended to operate with power augmentation. The certificate holder shall submit an affidavit certifying the heat rate and capacity.
[Final Order IV.P.2.4] [AMD1]

12.5 Before beginning construction of Unit 1, the certificate holder shall specify to the Department the annual average hours and the times that it expects to operate with power augmentation.
[Final Order IV.P.2.5]

12.6 To calculate the initial monetary path payment requirement, the certificate holder shall use the contracted design parameters for capacities and heat rates submitted under Condition 12.4 and the annual average hours and times of operation with power augmentation specified under Condition 12.5.
[Final Order IV.P.2.6]

12.7 Before beginning construction of Unit 1, the certificate holder shall enter into a Memorandum of Understanding (MOU) with The Climate Trust that establishes the disbursement mechanism to transfer selection and contracting funds and offset funds to The Climate Trust.

a. The MOU must be substantially in the form of Exhibit 3 to the Final Order on the Application. At the request of the certificate holder, the Council may approve a different form of a letter of credit and concurrent MOU without an amendment of the site certificate.
b. Either the certificate holder or The Climate Trust may submit to the Council for the Council's resolution any dispute between the certificate holder and The Climate Trust concerning the terms of the letter of credit, the MOU or any other issues related to the monetary path payment requirement. The Council's decision shall be binding on all parties.
[Final Order IV.P.2.7] [AMD1]

12.8 The certificate holder shall submit all monetary path payment requirement calculations to the Department for verification in a timely manner before submitting a letter of credit for Council approval, before entering into an MOU with The Climate Trust as required by Condition 12.7, and before making disbursements to The Climate Trust.
[Final Order IV.P.2.8] [AMD1]

12.9 Before beginning construction of Unit 1, the certificate holder shall submit to The Climate Trust a letter of credit in the amount of the offset funds of the monetary path payment requirement as determined under Condition 12.3.

a. The certificate holder shall use a form of letter of credit that is substantially in the form of Appendix B to the MOU described in Condition 12.7. At the request of the certificate holder, the Council may approve a different form of a letter of credit without an amendment of the site certificate.
b. The certificate holder shall use an issuer of the letter of credit approved by the Council.
c. The certificate holder shall maintain the letter of credit in effect until the certificate holder has disbursed the full amount of the offset funds to The Climate Trust. The certificate holder may reduce the amount of the letter of credit commensurate with payments it makes to The Climate Trust. The letter of

credit must not be subject to revocation before disbursement of the full amount of the offset funds.
[Final Order IV.P.2.9] [AMD1]

12.10 For any transfer of the site certificate approved under OAR 345-027-0100:

a. If The Climate Trust has not yet fully withdrawn the amount of the letter of credit of the current certificate holder at the time of the transfer, the new certificate holder shall submit to The Climate Trust a pro-rated letter of credit, subject to the requirements of Condition 12.9. The new certificate holder shall submit to Council for the Council's approval the identity of the issuer of the letter of credit. The Council may approve a new letter of credit without a site certificate amendment.
b. The new certificate holder shall enter into an MOU with The Climate Trust as described in Condition 12.7 unless the new certificate holder demonstrates to the satisfaction of the Department that there has been a valid assignment of the current certificate holder's MOU to the new certificate holder. The Council may approve a new MOU without a site certificate amendment.
c. For resolution of any dispute between the new certificate holder and The Climate Trust concerning the disbursement mechanism for monetary path payments or any other issues related to the monetary path payment requirement, either party may submit the dispute to the Council as provided in Condition 12.7.b.
[Final Order IV.P.2.10]

12.11 The certificate holder shall disburse to The Climate Trust offset funds and selection and contracting funds when requested by The Climate Trust in accordance with Conditions 12.13 and 12.14 and the following requirements:

a. The certificate holder shall disburse selection and contracting funds to The Climate Trust before beginning construction and as appropriate when additional offset funds are required under Conditions 12.13 and 12.14.
b. Upon notice pursuant to subsection (c), The Climate Trust may request from the issuer of the letter of credit the full amount of all offset funds available or it may request partial payment of offset funds at its sole discretion. Notwithstanding the specific amount of any contract to implement an offset project, The Climate Trust may request up to the full amount of offset funds the certificate holder is required to provide to meet the monetary path payment requirement.
c. The Climate Trust may request disbursement of offset funds pursuant to paragraph (b) by providing notice to the issuer of the letter of credit that The Climate Trust has executed a letter of intent to acquire an offset project. The certificate holder shall require that the issuer of the letter of credit disburse offset funds to The Climate Trust within three business days of a request by The Climate Trust for the offset funds in accordance with the terms of the letter of credit.
[Final Order IV.P.2.11]

12.12 Within the first 12 months of commercial operation of the facility, the certificate holder shall conduct a 100-hour test at full power without power augmentation (Year One Test-1) and a test at full power with power augmentation (Year One Test-2). Tests performed for purposes of the certificate holder's commercial acceptance of the facility may suffice to satisfy this condition in lieu of testing after beginning commercial operation.

a. The certificate holder shall conduct the Year One Test-1 to determine the actual heat rate (Year One Heat Rate-1) and the net electric power output (Year One Capacity-1) on a new and clean basis, without degradation, with the results adjusted for the average annual site condition for temperature, barometric pressure and relative humidity. The certificate holder shall calculate carbon dioxide emissions using a rate of 117 pounds of carbon dioxide per million Btu of natural gas fuel.
b. The certificate holder shall conduct the Year One Test-2 to determine the actual heat rate (Year One Heat Rate-2) and net electric power output (Year One Capacity-2) for the facility operating with power augmentation, without degradation, with the results adjusted for the site condition for temperature, barometric pressure and relative humidity at the site during the times of year when the power augmentation is intended to operate. The certificate holder shall calculate carbon dioxide emissions using a rate of 117 pounds of carbon dioxide per million Btu of natural gas fuel.
c. The certificate holder shall notify the Department at least 60 days before conducting the tests required in subsections (a) and (b) unless the certificate holder and the Department have mutually agreed that less notice will suffice.
d. Before conducting the tests required in subsections (a) and (b), the certificate holder shall, in a timely manner, provide to the Department for its approval a copy of the protocol for conducting the tests. The Department may approve modified parameters for testing power augmentation on a new and clean basis and pursuant to OAR 345-024-0590(1) without a site certificate amendment. The certificate holder shall not conduct the tests until the Department has approved the testing protocols.
e. Within two months after completing the Year One Tests, the certificate holder shall provide to the Council reports of the results of the Year One Tests. [Final Order IV.P.2.12]

12.13 Based on the data from the Year One Tests described in Condition 12.12, the certificate holder shall calculate an adjusted monetary path payment. The certificate holder shall submit its calculations to the Department for verification. If the adjusted amount exceeds the amount of the letter of credit provided according to Condition 12.9 before beginning construction, the certificate holder shall fully disburse the excess amount directly to The Climate Trust within 30 days of the Department's verification of the calculations.

a. The certificate holder shall include the appropriate calculations of the adjusted monetary path payment with its reports of the results of the Year One Tests required under Condition 12.12.

b. For calculating the adjusted monetary path payment, the certificate holder shall use an offset fund rate of $1.27 per ton of carbon dioxide (in 2011 dollars) and shall calculate contracting and selecting funds based on 10 percent of the first $500,000 in offset funds and 4.286 percent of any offset funds in excess of $500,000 (in 2011 dollars).
c. In no case shall the certificate holder diminish the value of the letter of credit it provided before beginning construction or receive a refund from The Climate Trust based on the calculations made using the Year One Capacities and the Year One Heat Rates.
[Final Order IV.P.2.13]

12.14 The certificate holder shall use the Year One Capacity-2 and Year One Heat Rate-2 that it reports for the facility, as described in Condition 12.12.b, to calculate whether it owes supplemental monetary path payments due to increased hours that it uses power augmentation.
a. Each five years after beginning commercial operation of the facility (five-year reporting period), the certificate holder shall report to the Department the annual average hours the facility operated with power augmentation during that five-year reporting period, as required under OAR 345-024-0590(6). The certificate holder shall submit five-year reports to the Department within 30 days after the anniversary date of beginning commercial operation of the facility.
b. If the Department determines that the facility exceeded the projected net total carbon dioxide emissions calculated under Conditions 12.4, 12.5 and 12.12, prorated for five years, during any five-year reporting period described in subsection (a), the certificate holder shall offset excess emissions for the specific reporting period according to paragraph (i) and shall offset the estimated future excess emissions according to paragraph (ii), as follows:
i. In determining whether there have been excess carbon dioxide emissions that the certificate holder must offset for a five-year reporting period, the Department shall apply OAR 345-024-0600(4)(a). The certificate holder shall pay for the excess emissions at $1.27 per ton of carbon dioxide emissions (in 2011 dollars). The Department shall notify the certificate holder and The Climate Trust of the amount of supplemental payment required to offset excess emissions.
ii. The Department shall calculate estimated future excess emissions for the remaining period of the deemed 30-year life of the facility using the parameters specified in OAR 345-024-0600(4)(b). The certificate holder shall pay for the estimated excess emissions at $1.27 per ton of carbon dioxide (in 2011 dollars). The Department shall notify the certificate holder of the amount of supplemental payment required to offset future excess emissions.
iii. The certificate holder shall offset excess emissions identified in paragraphs (i) and (ii) using the monetary path as described in OAR 345-024-0710. The certificate holder shall pay selection and contracting

funds of 10 percent of the first $500,000 in offset funds and 4.286 percent of any offset funds in excess of $500,000 (in 2010 dollars).

c. The certificate holder shall disburse the supplemental selection and contracting funds and supplemental offset funds to The Climate Trust within 30 days after notification by the Department of the amount that the certificate holder owes. [Final Order IV.P.2.14]

12.15 The certificate holder shall use only pipeline quality natural gas or shall use synthetic gas with a carbon content per million Btu no greater than pipeline-quality natural gas to fuel the combustion turbines and the power augmentation.
[Final Order IV.P.2.15] [AMD1]

12.16 After the certificate holder has complied with the conditions relating to the carbon dioxide standard before beginning construction, incremental increases in capacity and heat rate that otherwise fall within the limits specified in OAR 345-027-0050(2) do not require an amendment of the site certificate if the certificate holder complies substantially with Conditions 12.1 through 12.15, except as modified below, and if:

a. The Department or the Council determines, as described in OAR 345-027-0050(5), that the proposed change in the facility does not otherwise require an amendment; and
b. The certificate holder complies with the appropriate carbon dioxide emissions standard and monetary offset rate in effect at the time the Department or the Council makes its determination under this condition.

[Final Order IV.P.2.16]

12.17 [Deleted]
[Final Order IV.P.2.17] [AMD1]

13.0 NOISE CONTROL AND NOISE COMPLAINT RESPONSE

13.1 To reduce construction noise impacts at nearby residences, the certificate holder shall:

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

[Final Order V.A.2.1]

13.2 During operation, the certificate holder shall maintain a complaint response system to address noise complaints. The certificate holder shall notify the Department within 15 days of receiving a complaint about noise from the facility. The notification should include the date the complaint was received, the nature of the complaint, the

complainant's contact information, the location of the affected property, and any actions taken, or planned to be taken, by the certificate holder to address the complaint.
[Final Order V.A.2.2]

13.3 Upon written notification from the Department, the certificate holder will monitor and record the actual statistical noise levels during operations to verify that the certificate holder is operating the facility in compliance with the noise control regulations. The monitoring plan must be reviewed and approved by the Department prior to implementation. The cost of such monitoring, if required, will be borne by the certificate holder.
[Final Order V.A.2.3]

14.0 MONITORING AND REPORTING REQUIREMENTS - GENERAL

14.1 The following general monitoring conditions apply:

a. The certificate holder shall consult with affected state agencies, local governments and tribes and shall develop specific monitoring programs for impacts to resources protected by the standards of divisions 22 and 24 of OAR Chapter 345 and resources addressed by applicable statutes, administrative rules and local ordinances. The certificate holder must submit the monitoring programs to the Department of Energy and receive Department approval before beginning construction or, as appropriate, operation of the facility.
b. The certificate holder shall implement the approved monitoring programs described in OAR 345-027-0028(1) and monitoring programs required by permitting agencies and local governments.
c. For each monitoring program described in OAR 345-027-0028(1) and (2), the certificate holder shall have quality assurance measures approved by the Department before beginning construction or, as appropriate, before beginning commercial operation.
d. If the certificate holder becomes aware of a significant environmental change or impact attributable to the facility, the certificate holder shall, as soon as possible, submit a written report to the Department describing the impact on the facility and any affected site certificate conditions.

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

14.2 The certificate holder shall report according to the following requirements:

a. General reporting obligation for energy facilities under construction or operating:
    i. Within six months after beginning construction, and every six months thereafter during construction of the energy facility and related or supporting facilities, the certificate holder shall submit a semiannual construction progress report to the Department of Energy as described in OAR 345-026-0080(1)(a).
    [AMD1]
    ii. By April 30 of each year after beginning operation, the certificate holder shall submit an annual report to the Department addressing the subjects listed in

OAR 345-026-0080 (1)(b). The Council Secretary and the certificate holder may, by mutual agreement, change the reporting date.
[AMD1]

iii. To the extent that information required by OAR 345-026-0080 is contained in reports the certificate holder submits to other state, federal or local agencies, the certificate holder may submit excerpts from such other reports to satisfy this rule. The Council reserves the right to request full copies of such excerpted reports.
[Final Order VI.4] [Mandatory Condition OAR 345-026-0080] [AMD1]

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

15.0 RETIREMENT AND FINANCIAL ASSURANCE

15.1 Before beginning construction, the certificate holder shall submit to the State of Oregon through the Council a bond or letter of credit naming the State of Oregon, acting by and through the Council, as beneficiary or payee. The initial bond or letter of credit amount for Block 1 is $7.884 million (in 3rd Quarter 2011 dollars), to be adjusted to the date of issuance, and adjusted on an annual basis thereafter, as described in sub-paragraph (b) of this condition. ~~The initial bond or letter of credit amount for the Carty Solar Farm and its supporting facilities is $2.713 million (in 3rd Quarter 2016 dollars) to be adjusted to the date of issuance, and adjusted on an annual basis thereafter, as described in sub-paragraph (b) of this condition.~~ The initial bond or letter of credit amount for the related or supporting facilities approved in Final Order on RFA2 is $13.779 million (in 4th Quarter 2020 dollars) to be adjusted to the date of issuance and submitted within 60 days of execution of the Second Amended Site Certificate, and adjusted on an annual basis thereafter, as described in sub-paragraph (b) of this condition. The initial bond or letter of credit amount for the Carty Solar Farm and its supporting facilities approved in Final Order on RFA4 is $16.234 million (in 1st Quarter 2024 dollars) to be adjusted to the date of issuance and submitted prior to beginning construction of the Carty Solar Farm, and adjusted on an annual basis thereafter, as described in sub-paragraph (b) of this condition.

a. The certificate holder may adjust the amount of the bond or letter of credit based on the final design configuration of the facility and turbine types selected by applying the unit costs and general costs presented in Site Restoration Cost Estimate of the Final Order on ASC for Unit 1; ~~Table 4 of the Final Order on RFA1 for Carty Solar Farm; and~~ Table 2 of the Final Order on RFA2; and Table [TBD] of the Final Order on RFA4 for the approved related or supporting

facilities. Any revision to the restoration costs should be adjusted to the date of issuance as described in (b), and is subject to review and approval by the Department.

b. The certificate holder shall adjust the amount of the bond or letter of credit, using the following calculation and subject to approval by the Department.
    i. Adjust the amount of the bond or letter of credit amount for Unit 1 (expressed in 3rd Quarter 2011 dollars), ~~Carty Solar Farm (expressed in 3rd Quarter 2016 dollars) and~~ related or supporting facilities approved in Final Order on RFA2 (expressed in 4th Quarter 2020 dollars), and Carty Solar Farm approved in Final Order on RFA4 (expressed in 1st Quarter 2024 dollars) to present value, using the U.S. Gross Domestic Product Implicit Price Deflator, Chain-Weight, as published in the Oregon Department of Administrative Services' "Oregon Economic and Revenue Forecast" or by any successor agency (the "Index") and using the index value and the quarterly index value applicable for Unit 1, ~~Carty Solar Farm, and~~ RFA2 facility components, and Carty Solar Farm for the date of issuance of the new bond or letter of credit. If at any time the Index is no longer published, the Council shall select a comparable calculation to adjust the bond or letter of credit to present value.
    ii. Round the resulting total to the nearest $1,000 to determine the financial assurance amount.
c. The certificate holder shall use a form of bond or letter of credit approved by the Council.
d. The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.
e. The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council under Condition VI.4.
f. The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.

[Final Order IV.G.2.9] [Mandatory Condition OAR 345-025-0006(8)] [AMD1] [AMD2] [AMD4]

15.2 If the certificate holder elects to use a bond to meet the requirements of Condition 15.1, the certificate holder shall ensure that the surety is obligated to comply with the requirements of applicable statutes, Council rules and this site certificate when the surety exercises any legal or contractual right it may have to assume construction, operation or retirement of the energy facility. The certificate holder shall also ensure that the surety is obligated to notify the Council that it is exercising such rights and to obtain any Council approvals required by applicable statutes, Council rules and this site certificate before the surety commences any activity to complete construction, operate or retire the energy facility.
[Final Order IV.G.2.10]

15.3 The certificate holder shall prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder.
[Final Order IV.G.2.5] [Mandatory Condition OAR 345-025-0006(7)]

15.4 The certificate holder must retire the facility in accordance with a retirement plan approved by the Council if the certificate holder permanently ceases construction or operation of the facility. The retirement plan must describe the activities necessary to restore the site to a useful, non-hazardous condition, as described in OAR 345-027-0110(5). After Council approval of the plan, the certificate holder must obtain the necessary authorization from the appropriate regulatory agencies to proceed with restoration of the site.
[Final Order IV.G.2.6] [Mandatory Condition OAR 345-025-0006(9)]

15.5 The certificate holder is obligated to retire the facility upon permanent cessation of construction or operation. If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council shall notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the Department within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the Department to prepare a proposed final retirement plan for the Council's approval.
[Final Order IV.G.2.7] [Mandatory Condition OAR 345-025-0006(16)]

15.6 Upon the Council's approval of a final retirement plan prepared per Condition 15.5, the Council may draw on the bond or letter of credit submitted per the requirements of Condition 15.1 to restore the site to a useful, non-hazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder shall pay any additional cost necessary to restore the site to a useful, non-hazardous condition. After completion of site restoration, the Council shall issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan.
[Final Order IV.G.2.8] [Mandatory Condition OAR 345-027-0020(16)]

15.7 Following receipt of the site certificate or an amended site certificate, the certificate holder shall implement a plan that verifies compliance with all site certificate terms and conditions and applicable statutes and rules. As a part of the compliance plan, to verify compliance with the requirement to begin construction by the date specified in the site certificate, the certificate holder shall report promptly to the Department of Energy when construction begins. Construction is defined in OAR 345-001-0010. In reporting the beginning of construction, the certificate holder shall describe all work on the site performed before beginning construction, including work performed before the Council

issued the site certificate, and shall state the cost of that work. For the purpose of this exhibit, “work on the site” means any work within a site or corridor, other than surveying, exploration or other activities to define or characterize the site or corridor. The certificate holder shall document the compliance plan and maintain it for inspection by the Department or the Council.
[Final Order VI.3] [Mandatory Condition OAR 345-026-0048]

16. SUCCESSORS AND ASSIGNS

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

17. SEVERABILITY AND CONSTRUCTION

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

18. GOVERNING LAW AND FORUM

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

19. EXECUTION

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

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

ENERGY FACILITY SITING COUNCIL	**PORTLAND GENERAL ELECTRIC COMPANY**
By: _____	By: _____
Marcy Grail, Chair Oregon Energy Facility Siting Council	Print: _____

Date: _____ Date: _____

Attachment 2. Articles of Incorporation

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State of Oregon

OFFICE OF THE SECRETARY OF STATE
Corporation Division

Certified Copy 729U304B7

I, LAVONNE GRIFFIN-VALADE, Secretary of State of Oregon, and Custodian of the Seal of said State, do hereby certify:

That the attached

Copy of the

Restated

Articles of Incorporation

for

PORTLAND GENERAL ELECTRIC COMPANY

is a true copy of the original document(s).

In Testimony Whereof, I have hereunto set my hand and affixed hereto the Seal of the State of Oregon.

Lavonne Griffin-Valade

LAVONNE GRIFFIN-VALADE, SECRETARY OF STATE

7/31/2023

Restated Articles of Incorporation - Business/Professional

Secretary of State - Corporation Division - 255 Capitol St. NE, Suite 151 - Salem, OR 97310-1327 - http://www.FilingInOregon.com - Phone: (503) 986-2200

FILED

MAY 07 2014

OREGON SECRETARY OF STATE

REGISTRY NUMBER: 034142-16

For office use only

In accordance with Oregon Revised Statute 192.410-192.490, the information on this application is public record. We must release this information to all parties upon request and it will be posted on our website.

Please Type or Print Legibly in Black Ink. Attach Additional Sheet if Necessary.

1) **NAME OF CORPORATION:** PORTLAND GENERAL ELECTRIC COMPANY

2) **NEW NAME OF THE CORPORATION:** (If changed) _____

3) **A COPY OF THE RESTATED ARTICLES MUST BE ATTACHED:** ☐

4) **CHECK THE APPROPRIATE STATEMENT:**

☐ The restated articles contain amendments which do not require shareholder approval. The date of the adoption of the amendments and restated articles was _____. These amendments were duly adopted by the board of directors.

■ The restated articles contain amendments which require shareholder approval. The date of the adoption of the amendments and restated articles was 05/07/14.

The vote of the shareholders was as follows:

Class or series of shares	Number of shares outstanding	Number of votes entitled to be cast	Number of votes cast FOR	Number of votes cast AGAINST
Common Stock	78,174,686	78,174,686	63,602,823	651,910

☐ The corporation has not issued any shares of stock. Shareholder action was not required to adopt the restated articles. The restated articles were adopted by the Incorporators or by the board of directors.

5) **EXECUTION:** (Must be signed by at least one officer or director.)
By my signature, I declare as an authorized authority, that this filing has been examined by me and is, to the best of my knowledge and belief, true, correct, and complete. Making false statements in this document is against the law and may be penalized by fines, imprisonment or both.

Signature: Marc S. Bocci | Printed Name: Marc S. Bocci | Title: Corporate Secretary

CONTACT NAME: (To resolve questions with this filing.)

Marc S. Bocci

PORTLAND GENERAL ELECTRIC COMPA

3414216-15184168 RSTART

FEES

Required Processing Fee $100

Processing Fees are nonrefundable. Please make check payable to "Corporation Division."

Free copies are available at FilingInOregon.com, using the Business Name Search program.

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THIRD AMENDED AND RESTATED ARTICLES OF INCORPORATION OF PORTLAND GENERAL ELECTRIC COMPANY

The Articles of Incorporation, as amended, of Portland General Electric Company (the "Corporation") are hereby amended and restated under 60.451 of the Oregon Business Corporation Act (the "Act"). The date of filing of the Corporation's Articles of Incorporation was July 25, 1930.

ARTICLE I.
Name

The name of the Corporation is:

Portland General Electric Company

ARTICLE II.
Duration

The Corporation shall exist perpetually.

ARTICLE III.
Purposes

The Corporation is organized for the following purposes:

1. To construct, purchase, lease, and otherwise acquire ownership of and improve, maintain, use and operate every type and kind of real and personal property for the generation, manufacture, production and furnishing of electric energy, and to use, furnish and sell to the public, including other corporations, towns, cities and municipalities, at wholesale and retail, electric energy.

2. To engage in any lawful activity for which corporations may be organized under the Act and any amendment thereto.

3. To engage in any lawful activity and to do anything in the operation of the Corporation or for the accomplishment of any of its purposes or for the exercise of any of its powers which shall appear necessary for or beneficial to the Corporation.

The authority conferred in this Article III shall be exercised consistently with the requirements of applicable state and federal laws and regulations governing the activities of a public utility.

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ARTICLE IV.
Classes of Capital Stock

The amount of the capital stock of the Corporation is:

COMMON STOCK. Common Stock of the Corporation shall consist of a class without par value consisting of 160,000,000 shares.

PREFERRED STOCK. Preferred Stock of the Corporation shall consist of a class without par value consisting of 30,000,000 shares issuable in series as hereinafter provided.

A statement of the preferences, limitations, and relative rights of each class of the capital stock of the Corporation, namely, the Preferred Stock without par value and the Common Stock, of the variations and relative rights and preferences as between series of the Preferred Stock insofar as the same are fixed by these Amended and Restated Articles of Incorporation (these "Articles") and of the authority vested in the Board of Directors of the Corporation to establish series of Preferred Stock, and to fix and determine the variations in the relative rights and preferences as between series insofar as the same are not fixed by these Articles is as follows:

PREFERRED STOCK

(a) As used in these Articles, the term "Preferred Stock" shall mean the Preferred Stock without par value. The Preferred Stock may be divided into and issued in series. Each series shall be so designated as to distinguish the shares thereof from the shares of all other series of the Preferred Stock and all other classes of capital stock of the Corporation. To the extent that these Articles shall not have established series of the Preferred Stock and fixed and determined the variations in the relative rights and preferences as between series, the Board of Directors shall have authority, and is hereby expressly vested with authority, to divide the Preferred Stock into series and, with the limitations set forth in these Articles and such limitations as may be provided by law, to fix and determine the relative rights and preferences of any series of the Preferred Stock so established. Such action by the Board of Directors shall be expressed in a resolution or resolutions adopted by it prior to the issuance of shares of each series, which resolution or resolutions shall also set forth the distinguishing designation of the particular series of the Preferred Stock established thereby. Without limiting the generality of the foregoing, authority is hereby expressly vested in the Board of Directors to fix and determine with respect to any series of the Preferred Stock:

(1) The rate of dividend;

(2) The price at which and the terms and conditions on which shares may be sold or redeemed;

(3) The amount payable upon shares in the event of voluntary liquidation and the amount payable in the event of involuntary liquidation, but such involuntary liquidation amount shall not exceed the price at which the shares may be sold as fixed in the resolution or resolutions creating the series;

(4) Sinking fund provisions for the redemption or purchase of shares; and

(5) The terms and conditions on which shares may be converted.

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All shares of the Preferred Stock of the same series shall be identical except that shares of the same series issued at different times may vary as to the dates from which dividends thereon shall be cumulative; and all shares of the Preferred Stock, irrespective of series, shall constitute one and the same class of stock, shall be of equal rank, and shall be identical except as to the designation thereof, the date or dates from which dividends on shares thereof shall be cumulative, and the relative rights and preferences set forth above in clauses (1) through (5) of this subdivision (a), as to which there may be variations between different series. Except as may be otherwise provided by law, by subdivision (g) of this Article IV, or by the resolutions establishing any series of Preferred Stock in accordance with the foregoing provisions of this subdivision (a), whenever the presence, written consent, affirmative vote, or other action on the part of the holders of the Preferred Stock may be required for any purpose, such consent, vote or other action shall be taken by the holders of the Preferred Stock as a single body irrespective of series and shall be determined by weighing the vote cast for each share so as to reflect the involuntary liquidation amount fixed in the resolution or resolutions creating the series, such that each share shall have one vote per $100 of involuntary liquidation value.

(b) The holders of shares of the Preferred Stock of each series shall be entitled to receive dividends, when and as declared by the Board of Directors, out of any funds legally available for the payment of dividends, at the annual rate fixed and determined with respect to each series in accordance with subdivision (a) of this Article IV, and no more, payable quarterly on the first days of January, April, July and October in each year or on such other date or dates as the Board of Directors shall determine. Such dividends shall be cumulative in the case of shares of each series either from the date of issuance of shares of such series or from the first day of the current dividend period within which shares of such series shall be issued, as the Board of Directors shall determine, so that if dividends on all outstanding shares of each particular series of the Preferred Stock, at the annual dividend rates fixed and determined by the Board of Directors for the respective series, shall not have been paid or declared and set apart for payment for all past dividend periods and for the then current dividend periods, the deficiency shall be fully paid or dividends equal thereto declared and set apart for payment at said rates before any dividends on the Common Stock shall be paid or declared and set apart for payment. In the event more than one series of the Preferred Stock shall be outstanding, the Corporation, in making any dividend payment on the Preferred Stock, shall make payments ratably upon all outstanding shares of the Preferred Stock in proportion to the amount of dividends accumulated thereon to the date of such dividend payment. No interest, or sum of money in lieu of interest, shall be payable in respect of any dividend payment or payments which may be in arrears.

(c) In the event of any dissolution, liquidation or winding up of the Corporation, before any distribution or payment shall be made to the holders of the Common Stock, the holders of the Preferred Stock of each series then outstanding shall be entitled to be paid out of the net assets of the Corporation available for distribution to its shareholders the respective involuntary liquidation amount for each share as fixed and determined with respect to each series in accordance with subdivision (a) of this Article IV, plus in all cases unpaid accumulated dividends thereon, if any, to the date of payment, and no more, unless such dissolution, liquidation or winding up shall be voluntary, in which event the amount which such holders shall be entitled so to be paid shall be the respective voluntary liquidation amounts per share fixed and determined with respect to each series in accordance with subdivision (a) of this Article IV, and no more. If upon any dissolution, liquidation or winding up of the Corporation, whether

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voluntary or involuntary, the net assets of the Corporation available for distribution to its shareholders shall be insufficient to pay the holders of all outstanding shares of Preferred Stock of all series the full amounts to which they shall be respectively entitled as aforesaid, the entire net assets of the Corporation available for distribution shall be distributed ratably to the holders of all outstanding shares of Preferred Stock of all series in proportion to the amounts to which they shall be respectively so entitled. For the purposes of this subdivision (c), any dissolution, liquidation or winding up which may arise out of or result from the condemnation or purchase of all or a major portion of the properties of the Corporation by (1) the United States Government or any authority, agency or instrumentality thereof, (2) a State of the United States or any political subdivision, authority, agency or instrumentality thereof, or (3) a district, cooperative or other association or entity not organized for profit, shall be deemed to be an involuntary dissolution, liquidation or winding up; and a consolidation, merger or amalgamation of the Corporation with or into any other corporation or corporations shall not be deemed to be a dissolution, liquidation or winding up of the Corporation, whether voluntary or involuntary.

(d) Subject to the limitations set forth in subdivision (c) of Article V, the Preferred Stock of all series, or of any series thereof, or any part of any series thereof, at any time outstanding, may be redeemed by the Corporation, at its election expressed by resolution of the Board of Directors, at any time or from time to time, at the then applicable redemption price fixed and determined with respect to each series in accordance with subdivision (a) of this Article IV. If less than all of the shares of any series are to be redeemed, the redemption shall be made either pro rata or by lot in such manner as the Board of Directors shall determine.

In the event the Corporation shall so elect to redeem shares of the Preferred Stock, notice of the intention of the Corporation to do so and of the date and place fixed for redemption shall be mailed not less than thirty days before the date fixed for redemption to each holder of shares of the Preferred Stock to be redeemed at his address as it shall appear on the books of the Corporation, and on and after the date fixed for redemption and specified in such notice (unless the Corporation shall default in making payment of the redemption price), such holders shall cease to be shareholders of the Corporation with respect to such shares and shall have no interest in or claim against the Corporation with respect to such shares, excepting only the right to receive the redemption price therefor from the Corporation on the date fixed for redemption, without interest, upon endorsement, if required, and surrender of their certificates for such shares.

Contemporaneously with the mailing of notice of redemption of any shares of the Preferred Stock as aforesaid or at any time thereafter on or before the date fixed for redemption, the Corporation may, if it so elects, deposit the aggregate redemption price of the shares to be redeemed with any bank or trust company doing business in the City of New York, N. Y., the City of Chicago, Illinois, the City of San Francisco, California, or the City of Portland, Oregon, having a capital and surplus of at least $5,000,000, named in such notice, payable on the date fixed for redemption in the proper amounts to the respective holders of the shares to be redeemed, upon endorsement, if required, and surrender of their certificates for such shares, and on and after the making of such deposit such holders shall cease to be shareholders of the Corporation with respect to such shares and shall have no interest in or claim against the Corporation with respect to such shares, excepting only the right to exercise such redemption or exchange rights, if any, on or before the date fixed for redemption as may

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have been provided with respect to such shares or the right to receive the redemption price of their shares from such bank or trust company on the date fixed for redemption, without interest, upon endorsement, if required, and surrender of their certificates for such shares.

If the Corporation shall have elected to deposit the redemption moneys with a bank or trust company as permitted by this subdivision (d), any moneys so deposited which shall remain unclaimed at the end of six years after the redemption date shall be repaid to the Corporation, and upon such repayment holders of Preferred Stock who shall not have made claim against such moneys prior to such repayment shall be deemed to be unsecured creditors of the Corporation for an amount, without interest, equal to the amount they would theretofore have been entitled to receive from such bank or trust company. Any redemption moneys so deposited which shall not be required for such redemption because of the exercise, after the date of such deposit, of any right of conversion or exchange or otherwise, shall be returned to the Corporation forthwith. The Corporation shall be entitled to receive any interest allowed by any bank or trust company on any moneys deposited with such bank or trust company as herein provided, and the holders of any shares called for redemption shall have no claim against any such interest.

Except as set forth in subdivision (c) of Article V, nothing herein contained shall limit any legal right of the Corporation to purchase or otherwise acquire any shares of the Preferred Stock.

(e) The holders of shares of the Preferred Stock shall have no right to vote in the election of directors or for any other purpose except as may be otherwise provided by law, by subdivisions (f), (g) and (h) of this Article IV, or by resolutions establishing any series of Preferred Stock in accordance with subdivision (a) of this Article IV. Holders of Preferred Stock shall be entitled to notice of each meeting of shareholders at which they shall have any right to vote, but shall not be entitled to notice of any other meeting of shareholders.

(f) If at any time dividends payable on any share or shares of Preferred Stock shall be in arrears in an amount equal to four full quarterly dividends or more per share, a default in preferred dividends for the purpose of this subdivision (f) shall be deemed to have occurred, and, having so occurred, such default shall be deemed to exist thereafter until, but only until, all unpaid accumulated dividends on all shares of Preferred Stock shall have been paid to the last preceding dividend period. If and whenever a default in preferred dividends shall occur, a special meeting of shareholders of the Corporation shall be held for the purpose of electing directors upon the written request of the holders of at least 10% of the Preferred Stock then outstanding. Such meeting shall be called by the secretary of the Corporation upon such written request and shall be held at the earliest practicable date upon like notice as that required for the annual meeting of shareholders of the Corporation and at the place for the holding of such annual meeting. If notice of such special meeting shall not be mailed by the secretary within thirty days after personal service of such written request upon the secretary of the Corporation or within thirty days of mailing the same in the United States of America by registered mail addressed to the secretary at the principal office of the Corporation, then the holders of at least 10% of the Preferred Stock then outstanding may designate in writing one of their number to call such meeting and the person so designated may call such meeting upon like notice as that required for the annual meeting of shareholders and to be held at the place for the holding of such annual

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meeting. Any holder of Preferred Stock so designated shall have access to the stock books of the Corporation for the purpose of causing a meeting of shareholders to be called pursuant to the foregoing provisions of this paragraph.

At any such special meeting, or at the next annual meeting of shareholders of the Corporation for the election of directors and at each other meeting, annual or special, for the election of directors held thereafter (unless at the time of any such meeting such default in preferred dividends shall no longer exist), the holders of the outstanding Preferred Stock, voting separately as herein provided, shall have the right to elect the smallest number of directors which shall constitute at least one-fourth of the total number of directors of the Corporation, or two directors, whichever shall be the greater, and the holders of the outstanding shares of Common Stock, voting as a class, shall have the right to elect all other members of the Board of Directors, anything herein or in the Bylaws of the Corporation to the contrary notwithstanding. The terms of office, as directors, of all persons who may be directors of the Corporation at any time when such special right to elect directors shall become vested in the holders of the Preferred Stock shall terminate upon the election of any new directors to succeed them as aforesaid.

At any meeting, annual or special, of the Corporation, at which the holders of Preferred Stock shall have the special right to elect directors as aforesaid, the presence in person or by proxy of the holders of a majority of the Preferred Stock then outstanding shall be required to constitute a quorum of such stock for the election of directors, and the presence in person or by proxy of the holders of a majority of the Common Stock then outstanding shall be required to constitute a quorum of such stock for the election of directors; provided, however, that the absence of a quorum of the holders of either stock shall not prevent the election at any such meeting or adjournment thereof of directors by the other stock if the necessary quorum of the holders of such other stock shall be present at such meeting or any adjournment thereof; and, provided further, that in the absence of a quorum of holders of either stock a majority of the holders of such stock who are present in person or by proxy shall have power to adjourn the election of the directors to be elected by such stock from time to time, without notice other than announcement at the meeting, until the requisite quorum of holders of such stock shall be present in person or by proxy, but no such adjournment shall be made to a date beyond the date for the mailing of the notice of the next annual meeting of shareholders of the Corporation or special meeting in lieu thereof.

So long as a default in preferred dividends shall exist, any vacancy in the office of a director elected by the holders of the Preferred Stock may be filled at any meeting of shareholders, annual or special, for the election of directors held thereafter, and a special meeting of shareholders, or of the holders of shares of the Preferred Stock, may be called for the purpose of filling any such vacancy. So long as a default in preferred dividends shall exist, any vacancy in the office of a director elected by the holders of the Common Stock may be filled by majority vote of the remaining directors elected by the holders of Common Stock.

If and when the default in preferred dividends which permitted the election of directors by the holders of the Preferred Stock shall cease to exist, the holders of the Preferred Stock shall be divested of any special right with respect to the election of directors, and the voting power of the holders of the Preferred Stock and of the holders of the Common Stock shall revert to the status existing before the first dividend payment date on which dividends on the Preferred Stock were not paid in full, subject to

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revesting in the event of each and every subsequent like default in preferred dividends. Upon the termination of any such special right, the terms of office of all persons who may have been elected directors by vote of the holders of the Preferred Stock pursuant to such special right shall forthwith terminate, and the resulting vacancies shall be filled by the majority vote of the remaining directors.

(g) So long as any shares of the Preferred Stock shall be outstanding, the Corporation shall not without the written consent or affirmative vote of the holders of at least two-thirds of the Preferred Stock then outstanding, (1) create or authorize any new stock ranking prior to the Preferred Stock as to dividends or upon dissolution, liquidation or winding up, or (2) amend, alter or repeal any of the express terms of the Preferred Stock then outstanding in a manner substantially prejudicial to the holders thereof. Notwithstanding the foregoing provisions of this subdivision (g), if any proposed amendment, alteration or repeal of any of the express terms of any outstanding shares of the Preferred Stock would be substantially prejudicial to the holders of shares of one or more, but not all, of the series of the Preferred Stock, only the written consent or affirmative vote of the holders of at least two-thirds of the total number of outstanding shares of all series so affected shall be required. Any affirmative vote of the holders of the Preferred Stock, or of any one or more series thereof, which may be required in accordance with the foregoing provisions of this subdivision (g), upon a proposal to create or authorize any stock ranking prior to the Preferred Stock or to amend, alter or repeal the express terms of outstanding shares of the Preferred Stock or of any one or more series thereof in a manner substantially prejudicial to the holders thereof may be taken at a special meeting of the holders of the Preferred Stock or of the holders of one or more series thereof called for the purpose, notice of the time, place and purposes of which shall have been given to the holders of the shares of the Preferred Stock entitled to vote upon any such proposal, or at any meeting, annual or special, of the shareholders of the Corporation, notice of the time, place and purposes of which shall have been given to holders of shares of the Preferred Stock entitled to vote on such a proposal.

(h) So long as any shares of the Preferred Stock shall be outstanding, the Corporation shall not, without the written consent or affirmative vote of the holders of at least a majority of the Preferred Stock then outstanding:

(1) issue any shares of Preferred Stock, or of any other class of stock ranking prior to or on a parity with the Preferred Stock as to dividends or upon dissolution, liquidation or winding up, unless (a) the net income of the Corporation available for the payment of dividends for a period of twelve consecutive calendar months within the fifteen calendar months immediately preceding the issuance of such shares (including, in any case in which such shares are to be issued in connection with the acquisition of new property, the net income of the property so to be acquired, computed on the same basis as the net income of the Corporation) is at least equal to two times the annual dividend requirements on all shares of the Preferred Stock, and on all shares of all other classes of stock ranking prior to or on a parity with the Preferred Stock as to dividends or upon dissolution, liquidation or winding up, which will be outstanding immediately after the issuance of such shares, including the shares proposed to be issued, and (b) the gross income (defined as the sum of net income and interest charges, to securities evidencing indebtedness deducted in arriving at such net income) of the Corporation available for the payment of interest for a period of twelve consecutive calendar months within the fifteen calendar months immediately preceding the issuance of such shares (including, in any case in

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which such shares are to be issued in connection with the acquisition of new property, the gross income, as heretofore defined, of the property so to be acquired, computed on the same basis as the gross income, as heretofore defined, of the Corporation) is at least equal to one and one-half times the aggregate of the annual interest requirements on all securities evidencing indebtedness of the Corporation, and the annual dividend requirements on all shares of the Preferred Stock and on all shares of all other classes of stock ranking prior to or on a parity with the Preferred Stock as to dividends or upon dissolution, liquidation or winding up, which will be outstanding immediately after the issuance of such shares, including the shares proposed to be issued; or

(2) issue any shares of the Preferred Stock, or of any other class of stock ranking prior to or on a parity with the Preferred Stock as to dividends or upon dissolution, liquidation or winding up, unless the aggregate of the capital of the Corporation applicable to the Common Stock and the surplus of the Corporation (paid-in, earned or other, if any) shall be not less than the aggregate amount payable on the involuntary dissolution, liquidation, or winding up of the Corporation on all shares of the Preferred Stock, and on all shares of all other classes of stock ranking prior to or on a parity with the Preferred Stock as to dividends or upon dissolution, liquidation or winding up, which will be outstanding immediately after the issuance of such shares, including the shares proposed to be issued; provided, however, that if, for the purposes of meeting the requirements of this subparagraph (2), it shall become necessary to take into consideration any surplus of the Corporation, the Corporation shall not thereafter pay any dividends on shares of the Common Stock which would result in reducing the aggregate of the capital of the Corporation applicable to the Common Stock and the surplus of the Corporation to an amount less than the aggregate amount payable on involuntary dissolution, liquidation or winding up of the Corporation, on all shares of the Preferred Stock and of any stock ranking prior to or on a parity with the Preferred Stock, as to dividends or upon dissolution, liquidation or winding up, at the time outstanding.

In any case where it would be appropriate, under generally accepted accounting principles, to combine or consolidate the financial statements of any predecessor or subsidiary of the Corporation with those of the Corporation, the foregoing computations may be made on the basis of such combined or consolidated financial statements. Any affirmative vote of the holders of the Preferred Stock which may be required in accordance with the foregoing provisions of this subdivision (h) may be taken at a special meeting of the holders of the Preferred Stock called for the purpose, notice of the time, place and purposes of which shall have been given to the holders of the outstanding shares of the Preferred Stock, or at any meeting, regular or special, of the shareholders of the Corporation, notice of the time, place and purposes of which shall have been given to the holders of the outstanding shares of the Preferred Stock.

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COMMON STOCK

(i) Subject to the limitations set forth in subdivision (b) of this Article IV (and subject to the rights of any class of stock hereafter authorized) dividends may be paid upon the Common Stock when and as declared by the Board of Directors of the Corporation out of any funds legally available for the payment of dividends.

(j) Subject to the limitations set forth in subdivision (c) of this Article IV (and subject to the rights of any other class of stock hereafter authorized), upon any dissolution, liquidation or winding up of the Corporation, whether voluntary or involuntary, the net assets of the Corporation shall be distributed ratably to the holders of the Common Stock.

(k) Subject to the limitations set forth in subdivisions (f), (g), and (h) of this Article IV (and subject to the rights of any class of stock hereafter created), and except as may be otherwise provided by law, the holders of the Common Stock shall have the exclusive right to vote for the election of directors and for all other purposes.

(l) Upon the issuance for money or other consideration of any shares of capital stock of the Corporation, or of any security convertible into capital stock of the Corporation, no holder of shares of the capital stock, irrespective of the class or kind thereof, shall have any preemptive or other right to subscribe for, purchase, or receive any proportionate or other amount of such shares of capital stock, or such security convertible into capital stock, proposed to be issued; and the Board of Directors may cause the Corporation to dispose of all or any of such shares of capital stock, or of any such security convertible into capital stock, as and when said Board may determine, free of any such right, either by offering the same to the Corporation's then shareholders or by otherwise selling or disposing of such shares or other securities, as the Board of Directors may deem advisable.

(m) The Corporation from time to time, with the approving vote of the holders of at least a majority of its then outstanding shares of Common Stock, may authorize additional shares of its capital stock, with or without nominal or par value, including shares of such other class or classes, and having such designations, preferences, rights, and voting powers, or restrictions or qualifications thereof, as may be approved by such vote and be stated in amended or restated articles of incorporation executed and filed in the manner provided by law.

(n) The provisions of subdivision (l) and of this subdivision (n) of this Article IV shall not be changed unless the holders of at least a majority of the outstanding shares of Common Stock shall consent thereto in writing, or by vote at a meeting in the notice of which action on the proposed change shall have been set forth.

ARTICLE V.
Designation of Series Preferred Stock

7.75% SERIES CUMULATIVE PREFERRED STOCK, WITHOUT PAR VALUE.

7.75% Series Cumulative Preferred Stock, Without Par Value of the Corporation shall consist of 300,000 shares. Such series of Preferred Stock is hereinafter referred to as "Preferred Stock of the First Series, Without Par Value." Shares of Preferred Stock of the First Series, Without Par Value shall have the following relative rights and preferences in addition to those fixed in Article IV above:

(a) The rate of dividend payable upon shares of Preferred Stock of the

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First Series, Without Par Value shall be 7.75 percent per annum. Dividends upon shares of Preferred Stock of the First Series, Without Par Value shall be cumulative from the date of original issue and shall be payable on the 15th day of January, April, July and October of each year thereafter.

(b) Subject to the provisions of subdivision (d) of Article IV of the Articles, prior to June 15, 2002, and prior to June 15 in each year thereafter until June 15, 2006, so long as any of the Preferred Stock of the First Series, Without Par Value shall remain outstanding, the Corporation shall deposit with its Transfer Agent, as a Sinking Fund for the Preferred Stock of the First Series, Without Par Value, an amount sufficient to redeem a minimum of 15,000 shares of the Preferred Stock of the First Series, Without Par Value, plus an amount equal to dividends accrued thereon to each such June 15 and, in addition, the Corporation may, at its option, prior to each such June 15, deposit an amount sufficient to retire through the operation of the Sinking Fund not more than 15,000 additional shares of Preferred Stock of the First Series, Without Par Value, but the right to make such optional deposit shall not be cumulative and shall not reduce any subsequent mandatory Sinking Fund payment for the Preferred Stock of the First Series, Without Par Value, and prior to June 15, 2007 the Corporation shall deposit with its Transfer Agent, as the final Sinking Fund payment, an amount sufficient to redeem all shares of the Preferred Stock of the First Series, Without Par Value outstanding on June 15, 2007. The Corporation shall not declare or pay or set apart for, or make or order any other distribution in respect of, or purchase or otherwise acquire for value any shares of, the Common Stock of the Corporation, or any class of stock as to which the Preferred Stock of the Corporation has priority as to payments of dividends, unless all amounts required to be paid or set aside for any Sinking Fund payment to retire shares of the Preferred Stock of the First Series, Without Par Value, shall have been paid or set aside. The Corporation's Transfer Agent shall, in accordance with the provisions set forth herein, apply the moneys in the Sinking Fund to redeem (i) pro rata, or by lot if so determined by the Board of Directors, on June 15, 2002, and on June 15 in each year thereafter until June 15, 2006, shares of the Preferred Stock of the First Series, Without Par Value, and (ii) on June 15, 2007 all outstanding shares of Preferred Stock of the First Series, Without Par Value, in each case at One Hundred Dollars ($100.00) per share plus dividends accrued to the date of redemption. The Corporation may, upon notice to its Transfer Agent prior to a date 45 days prior to June 15 in any year, commencing with the year 2002 through and including the year 2006, in which the Corporation shall be obligated to redeem shares of the Preferred Stock of the First Series, Without Par Value through the operation of the Sinking Fund, elect to reduce its obligation in respect of the redemption of shares required to be redeemed pursuant to the Sinking Fund by directing that any shares of the Preferred Stock of the First Series, Without Par Value previously purchased by the Corporation (other than shares purchased pursuant to the operation of the Sinking Fund or previously applied as a credit against the Sinking Fund) shall be applied as a credit, in whole or in part, in an amount equal to the aggregate liquidation value of the shares so applied, against the aggregate liquidation value of the shares required to be redeemed in such year pursuant to the operation of the Sinking Fund.

(c) The Preferred Stock of the First Series, Without Par Value shall not be subject to redemption, except pursuant to the Sinking Fund established for such Series.

(d) In the event of (i) any voluntary dissolution, liquidation or winding up of the Corporation, holders of the Preferred Stock of the First Series, Without Par Value shall be entitled to be paid out of the net assets of the Corporation available for distribution to its shareholders One Hundred Dollars ($100.00) per share, plus unpaid

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accumulated dividends thereon, if any, to the date of payment, and no more, and (ii) any involuntary dissolution, liquidation or winding up of the Corporation, holders of the Preferred Stock of the First Series, Without Par Value shall be entitled to be paid out of the net assets of the Corporation One Hundred Dollars ($100.00) per share, plus unpaid accumulated dividends thereon, if any, to the date of payment, and no more.

ARTICLE VI.
Vacancy on Board of Directors

Any vacancy occurring on the Board of Directors, including a vacancy created by reason of an increase in the number of directors, may be filled by the affirmative vote of a majority of directors then in office, although less than a quorum, provided that so long as a default in preferred dividends shall exist, any vacancy in the office of a director elected by the holders of the Preferred Stock may be filled only as provided in subdivision (f) of Article IV.

ARTICLE VII.
Limitation of Liability

To the fullest extent permitted by law, no director of the Corporation shall be personally liable to the Corporation or its shareholders for monetary damages for conduct as a director. No amendment or repeal of this provision shall adversely affect any right or protection of a director existing at the time of such amendment or repeal. No change in the law shall reduce or eliminate the right and protections applicable at the time this provision became effective unless the change in law shall specifically require such reduction or elimination. If the law is amended, after this Article VII shall become effective, to authorize corporate action further eliminating or limiting the personal liability of directors, officers, employees or agents of the Corporation, then the liability of directors, officers, employees or agents of the Corporation shall be eliminated or limited to the fullest extent permitted by the law, as so amended.

ARTICLE VIII.
Indemnification

The Corporation may indemnify to the fullest extent permitted by law any person who is made or threatened to be made a party to, witness in, or otherwise involved in, any action, suit, or proceeding, whether civil, criminal, administrative, investigative, or otherwise (including an action, suit, or proceeding by or in the right of the Corporation) by reason of the fact that the person is or was a director, officer, employee or agent of the Corporation or any of its subsidiaries, or a fiduciary within the meaning of the Employee Retirement Income Security Act of 1974, as amended, with respect to any employee benefit plan of the Corporation or any of its subsidiaries, or serves or served at the request of the Corporation as a director, officer, employee or agent, or as a fiduciary of an employee benefit plan, of another corporation, partnership, joint venture, trust or other enterprise. Any indemnification provided pursuant to this Article VIII shall not be exclusive of any rights to which the person indemnified may otherwise be entitled under any provision of articles of incorporation, bylaws, agreement, statute, policy of insurance, vote of shareholders or Board of Directors, or otherwise.

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ARTICLE IX.
Shareholder Action Without a Meeting

Except as otherwise provided under these Articles of Incorporation and applicable law, and subject to restrictions on the taking of shareholder action without a meeting under applicable law or rules of a national securities association or exchange, action required or permitted by the Act to be taken at a shareholders' meeting may be taken without a meeting if the action is taken by shareholders having not less than the minimum number of votes that would be necessary to take such action at a meeting at which all shareholders entitled to vote on the action were present and voted.

ARTICLE X.
Majority Voting in Uncontested Elections

Except as otherwise provided under these Articles of Incorporation and applicable law, in any election of directors of the Corporation at a meeting of shareholders at which a quorum is present, each director shall be elected if the number of votes cast "for" the director exceeds the number of votes cast "against" the director; provided, however, that directors shall be elected by a plurality of the votes cast at any meeting of shareholders for which the Secretary of the Corporation determines that the number of nominees exceeds the number of directors to be elected as of the date seven days prior to the scheduled mailing date of the Corporation's definitive proxy statement for such meeting.

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CORPORATION DIVISION
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Attachment 3. Property Owner List

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MAPTAXLOT	First Name	Last Name	Second Name	Org/Corp	C/O Contact	Address	City	State	ZIP	ZIPPLUS
02N23E000000100				THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818	9663
02N23E000000102				THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818	9663
02N23E000002900				MILLER, APRIL, 1/2 & MILLER, LORI, 1/2	C/O PDS TAX SERVICES	777 TAYLOR ST 1A	FORT WORTH	TX	76102	4919
02N24E000000100				THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818	9663
02N24E000000101				THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818	9663
02N24E000000102				PORTLAND GENERAL ELECTRIC	CORPORATE TAX DEPARTMENT	121 SW SALMON ST	PORTLAND	OR	97204	2908
02N24E000000103				PORTLAND GENERAL ELECTRIC	CORPORATE TAX DEPARTMENT	121 SW SALMON ST	PORTLAND	OR	97204	2908
02N24E000000105				PORTLAND GENERAL ELECTRIC COMPANY ETAL	CORPORATE TAX DEPARTMENT	121 SW SALMON ST	PORTLAND	OR	97204	2908
02N24E000000106				PORTLAND GENERAL ELECTRIC	CORPORATE TAX DEPARTMENT	121 SW SALMON ST	PORTLAND	OR	97204	2908
02N24E000000107				THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818	9663
02N24E000000200				ELLA RANCH, LLC	DOHERTY, RICHARD	3588 NW LEHMAN PL	BEAVERTON	OR	97006	7207
02N24E000000300	KENNETH MICHAEL	KLINGER				68280 IMMIGRANT LN	IONE	OR	97843	4340
02N24E000000302	MARILYN	PECK	GARY MORGAN			1042 NW 12TH ST APT C	PENDLETON	OR	97801	1279
02N24E000000600				CRAWFORD, KYLE ET AL		5645 HWY 201	ONTARIO	OR	97914	8027
02N24E000000700				ELLA RANCH, LLC	DOHERTY, RICHARD	3588 NW LEHMAN PL	BEAVERTON	OR	97006	7207
02N24E000000701				ELLA RANCH, LLC	DOHERTY, RICHARD	3588 NW LEHMAN PL	BEAVERTON	OR	97006	7207
02N24E000001100	TIM	HOLTZ	DEBBIE HOLTZ			65151 TEWS LN	IONE	OR	97843	7405
02N24E000001300	CATHERINE M	NUFERROUS				65444 IMMIGRANT LN	IONE	OR	97843	4395
02N24E000001400				IMMIGRANT LANE, LLC		64982 BAKER LN	IONE	OR	97843	4326
02N25E000000200				USA (BOMBING RANGE)					0	
02N25E000000701				ELLA RANCH, LLC	DOHERTY, RICHARD	3588 NW LEHMAN PL	BEAVERTON	OR	97006	7207
03N23E000000100				THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818	9663
03N23E000000111				THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818	9663
03N24E000000100				INSITU INC	PWC US TAX LLP	PO BOX 30026	TAMPA	FL	33630	3026
03N24E000000101				PORTLAND GENERAL ELECTRIC	CORPORATE TAX DEPARTMENT	121 SW SALMON ST	PORTLAND	OR	97204	2908
03N24E000000102				PORTLAND GENERAL ELECTRIC COMPANY ETAL	CORPORATE TAX DEPARTMENT	121 SW SALMON ST	PORTLAND	OR	97204	2908
03N24E000000104				PORTLAND GENERAL ELECTRIC COMPANY ETAL	CORPORATE TAX DEPARTMENT	121 SW SALMON ST	PORTLAND	OR	97204	2908
03N24E000000112				THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818	9663
03N24E000000113				PORTLAND GENERAL ELECTRIC	CORPORATE TAX DEPARTMENT	121 SW SALMON ST	PORTLAND	OR	97204	7086
03N24E000000114				PORTLAND GENERAL ELECTRIC COMPANY ETAL	CORPORATE TAX DEPARTMENT	121 SW SALMON ST	PORTLAND	OR	97204	2908
03N24E000000115				PORTLAND GENERAL ELECTRIC COMPANY ETAL	CORPORATE TAX DEPARTMENT	121 SW SALMON ST	PORTLAND	OR	97204	7086
03N24E000000116				PORTLAND GENERAL ELECTRIC COMPANY ETAL	CORPORATE TAX DEPARTMENT	121 SW SALMON ST	PORTLAND	OR	97204	7086
03N24E000000117				PORTLAND GENERAL ELECTRIC COMPANY ETAL	CORPORATE TAX DEPARTMENT	121 SW SALMON ST	PORTLAND	OR	97204	2908
03N24E000000120				THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818	9663
03N24E000000121				PORTLAND GENERAL ELECTRIC	CORPORATE TAX DEPARTMENT	121 SW SALMON ST	PORTLAND	OR	97204	2908
03N24E000000122				PORTLAND GENERAL ELECTRIC	CORPORATE TAX DEPARTMENT	121 SW SALMON ST	PORTLAND	OR	97204	2908

MAPTAXLOT	First Name	Last Name	Second Name	Org/Corp	C/O Contact	Address	City	State	ZIP	ZIPPLUS
03N24E000000123				ROWAN PERCHERON LLC	BIRCH INFRASTRUCTURE	120 STATE ST STE 120	TRAVERSE CITY	MI	49684	2404
03N25E000000100				USA (BOMBING RANGE)					0	
04N23E000000110				THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818	9663
04N24E000000121				THREEMILE CANYON FARMS, LLC		75906 MARTY MYERS RD	BOARDMAN	OR	97818	9663
04N25E000001600				USA (DEPT OF NAVY)	ATTN: RANGE MANAGEMENT, N00RM	3730 N CHARLES PORTER AVE	OAK HARBOR	WA	98278	3500

Carty Generating Station Request for Amendment 4

Attachment 3
Figure 1
Tax Lots

MORROW COUNTY, OR

Figure 1.1
Figure 1.2
Figure 1.3
Figure 1.4
Figure 1.5
Figure 1.6
Figure 1.7
Figure 1.8
Figure 1.9
Figure 1.10
Figure 1.11
Figure 1.12

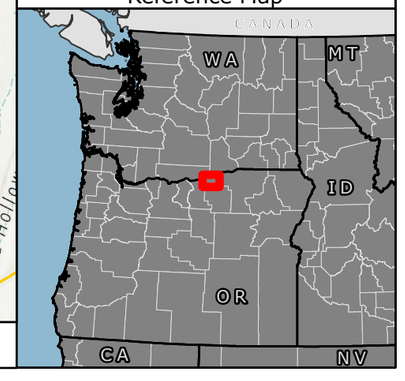
- Grid Index
- Amended Site Boundary
- Tax Lot Boundary*
- Interstate Highway
- US Highway
- State Highway

*Tax lot boundary data updated from Morrow County on October 16, 2026

TETRA TECH

PGE

Reference Map



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WGS 1984 UTM Zone 11N

0 1 2 4 6 8 Miles

NOT FOR CONSTRUCTION

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Carty Generating Station Request for Amendment 4

Attachment 3
Figure 1.1
Tax Lots

MORROW COUNTY, OR

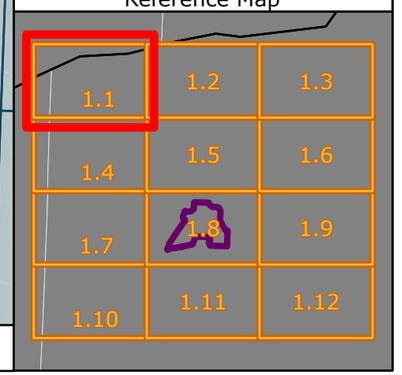
- Amended Site Boundary
- Tax Lot Boundary*
- Interstate Highway
- US Highway
- State Highway
- Local Roads

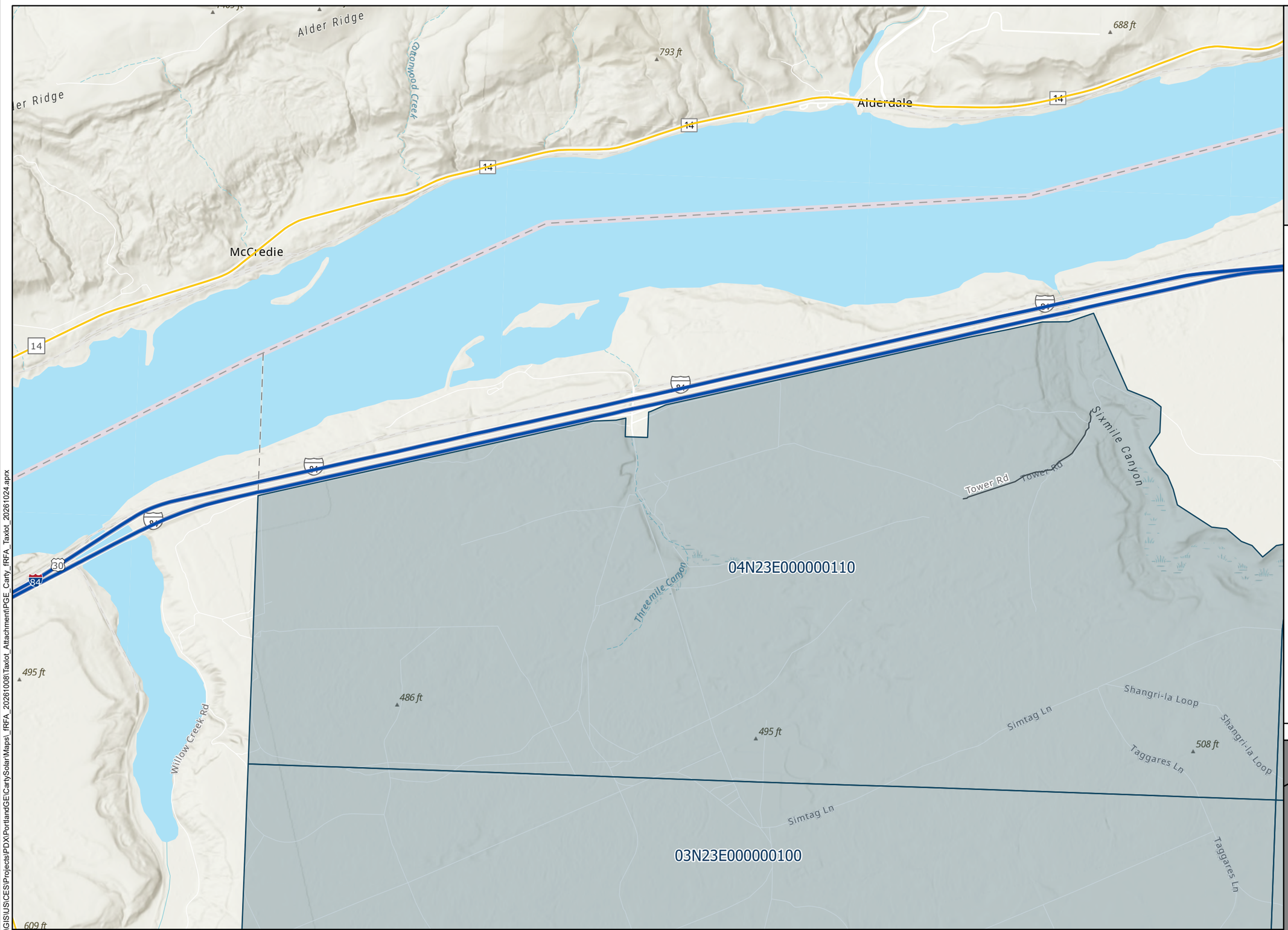
*Tax lot boundary data updated from Morrow County on October 16, 2026

TETRA TECH

PGE

Reference Map





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WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

\\tt.local\GIS\US\CES\Projects\PDX\Portland\GE\CartySolar\Maps_fRFA_20261008\Taxlot_Attachment\PGE_Carty_fRFA_Taxlot_20261024.aprx

Carty Generating Station Request for Amendment 4

Attachment 3
Figure 1.10
Tax Lots

MORROW COUNTY, OR

02N23E000000102

02N24E000001400

02N23E000002900

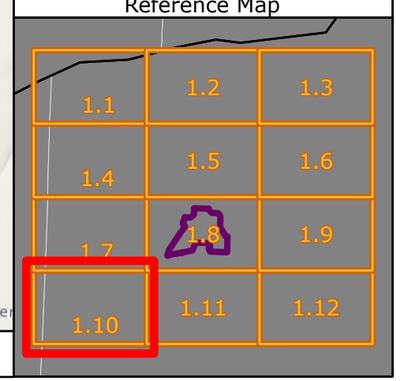
- Amended Site Boundary
- Tax Lot Boundary*
- State Highway
- Local Roads

*Tax lot boundary data updated from Morrow County on October 16, 2026

TETRA TECH

PGE

Reference Map



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WGS 1984 UTM Zone 11N

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NOT FOR CONSTRUCTION

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Carty Generating Station Request for Amendment 4

Attachment 3
Figure 1.11
Tax Lots

MORROW COUNTY, OR

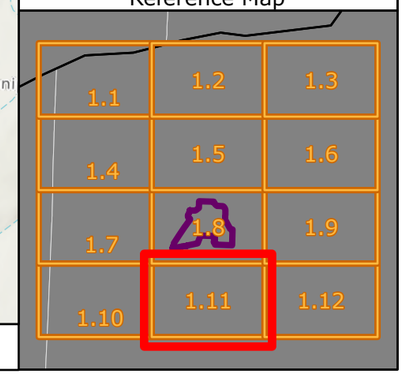
- Amended Site Boundary
- Tax Lot Boundary*
- Local Roads

*Tax lot boundary data updated from Morrow County on October 16, 2026

TETRA TECH

PGE

Reference Map



02N23E000000102
02N24E000000107
02N25E000000200
02N24E000001400
02N24E000001300
02N24E000001100
02N24E000000700
02N24E000000600
02N24E000000701
02N24E000000302
02N24E000000300
02N25E000000701
02N24E000000200
02N23E000002900
776 ft
789 ft
804 ft
819 ft
927 ft
968 ft
925 ft
925 ft
989 ft
1130 ft
1152 ft
1327 ft
1287 ft
1409 ft
Immigrant Ln
Fourmile Canyon
Sixmile Canyon
Ella Rd
Baker Ln
Dave Reitmann Rd
Ione-Boardman Rd
Albert Lindstrom Rd

1:34,000 WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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Carty Generating Station Request for Amendment 4

Attachment 3
Figure 1.12
Tax Lots

MORROW COUNTY, OR

02N25E000000200

02N25E000000701

Amended Site Boundary
Tax Lot Boundary*
Local Roads

*Tax lot boundary data updated from Morrow County on October 16, 2026

TETRA TECH

PGE

Reference Map

1.1 1.2 1.3
1.4 1.5 1.6
1.7 1.8 1.9
1.10 1.11 1.12

1:34,000

WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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Carty Generating Station Request for Amendment 4

Attachment 3
Figure 1.2
Tax Lots

MORROW COUNTY, OR

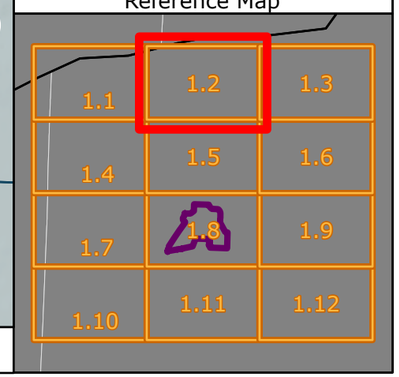
- Amended Site Boundary
- Tax Lot Boundary*
- Interstate Highway
- US Highway
- State Highway
- County Highway
- Local Roads

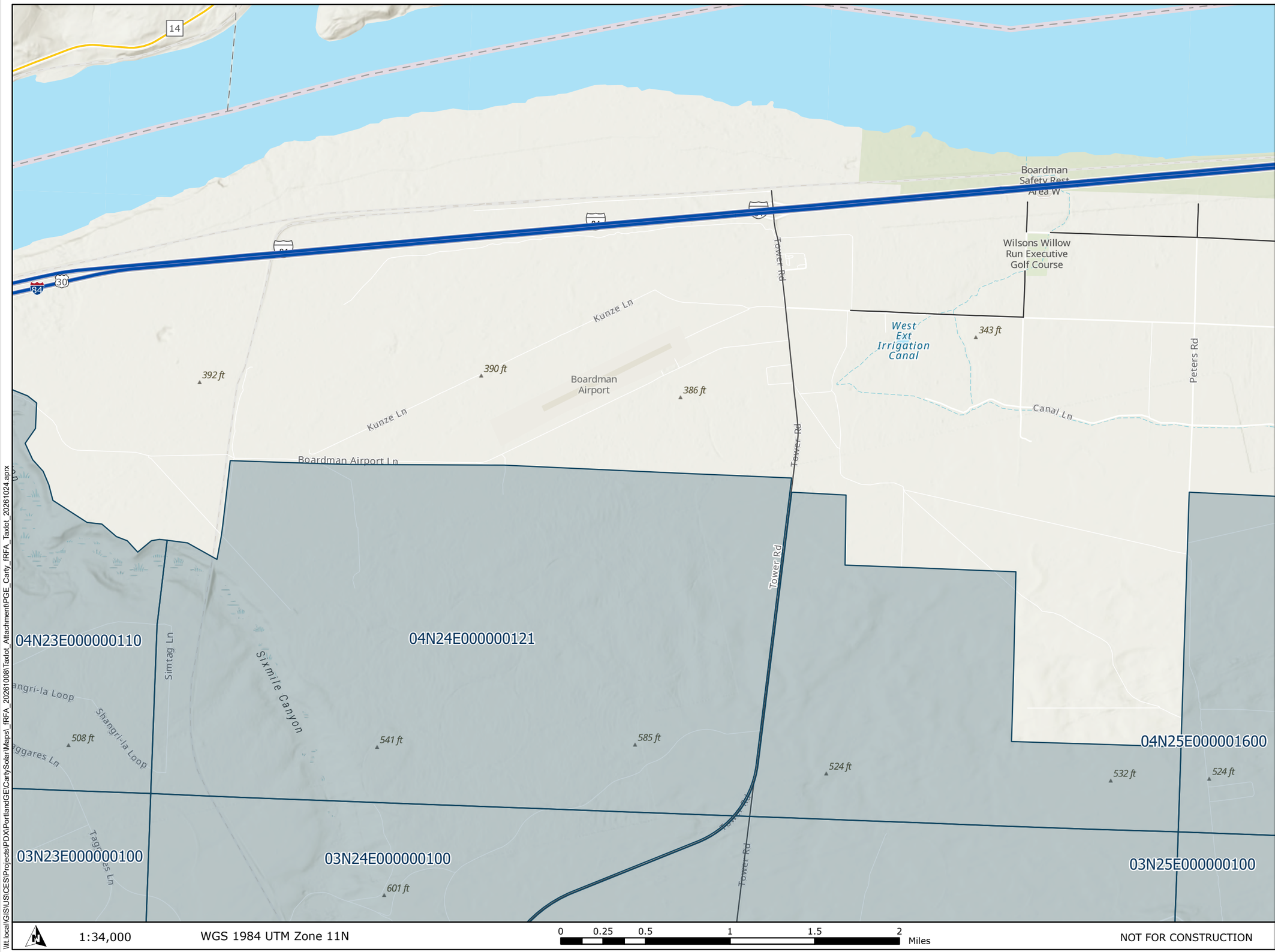
*Tax lot boundary data updated from Morrow County on October 16, 2026

TETRA TECH

PGE

Reference Map





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WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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Carty Generating Station Request for Amendment 4

Attachment 3
Figure 1.3
Tax Lots

MORROW COUNTY, OR

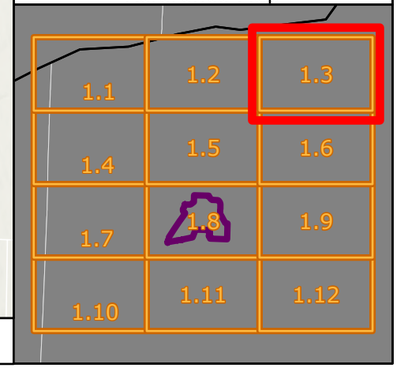
- Amended Site Boundary
- Tax Lot Boundary*
- Interstate Highway
- US Highway
- County Highway
- Local Roads

*Tax lot boundary data updated from Morrow County on October 16, 2026

TETRA TECH

PGE

Reference Map



Boardman
Boardman Park
Marine Dr NE
Utility Ln
Lewis & Clark Dr
Paul Smith Rd
Juniper Canyon
730
84
30
Wilson Ln
Paul Smith Rd
S Main St
Laurel Ln
Miller Rd
Rippee Rd
Wilson Ln SE
Wilson Rd SE
Root Ln
Kunze Ln
Peters Rd
Boardman Canal Rd
Canal Ln
Rome St
Bombing Range Rd
Main St
305 ft
380 ft
373 ft
385 ft
427 ft
457 ft
524 ft
539 ft
565 ft
565 ft
04N25E000001600
03N25E000000100

1:34,000 WGS 1984 UTM Zone 11N 0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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Carty Generating Station Request for Amendment 4

Attachment 3
Figure 1.4
Tax Lots

MORROW COUNTY, OR

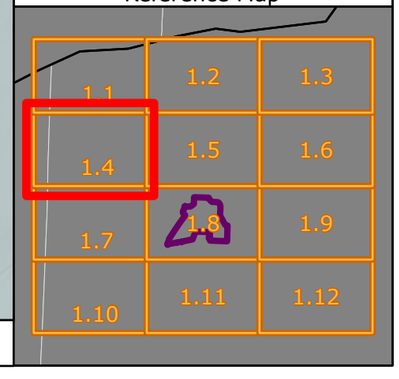
- Amended Site Boundary
- Tax Lot Boundary*
- State Highway
- Local Roads

*Tax lot boundary data updated from Morrow County on October 16, 2026

TETRA TECH

PGE

Reference Map



04N23E000000110

03N23E000000111

03N23E000000100

Willow Creek Rd

Simtag Ln

Taggares Ln

Sim-Tag Ln

Threemile Rd

Tower Rd

Dalreed Butte

609 ft

583 ft

508 ft

591 ft

592 ft

659 ft

666 ft

637 ft

640 ft

745 ft

727 ft

74

1:34,000

WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

\\tt.local\GIS\US\CES\Projects\PDX\Portland GE\CartySolar\Maps_fRFA_20261008\Taxlot_Attachment\PGE_Carty_fRFA_Taxlot_20261024.aprx

Carty Generating Station Request for Amendment 4

Attachment 3
Figure 1.5
Tax Lots

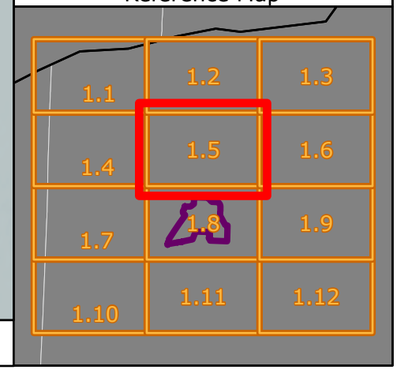
MORROW COUNTY, OR

- Amended Site Boundary
- Tax Lot Boundary*
- Local Roads

*Tax lot boundary data updated from Morrow County on October 16, 2026

TETRA TECH PGE

Reference Map



04N23E000000110
04N24E000000121
04N25E000001600
03N23E000000100
03N24E000000100
03N25E000000100
03N24E000000120
03N23E000000111
03N24E000000112
03N24E000000123
03N24E000000101

Tower Rd
Taggares Ln
Feedlot Rd
Sixmile Canyon
Poverty Ridge

508 ft
541 ft
585 ft
524 ft
532 ft
524 ft
601 ft
644 ft
634 ft
606 ft
636 ft
673 ft

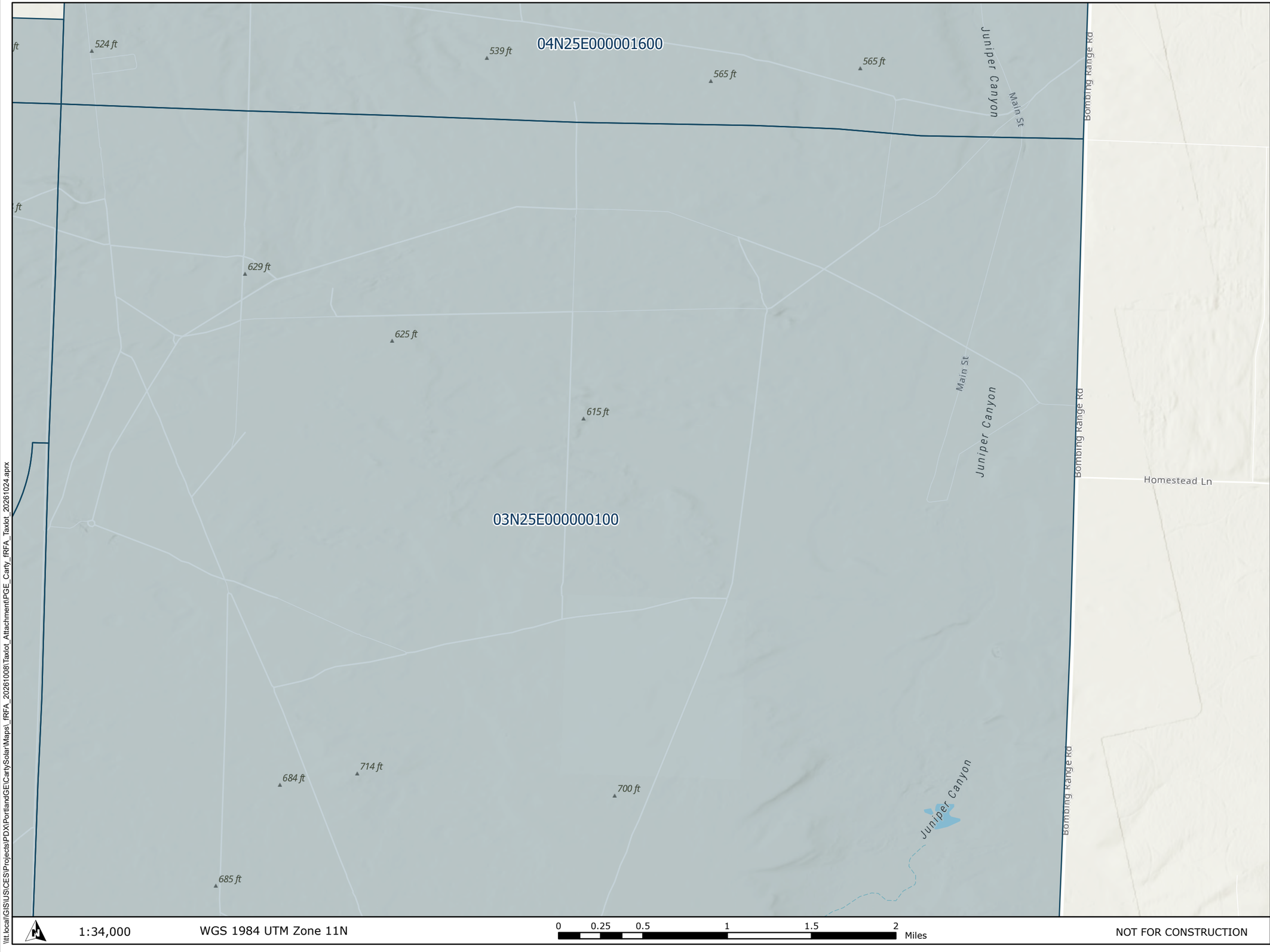
1:34,000 WGS 1984 UTM Zone 11N 0 0.25 0.5 1 1.5 2 Miles NOT FOR CONSTRUCTION

\\tt.local\GIS\US\CES\Projects\PDX\PortlandGE\CartySolar\Maps_fRFA_20261008\Taxlot_Attachment\PGE_Carty_fRFA_Taxlot_20261024.aprx

Carty Generating Station Request for Amendment 4

Attachment 3
Figure 1.6
Tax Lots

MORROW COUNTY, OR



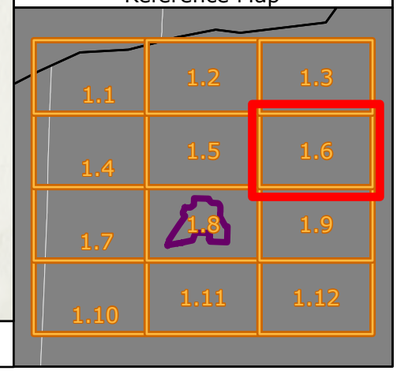
- Amended Site Boundary
- Tax Lot Boundary*
- Local Roads

*Tax lot boundary data updated from Morrow County on October 16, 2026

TETRA TECH

PGE

Reference Map



1:34,000 WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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Carty Generating Station Request for Amendment 4

Attachment 3
Figure 1.7
Tax Lots

MORROW COUNTY, OR

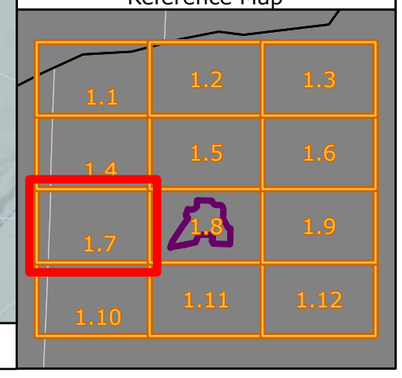
Amended Site Boundary
Tax Lot Boundary*
State Highway
Local Roads

*Tax lot boundary data updated from Morrow County on October 16, 2026

TETRA TECH

PGE

Reference Map



Dalreed Butte

Butte

03N23E000000100

02N23E000000100

02N23E000000102

Taggares Ln

Tower Rd

Ewing Rd

74

637 ft

745 ft

727 ft

707 ft

674 ft

857 ft

815 ft

809 ft

816 ft

776 ft

927 ft

1:34,000

WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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Carty Generating Station Request for Amendment 4

Attachment 3
Figure 1.8
Tax Lots

MORROW COUNTY, OR

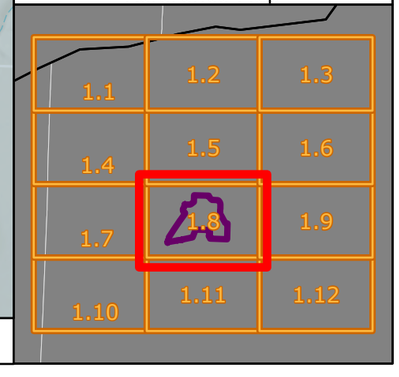
- Amended Site Boundary
- Tax Lot Boundary*
- Local Roads

*Tax lot boundary data updated from Morrow County on October 16, 2026

TETRA TECH

PGE

Reference Map



03N23E000000100
03N24E000000100
03N24E000000123
03N24E000000101
03N24E000000112
03N24E000000115
03N24E000000116
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03N24E000000113
03N24E000000121
03N24E000000104
03N24E000000114
03N24E000000122
03N24E000000117
03N25E000000100
02N24E000000106
02N24E000000101
02N24E000000103
02N24E000000102
02N23E000000100
02N24E000000105
02N24E000000100
02N25E000000200
02N23E000000102
02N24E000000107

Poverty Ridge
Sixmile Canyon
Fourmile Canyon
673 ft
685 ft
689 ft
690 ft
776 ft
789 ft
804 ft
819 ft
927 ft

1:34,000

WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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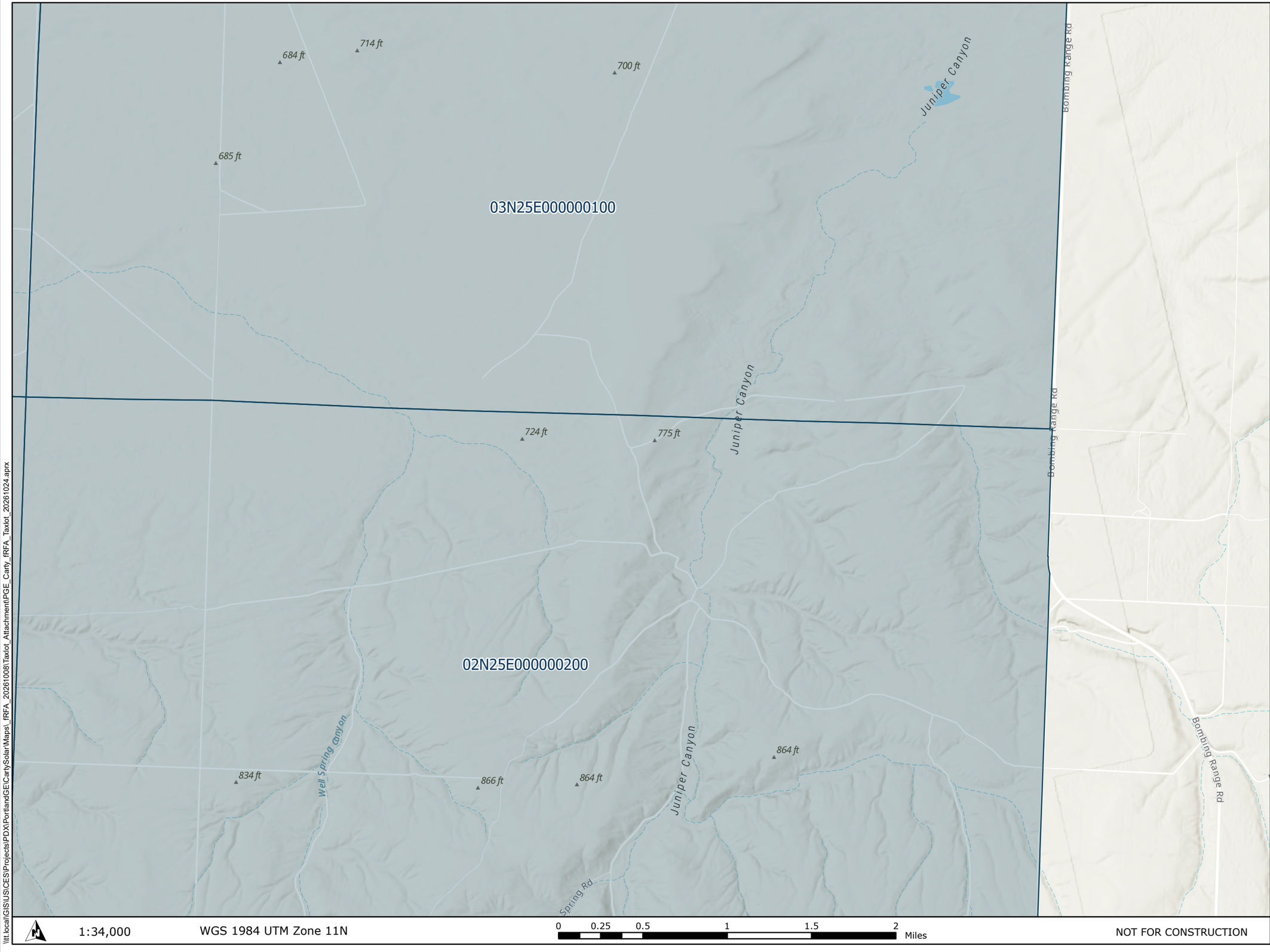
Carty Generating Station Request for Amendment 4

Attachment 3
Figure 1.9
Tax Lots

MORROW COUNTY, OR



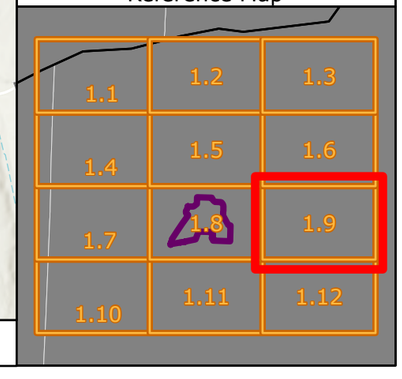
Amended Site Boundary
Tax Lot Boundary*
Local Roads

*Tax lot boundary data updated from Morrow County on October 16, 2026

TETRA TECH

PGE

Reference Map



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WGS 1984 UTM Zone 11N

0 0.25 0.5 1 1.5 2 Miles

NOT FOR CONSTRUCTION

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Attachment 4. Division 21 Exhibits

Exhibits G-DD are provided as individual files

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