

Notice of Intent to Apply for a Site Certificate for the Blue Marmot Solar Energy Facility in Lake County, Oregon

Submitted to

Oregon Energy Facility Siting Council

Prepared for

Blue Marmot Solar Park LLC

January 2018



CH2M HILL Engineers, Inc.
2020 SW 4th Avenue, Suite 300
Portland, Oregon 97201

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Acronyms and Abbreviations

ACDP	Air Contaminant Discharge Permit
Applicant	Blue Marmot Solar Park LLC
ASC	Application for Site Certificate
CFR	<i>Code of Federal Regulations</i>
c/o	care of
DEQ	Oregon Department of Environmental Quality
EFSC	Energy Facility Siting Council
ESCP	erosion and sediment control plan
Facility	Blue Marmot Solar Energy Facility
GCR	ground coverage ratio
IPaC	<i>Information, Planning, and Conservation System</i>
kV	kilovolt
LDC	Lakeview Development Code
LLC	limited liability company
MW	megawatt
NESC	National Electrical Safety Code
NHD	<i>National Hydrography Dataset</i>
NOI	Notice of Intent
NPDES	National Pollutant Discharge Elimination System
NWI	<i>National Wetlands Inventory</i>
O&M	operations and maintenance
OAR	Oregon Administrative Rule
ODA	Oregon Department of Agriculture
ODFW	Oregon Department of Fish and Wildlife
ODOE	Oregon Department of Energy
OR 140	Oregon State Highway 140
ORBIC	Oregon Biodiversity Information Center
ORS	Oregon Revised Statute
PCS	power conversion station
POI	point of interconnection
PV	photovoltaic
SHPO	State Historic Preservation Office

ACRONYMS AND ABBREVIATIONS

T&E	threatened and endangered
US 395	U.S. Highway 395
U.S.C.	<i>United States Code</i>
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WPCF	Water Pollution Control Facilities

Applicant Information

OAR 345-020-0011(1)(a)

(a) **Exhibit A.** Information about the applicant and participating persons, including:

- (A) The name and address of the applicant including all co-owners of the proposed facility, the name, mailing address, email address and telephone number of the contact person for the NOI, and if there is a contact person other than the applicant, the name, title, mailing address, email address and telephone number of that person.

Response

Name and mailing address of Applicant:

Blue Marmot Solar Park LLC
c/o EDP Renewables North America LLC
Attention: General Counsel
808 Travis Street, Suite 700
Houston, TX 77002

Applicant Contact Person(s) with Mailing Address, Email Address, and Telephone Number:

Will Talbott
EDP Renewables North America LLC
53 SW Yamhill Street
Portland, OR 97204
William.Talbott@edpr.com
971-325-6238

Ilana Maccia
EDP Renewables North America LLC
53 SW Yamhill Street
Portland, OR 97204
Ilana.Maccia@edpr.com
503-535-1538

Contact person(s) other than the Applicant:

Paul Seilo
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2020 SW 4th Avenue, Suite 300
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Stoel Rives LLP
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Portland, OR 97205
tim.mcmahan@stoel.com
503-294-9517

- (B) *The contact name, mailing address, email address and telephone number of all participating persons, other than individuals, including but not limited to any parent corporation of the applicant, persons upon whom the applicant will rely for third-party permits or approvals related to the facility, and persons upon whom the applicant will rely in meeting any facility standard adopted by the Council.*

Response

Parent Corporation:

EDP Renewables North America LLC
808 Travis Street, Suite 700
Houston, TX 77002

Contact Name, Mailing Address, Email Address, and Telephone Number:

Will Talbott
EDP Renewables North America LLC
53 SW Yamhill Street
Portland, OR 97204
William.Talbott@edpr.com
971-325-6238

- (C) *If the applicant is a corporation, it shall give:*
- (i) *The full name, official designation, mailing address, email address and telephone number of the officer responsible for submitting the NOI;*
 - (ii) *The date and place of its incorporation;*
 - (iii) *A copy of its articles of incorporation and its authorization for submitting the NOI; and*
 - (iv) *In the case of a corporation not incorporated in Oregon, the name and address of the resident attorney-in-fact in this state and proof of registration to do business in Oregon.*

Response

The Applicant is not a corporation.

- (D) *If the applicant is a wholly owned subsidiary of a company, corporation or other business entity, in addition to the information required by paragraph (C), it shall give the full name and business address of each of the applicant's full or partial owners;*

Response

EDP Renewables North America LLC is the parent company of Blue Marmot Solar Park LLC.

Address:
808 Travis Street, Suite 700
Houston, TX 77002

- (E) *If the person submitting the NOI is an association of citizens, a joint venture or a partnership, it shall give:*
- (i) *The full name, official designation, mailing address, email address and telephone number of the person responsible for submitting the NOI;*
 - (ii) *The name, business address and telephone number of each person participating in the association, joint venture or partnership and the percentage interest held by each;*
 - (iii) *Proof of registration to do business in Oregon;*
 - (iv) *A copy of its articles of association, joint venture agreement or partnership agreement and a list of its members and their cities of residence; and*
 - (v) *If there are no articles of association, joint venture agreement or partnership agreement, the applicant shall state that fact over the signature of each member;*

Response

The person submitting the Notice of Intent (NOI) is not an association of citizens, a joint venture, or a partnership.

- (F) *If the applicant is a public or governmental entity, it shall give:*
- (i) *The full name, official designation, mailing address, email address and telephone number of the person responsible for submitting the NOI; and*
 - (ii) *Written authorization from the entity's governing body to submit an NOI;*

Response

The Applicant is not a public or governmental entity.

- (G) *If the applicant is an individual, the individual shall give his or her mailing address, email address and telephone number.*

Response

The Applicant is not an individual.

- (H) *If the applicant is a limited liability company, it shall give:*
- (i) *The full name, official designation, mailing address, email address and telephone number of the officer responsible for submitting the NOI;*
 - (ii) *The date and place of its formation;*
 - (iii) *A copy of its articles of organization and its authorization for submitting the NOI; and*
 - (iv) *In the case of a limited liability company not registered in Oregon, the name and address of the resident attorney-in-fact in this state and proof of registration to do business in Oregon.*

Response

Blue Marmot Solar Park LLC
c/o EDP Renewables North America LLC
Attention: General Counsel
808 Travis Street, Suite 700
Houston, TX 77002

The Applicant is a limited liability company (LLC) originally organized as Blue Marmot X LLC under the laws of Delaware on September 21, 2016. The Blue Marmot X LLC name was amended to Blue Marmot Solar Park LLC on January 8, 2018. The articles of incorporation for Blue Marmot X LLC, the revision to Blue Marmot Solar Park LLC, and authorization for submitting this NOI are contained in Attachment A.

Facility Description

OAR 345-020-0011(1)(b)

(b) **Exhibit B.** Information about the proposed facility, including:

(A) A description of the proposed energy facility, including as applicable:

Overview of Proposed Facility

Blue Marmot Solar Park LLC (Applicant) proposes to construct and operate the Blue Marmot Solar Energy Facility (Facility) in Lake County, Oregon (Figure G-1). The Facility will generate electricity using multiple arrays of photovoltaic (PV) solar panels connected to electrical infrastructure. (The term “array” refers to panels wired in series and in parallel.) Solar panels generate electricity by means of a photoelectric 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 Facility encompasses up to five separate solar array sites that will generate electricity — Duvaroo, Deniz East, Reish, Parmelee, and Deniz West (Figure G-2). The Applicant intends to begin Facility construction by February 2020, pending issuance of a site certificate from the Energy Facility Siting Council (EFSC). This section references figures attached to Exhibit G (Facility Maps) to support the overview of the proposed Facility.

Output from four of the solar array sites (Reish, Deniz East, Deniz West, and Parmelee) will be consolidated via 34.5-kilovolt (kV) collector lines to a centralized Facility substation (proposed central substation) (Figure G-2). The proposed central substation will step up the voltage from 34.5-kV to 115-kV and transfer it approximately 0.5 mile east via a new 115-kV overhead generation-tie transmission line to a nearby point of interconnection (POI) (Figure G-2, Map 1). Output from the fifth solar array site (Duvaroo) will be consolidated via either a 34.5-kV collector line to the proposed central substation or a new 115-kV overhead transmission line going directly from an onsite substation (proposed north substation) south to the POI, depending on the volume and phasing of capacity ultimately built at the Duvaroo solar array site (Figure G-2, Maps 1 and 2). The Facility will interconnect, at a new POI, with the existing PacifiCorp 115-kV Chiloquin to Alturas transmission line (PacifiCorp transmission line), approximately 1 mile from PacifiCorp’s existing Mile HI substation (Figure 2, Map 2). PacifiCorp plans to build the new POI at the existing PacifiCorp transmission line as part of the interconnection plan for another project in the area. This new POI will serve as the interconnect for the Facility, as well as accommodating other potential PacifiCorp project needs and interconnection requests.

Alternatives and Design Options

Manufacturers and models of equipment have not yet been determined; as such, precise output and numbers of components may change. The exact routing for the 34.5-kV collector lines is still being determined; therefore, multiple alternative 34.5-kV collector line routes are included between each solar array site and the proposed central substation. In addition, the Applicant is still exploring design options for the 34.5-kV collector lines including both underground and overhead design options. Thus, each alternative 34.5-kV collector line corridor may be developed with an underground 34.5-kV collector line, overhead 34.5-kV collector line, or segments of each. Finally, the Applicant is still examining alternative locations for the 115-kV overhead generation-tie transmission lines and access road to the Parmelee solar array site within the respective study areas described under Related or Supporting Facilities in this exhibit.

Facility Site Boundary

The Facility site boundary encompasses the five solar array sites, north and central substations, POI, alternative locations for the 34.5-kV collector lines, and study areas for siting the 115-kV overhead generation-tie transmission lines and access road to the Parmelee solar array site (Figure G-2).

- (i) *The nominal electric generating capacity and the average electrical generating capacity, as defined in ORS 469.300.*

Response

The Facility will consist of up to 60 megawatts (MW) of nominal and average generating capacity as defined in Oregon Revised Statute (ORS) 469.300(4)(c).

- (ii) *Major components, structures and systems, including a description of the size, type and configuration of equipment used to generate electricity and useful thermal energy.*

Response

Major Components, Structures, and Systems

Solar Modules. The PV solar panels, also known in the industry and referenced in this document as modules, will be installed to form approximately 30 module blocks of approximately 2.0 MW each in total on the five solar array sites shown on Figure G-2. The dimensions of each panel within each module block will be approximately 6 feet long by 3 feet wide by 2 inches in thickness. The solar panels are likely to be polycrystalline or monocrystalline. The final number of panels will be determined by wattage power ratings available when construction begins. Module block components will consist of the solar modules themselves, trackers, racks, posts, cabling, inverters, and transformers. Additional detail on each component is provided in the paragraphs below.

Tables and Trackers. The PV solar panels are mounted to steel tracker tables, which will be approximately 5 feet off the ground when level. Single-axis trackers that can rotate up to 60 degrees to the east and west will be installed to aim the panels toward the sun and increase power production throughout the day. When fully rotated, the highest point of the panel will be approximately 8 feet off the ground. The minimum distance to the ground when fully rotated will range from 1 to 2 feet.

Posts. Each tracker table will be supported by steel posts driven into the ground to serve as the foundation. The post depths will vary depending on soil conditions but are typically 8 feet below the surface. Approximately 1,000 posts will be installed per module block or approximately 30,000 posts for the 60-MW Facility. Post locations will be determined by the ground coverage ratio (GCR). The planned GCR is 30 to 35 percent, meaning that the area occupied by the panels (when tilted horizontally) will be 30 to 35 percent of the total area covered. This will minimize the amount of shading from modules onto others. To reduce subsurface impacts, a ballasted design may be used in portions of the solar array areas, wherein tracker tables would be mounted on foundations embedded in concrete blocks (ballasts) that would rest on the surface of the ground rather than on posts driven into the ground.

Cabling. Electric cables will connect the electrical current produced by the solar arrays with inverters and pad-mounted transformers. The cables will be buried to a depth of at least 3 feet. If conditions dictate, the electrical cables could be above ground in conduits using cable trays or other such measures.

Power Conversion Station. Direct current output of the solar modules is converted into alternating current via inverters paired with pad-mounted transformers that step up from low voltage to medium voltage to feed collector lines at 34.5-kV. The inverter and transformer pairing is called the power conversion station (PCS). A representative PCS is shown on Figure B-1 in Attachment B. Each 10 MW of

generation is paired with approximately five PCS of approximately 2 MW each that are connected in parallel by means of 34.5-kV cables to complete the medium-voltage collector system. The Facility will include up to approximately 30 PCS.

- (iii) *Methods for waste management and waste disposal, including, to the extent known, the amount of wastewater the applicant anticipates, the applicant's plans for disposal of wastewater and storm water, and the location of disposal;*

Response

The Facility will not use water resources in the generation of electricity and will not produce wastewater for disposal, nor will it produce significant quantities of solid waste. Further details of stormwater drainage, water, solid waste management, and sewage treatment during both construction and operations are discussed below in Exhibit K of this NOI.

- (iv) *For thermal power plants:*
- I. *A discussion of the source, quantity and availability of all fuels proposed to be used in the facility to generate electricity or useful thermal energy.*
 - II. *Methods for disposal of waste heat.*

Response

The above rule is not applicable to solar energy generation.

- (v) *For transmission lines, approximate transmission line voltage, load carrying capacity and type of current.*

Response

Up to two 115-kV overhead generation-tie transmission lines will connect the Facility substations to the POI (Figure G-2). One approximately 0.5-mile-long, 115-kV overhead generation-tie transmission line will connect the proposed central substation to the POI. Depending on the volume and phasing of capacity ultimately built at the Duvaroo solar array site, a second approximately 6-mile-long, 115-kV overhead generation-tie transmission line may be needed to connect the proposed north substation at the Duvaroo solar array site to the POI.

- (vi) *For pipelines, approximate operating pressure and delivery capacity in thousand cubic feet per day.*

Response

The above rule is not applicable to solar energy generation.

- (vii) *For surface facilities related to underground gas storage, estimated daily injection and withdrawal rates, horsepower compression required to operate at design injection or withdrawal rates, operating pressure range and fuel type of compressors.*

Response

The above rule is not applicable to solar energy generation.

- (viii) *For facilities to store liquefied natural gas, the approximate volume, maximum pressure, liquefaction and gasification capacity in thousand cubic feet per hour.*

Response

The above rule is not applicable to wind power generation.

Related or Supporting Facilities

(B) *A description of major components, structures and systems of each related or supporting facility.*

Response

Related or supporting facilities include the 34.5-kV collector lines, proposed north and central substations, 115-kV overhead generation-tie transmission lines, POI, operations and maintenance (O&M) building, access road, service road and gates, and construction areas.

Collector Lines. 34.5-kV collector lines will carry power from either four or all five solar array sites to the proposed central substation (Figure G-2). The 34.5-kV collector lines will run underground wherever possible for improved reliability, but could run overhead if conditions require. Underground 34.5-kV collector lines will be buried approximately 3 feet. Overhead 34.5-kV collector lines will likely be placed on new steel monopoles at least approximately 30 feet high and subject to the requirements of the National Electric Safety Code (NESC). The Applicant is also exploring the option of underhanging the 34.5-kV collector lines on existing transmission facilities.

Exact collector line routing is still being decided, and therefore different alternatives are included within the Facility site boundary (Figure G-2). Rights for the 34.5-kV collector line routes are still to be secured, but the lines will run primarily in existing public rights-of-way.

Substations. The 34.5-kV collector lines will bring the power to the proposed central substation (Figure G-2, Map 2). An additional proposed north substation may be located within the Duvaroo solar array site (Figure G-2, Map 1). The proposed north substation may be required depending on the volume and phasing of generation capacity ultimately built at the Duvaroo solar array site. Each substation will step up the power from 34.5-kV to 115-kV and be situated on up to 10 acres of land. The substations will include the following typical equipment:

- Main step-up transformer
- Neutral grounding reactor
- Control house
- Dead-end and shield pole
- Support steel
- Auxiliary station service transformer
- 115-kV circuit breaker
- 115-kV coupling capacitor voltage transformer
- 115-kV potential transformer
- 115-kV current transformer
- 115-kV motor-operated disconnect switch
- 34.5-kV main circuit breaker
- 34.5-kV feeder circuit breaker with integrated ground switch
- 34.5-kV potential transformer
- 34.5-kV current transformer
- 34.5-kV manual disconnect switch for main and feeder break

- 34.5-kV shunt reactive compensation switching breaker (for capacitor bank or reactor as required according to calculations)
- 34.5-kV manual disconnect switch for shunt reactive compensation
- Shunt capacitor bank

Generation-tie Transmission Lines. The Facility will require one or two new 115-kV overhead generation-tie transmission lines. One will extend from the proposed central substation where the 34.5-kV collector lines are consolidated to the POI; the other will connect the proposed north substation on the Duvaroo solar array site to the POI. Although the exact locations of the 115-kV overhead generation-tie transmission lines are not known, a study area (generation-tie transmission line study area) has been identified to evaluate an appropriate route for siting the lines (Figure G-2). The generation-tie transmission line study area is located within the Facility site boundary (Figure G-2, Maps 1 through 3).

The Facility's 115-kV overhead generation-tie transmission line from the proposed central substation will extend up to approximately 0.5 mile to the POI within the generation-tie transmission line study area (Figure G-2, Map 1). The 115-kV overhead generation-tie transmission line from the proposed north substation at the Duvaroo solar array site will extend approximately 6 miles to the POI generation-tie transmission line study area (Figure G-2, Maps 1 and 2). The 115-kV overhead generation-tie transmission lines will likely be constructed on steel monopoles at least approximately 55 feet high and subject to the requirements of the NESC and within a permanent right-of-way up to 150 feet in width. The right-of-way for both 115-kV overhead generation-tie transmission lines will be located within the greater generation-tie transmission line study area and permanent disturbances associated with the lines will be limited to the footprints of the supporting steel monopoles.

Point of Interconnection. The POI is a new three-breaker ring bus switchyard planned by PacifiCorp (Figure G-2, Map 2). The POI will include the following equipment to enable the interconnection:

- Control house
- 115-kV circuit breaker
- Metering, communications, protection, and control
- 115-kV circuit switcher
- Protection and control panel
- Supervisory control and data acquisition and metering upgrades at the collector substation

Operations and Maintenance Building. The O&M building will be a single-story building located on one of the solar array sites and will include an office space, storage, bathroom, and breakroom facilities. Water will be supplied via a small well or connection to a municipal water system. The O&M building will have an onsite, state-permitted septic system or sewer connection. Electric power and telephone will be provided via local service providers. A gravel parking and storage area will be located adjacent to the building.

Access Road. The solar array sites each abut at least one public road except for the Parmelee site. Thus, new segments of access roads are not required aside from at the Parmelee site. Approximately 1 mile of access road will be needed to the Parmelee site from Oregon State Highway 140 (OR 140). The Facility site boundary includes a general access road study area from OR 140 to the Parmelee solar array site (Figure G-2, Map 4). The new access road will be 16 feet wide and will occur within the approximately 125-acre greater access road study area. The Applicant will site the access road to the Parmelee solar array site to minimize disturbances to the agricultural and grazing effectiveness of the underlying land.

Service Roads and Gates. The solar array sites will be fenced with security gates for access to facilities; service roads will include graveled interior roads to each PCS and may also include perimeter roads for each solar array site.

Construction Areas. During construction, temporary laydown areas within the solar array sites and substation areas will be used to stage construction activities and organize equipment and supplies; laydown areas will be available for each area of the Facility.

(C) *The approximate dimensions of major facility structures and visible features.*

Response

The approximate dimensions of major Facility structures and visible features including related or supporting facilities are provided below.

Approximate Dimensions of Major Facility Structures and Features

The most notable features of the Facility are: (1) the various components of the solar array sites; (2) the 34.5-kV collector lines to the proposed central substation; (3) the proposed north and central substations; (4) the O&M building, and (5) the 115-kV overhead generation-tie transmission lines. The estimated dimensions of the structures, as currently available, including related or supporting facilities, are summarized below.

Solar Modules. Each block of solar modules will be approximately 930 feet wide by 595 feet long; this will be a targeted standard dimension, with micro-siting considerations necessitating variations at each of the five solar array sites (Figure G-2). As previously mentioned above, when mounted on the tables and tracking system, the PV solar panels, will be approximately 5 feet off the ground when level, and when fully rotated, the highest point will be approximately 8 feet off the ground.

Power Conversion Station. Each PCS will be approximately 10 feet wide, 34 feet long, and up to 10 feet tall (8 to 9 feet for inverter and transformer, plus up to 1 foot for the concrete mounting pad). A representative PCS is shown on Figure B-1 in Attachment B.

Collector Lines. It is anticipated that the majority of the 34.5-kV collector lines shown on Figure G-2 will be underground and in existing public right-of-way. Any overhead 34.5-kV collector line segments will likely be placed on new steel monopoles at least approximately 30 feet high and subject to the requirements of the NESC.

Substations. Each proposed substation (north and central) will occupy approximately 10 acres. The proposed substations are shown on Figure G-2, Maps 1 through 3.

Generation-tie Transmission Lines. The 115-kV overhead generation-tie transmission line easements will be up to 150 feet wide and within the generation-tie transmission line study area shown on Figure G-2, Maps 1 through 3. The 115-kV overhead generation-tie transmission line from the proposed central substation to the POI will be approximately 0.5 mile in length, while the 115-kV overhead generation-tie transmission line from the proposed north substation at the Duvaroo solar array site to the POI will be approximately 6 miles in length. The transmission lines will likely be constructed on steel monopoles at least approximately 55 feet high and subject to the requirements of the NESC.

Operations and Maintenance Building. The O&M building will be approximately 3,000 square feet, with a height of approximately 20 feet.

Facility Location

OAR 345-020-0011(1)(c)

(c) **Exhibit C.** *A description of the location of the proposed energy facility site and the proposed site of each related or supporting facility and all areas that might be temporarily disturbed during construction of the facility, including the approximate land area of each.*

Response

Figure G-1 in Attachment G shows the proposed Facility site boundary in Lake County, Oregon. The Facility site boundary encompasses all or portions of the following townships, ranges, and sections:

- Township 38 South, Range 20 East, Sections 028, 032, 033
- Township 39 South, Range 18 East, Section 013
- Township 39 South, Range 19 East, Sections 011, 013, 014, 015, 017, 018, 021, 022, 023, 026, 027, 032, 033, 034, 035
- Township 39 South, Range 20 East, Sections 004, 007, 009, 010, 015, 016, 019, 020, 021, 022, 034, 035
- Township 40 South, Range 20 East, Sections 001, 002

Figure G-2 in Attachment G shows that the Facility site boundary encompasses five solar array sites, the 34.5-kV collector lines, two proposed substations, a generation-tie transmission line study area, the POI, and an access road study area. The site boundary includes alternatives for the 34.5-KV collector lines from the solar array sites to the proposed central substation. The Facility components, except for the 34.5-kV collector lines, will be located on private land for which the Applicant has already negotiated or is in the process of negotiating long-term leases or easements with the landowners. The majority of the 34.5-kV collector lines are proposed within public rights-of-way.

As presented in this NOI, the Facility site boundary encompasses a total of approximately 5,170 acres. However, this total acreage includes conservative study areas for the generation-tie transmission lines and Parmelee access road as described below, as well as collector line alternatives from each solar array site. The actual Facility acreage will be significantly less with selection of a final generation-tie transmission line corridor, Parmelee access road, and collector line routes.

Solar Array Sites

Duvaroo. The site is approximately 1,412 acres and is located immediately adjacent to U.S. Highway 395 (US 395) to the west, north of the intersection with Warner Highway (OR 140). The site is located nearly 11 miles north of Goose Lake, within the Goose Lake Basin (Figure G-2, Map 1).

Reish. This site is approximately 182 acres and comprises two footprints under the same private ownership. The site is immediately west of US 395, located just over 2 miles northeast of Goose Lake (Figure G-2, Map 3).

Deniz East. The site is approximately 80 acres and is located 5 miles north of Goose Lake, at the intersection of County Highway 2-16 and County Highway 1-10, within the Goose Lake Basin. The site is approximately 2 miles west of the Lakeview city limits and immediately east of the Lakeview County Airport (Figure G-2, Maps 2 and 5).

Deniz West. This site is approximately 91 acres and is located 4 miles northwest of Goose Lake, just west of County Highway 1-11 (Figure G-2, Map 5).

Parmelee. The site is approximately 110 acres and is located north of OR 140, approximately 10 miles west of the Town of Lakeview, and 9 miles northwest of Goose Lake (Figure G-2, Map 4).

Collector Lines

The 34.5-kV collector lines are primarily within existing right-of-way (Figure G-2). The total collector line area within the Facility site boundary, including alternative routes, is approximately 425 acres. This total acreage for the collector line alternatives is highly conservative since it includes the entire corridor for all the alternative options both inside and outside of existing rights-of-way. The actual collector line acreage within the Facility site boundary will be significantly less with selection of a final collector line route from each solar array site. In addition, this total corridor acreage does not reflect surface disturbance from installation, which will be significantly less within the final collector line route selected.

Substations

The north and central substations will each occupy approximately 10 acres. The sites currently under consideration and included within the Facility site boundary for the substations are as follows:

Proposed North Substation. The site under study is approximately 10 acres and located west of US 395 and immediately west of Metzker Road, where it bends to the northwest and turns into Rabbit Hill Road.

Proposed Central Substation. The site under study is approximately 30 acres. The site is located immediately to the southwest of the intersection of Stock Drive Lane and Roberta Avenue. Once constructed, the proposed central substation site will occupy approximately 10 acres.

Generation-tie Transmission Line

The 150-foot-wide right-of-way for the 115-kV overhead generation-tie transmission lines will be located within the approximately 2,705-acre generation-tie transmission line study area (Figure G-2, Maps 1 through 3). The 150-foot-wide right-of-way associated with the 0.5-mile-long, 115-kV overhead generation-tie transmission line that connects the proposed central substation with the POI will encompass approximately 6 acres within the greater study area (Figure G-2, Map 2). The 115-kV overhead generation-tie transmission line that will extend approximately 6 miles to connect the proposed north substation at the Duvaroo solar array site with the POI will encompass approximately 73 acres (Figure G-2, Maps 1 and 2). The actual right-of-way for the 115-kV overhead generation-tie transmission lines will encompass approximately 3 percent of the generation-tie transmission line study area shown on Figure G-2, Maps 1 through 3.

Point of Interconnection

The POI is positioned directly adjacent to the existing PacifiCorp Chiloquin to Alturas transmission line (Figure G-2, Map 2), with exact dimensions to be determined by PacifiCorp.

Access Road

The 16-foot-wide access road to the Parmelee solar array site from OR 140 will be located within the approximately 125-acre greater access road study area (Figure G-2, Map 4). The actual acreage within the 16-foot-wide access road will be significantly less than the access road study area.

Alternative Locations

OAR 345-020-0011(1)(d)

(d) **Exhibit D.** *If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a transmission line or pipeline that, by itself, is an energy facility under the definition in ORS 469.300, identification of at least two proposed corridors, as defined in OAR 345-001-0010, or identification of a single proposed corridor with an explanation of why alternate corridors are unlikely to better meet the applicant's needs and satisfy the Council's standards. The applicant shall include an explanation of the basis for selecting the proposed corridor(s) and, for each proposed corridor, the information described in subsections (e), (g), (i), (j), (k), (n) and (p) that is available from existing maps, aerial photographs, and a search of readily available literature.*

Response

The proposed Facility is not a pipeline or a transmission line as defined in ORS 469.300, and does not include a pipeline or transmission line that in themselves will be considered an energy facility under ORS 469.300(11). The Facility includes up to two 115-kV overhead generation-tie transmission lines as related or supporting facilities that will be developed within the generation-tie transmission line study area shown on Figure G-2, Maps 1 through 3. The 115-kV overhead generation-tie transmission lines are approximately 0.5 mile and 6 miles in length, respectively, and are designed to connect the Facility with the new POI at the existing PacifiCorp transmission line shown on Figure G-2, Map 2.

Permits Needed for Construction and Operation

OAR 345-020-0011(1)(e)

- (e) **Exhibit E.** *Identification of all federal, state and local government permits related to the siting of the proposed facility, a legal citation of the statute, rule or ordinance governing each permit, and the name, address, email address and telephone number of the agency or office responsible for each permit. For each permit, the applicant shall provide a preliminary analysis of whether the permit should or should not be included in and governed by the site certificate.*

Response

Table E-1 identifies the federal, state, and local government permits needed to construct and operate the Facility.

Table E-1. Permits Required for Construction and Operation of the Proposed Facility

Permit	Agency	Authority	Description
Federal			
Clean Water Act, Section 404	U.S. Army Corps of Engineers, Portland District Attention: Benny A. Dean, Jr. Eugene Field Office 211 E. 7th Avenue, Suite 105 Eugene, OR 97401-2722 Benny.A.Dean@usace.army.mil 541-465-6769	Clean Water Act, Section 404 (33 U.S.C. § 1344); 33 CFR §§ 320, 323, 325-28, and 330	A Section 404 Permit will be required if dredge or fill occurs in waters of the United States. This federal process is not within the jurisdiction of EFSC and therefore should not be included in the site certificate.
Notice of Proposed Construction or Alteration (Form 7460.1)	Federal Aviation Administration Attention: Dan Shoemaker Airspace Specialist Seattle Obstruction Evaluation Group Dan.Shoemaker@faa.gov	Federal Aviation Act of 1958 (14 U.S.C. § 44718); 14 CFR § 77	Applicants proposing construction or alterations that may affect navigable airspace pertaining to potential glare from the Facility's solar arrays may be required to file a Notice of Proposed Construction or Alteration with the FAA. This notice may be required for construction of structures within specified distances of runways or helipads. No permit is issued by the FAA. This federal process is not within the jurisdiction of EFSC and therefore should not be included in the site certificate.
Supplemental Notice of Actual Construction or Alteration (Form 7460-2)	Federal Aviation Administration Attention: Dan Shoemaker Airspace Specialist Seattle Obstruction Evaluation Group Dan.Shoemaker@faa.gov 425-227-2791	Federal Aviation Act of 1958 (14 U.S.C. Section 44718); 14 CFR Section 77	If a Notice of Proposed Construction or Alteration with the FAA is required, then submission of the Supplemental Notice of Actual Construction or Alteration form must be filed within 5 days after construction reaches its greatest height as specified in the No Hazard Determination. No permit is issued by the FAA. This federal process is not within the jurisdiction of EFSC and therefore should not be included in the site certificate.
State			
Energy Facility Site Certificate	Oregon Department of Energy and Energy Facility Siting Council Attention: Sarah Esterson 550 Capitol Street N.E. Salem, OR 97301	ORS 469.300 et seq.; OAR Chapter 345, Divisions 1, 15, 21-24, 26-27	The Facility is an "energy facility" as defined in ORS Chapter 469.300(11) and must be authorized through a site certificate issued by EFSC.

Table E-1. Permits Required for Construction and Operation of the Proposed Facility

Permit	Agency	Authority	Description
	sarah.esterson@oregon.gov 503-373-7945		
Removal-Fill Permit	Oregon Department of State Lands Attention: Heidi Hartman 1645 NE Forbes Road., Suite 112 Bend, OR 97701 541-388-6060	ORS 196; OAR Chapter 141, Division 85	A removal-fill permit is required if 50 cubic yards or more of material is removed, filled, or altered within a jurisdictional water of the State. If removal or fill activities occurs in waters of the state, the Removal-Fill Permit should be included in and governed by the site certificate under ORS 469.401(3).
Onsite Sewage Disposal Construction-Installation Permit	Oregon Department of Environmental Quality Water Quality Onsite Program Attention: Bob Marshall Eastern Region 800 SE Emigrant #330 Pendleton, OR 97801 541-276-4063 800-304-3513	ORS 454 and 468B; OAR Chapter 340, Divisions 71 and 73	Facilities with an on-site sewage disposal system must obtain a Construction-Installation Permit before construction. The Facility will have a daily sewage flow of fewer than 2,500 gallons. If sewage disposal is required for the O&M building, the Applicant's third-party contractor will obtain this permit. Therefore, this permit should not be included in and governed by the site certificate.
National Pollutant Discharge Elimination System 1200-C Construction Stormwater Discharge Permit	Oregon Department of Environmental Quality - Water Quality Division Attention: Jackie Ray Eastern Region 800 SE Emigrant #330 Pendleton, OR 97801 541-278-4605	Clean Water Act, Section 402 (33 U.S.C. § 1342); 40 CFR § 122; ORS 468 and 468B; OAR Chapter 340, Division 45	A NPDES 1200-C permit is required for construction activities that will disturb one or more acres of land. The Applicant will obtain this permit directly from DEQ as it is outside the jurisdiction of EFSC and should not be included in and governed by the site certificate.
401 Water Quality Certification	Oregon Department of Environmental Quality 700 NE Multnomah St., Suite 600 Portland, OR 97204 503-229-5695	Clean Water Act, Section 401 (33 U.S.C. § 1341); OAR Chapter 340, Division 48	Water quality certification is required for projects that are processed under the U.S. Army Corps of Engineers Section 404 Nationwide Permits. The Applicant will obtain this permit directly from DEQ as it is outside the jurisdiction of EFSC and should not be included in and governed by the site certificate.
Water Right Permit or Water Use Authorization	Oregon Water Resources Department Water Rights Section District 10	ORS 537; OAR Chapter 690, Divisions 310,	The Applicant does not anticipate the need for a water right or use authorization and intends to obtain water for Facility construction and operation from a source

Table E-1. Permits Required for Construction and Operation of the Proposed Facility

Permit	Agency	Authority	Description
	Attention: Brian Mayer 513 Center Street Lakeview, OR 97630 541-957-6038	340, 410 and 507	with an existing water right such as the Town of Lakeview. If water for construction and operation is not available from permitted sources, the Applicant will obtain the necessary water right permit or use authorization directly from the Oregon Water Resources Department, as it is outside the jurisdiction of EFSC and should not be included in and governed by the site certificate.
General Water Pollution Control Facilities Permit, WPCF-1700-B	Oregon Department of Environmental Quality Eastern Region 700 SE Emigrant, Suite 330 Pendleton, OR 97801 541-276-4063	ORS 468B; OAR Chapter 340, Division 45	The Applicant or a third-party contractor who will conduct the solar panel washing activities will seek coverage under the WPCF-1700-B permit from DEQ following completion of construction and before initiating any washing activities. Therefore, this permit should not be included in and governed by the site certificate.
Basic Air Contaminant Discharge Permit	Oregon Department of Environmental Quality – Air Quality Division Eastern Region 475 NE Bellevue, Suite 110 Bend, OR 97701 541-633-2026	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	A Basic ACDP authorizes the permittee to operate a stationary or portable concrete manufacturing plant that produces more than 5,000 but less than 25,000 cubic yards per year output. If a portable concrete manufacturing plant is required for Facility construction, a Basic ACDP will be obtained from DEQ. The Applicant’s third-party contractor will obtain this permit directly from DEQ as it is outside the jurisdiction of EFSC and should not be included in and governed by the site certificate.
Oversize Load Movement Permit/Load Registration	Oregon Department of Transportation Motor Carriers Transportation Division 550 Capitol Street NE Salem, OR 97301 Christy Jordan Christy.A.Jordan@odot.state.or.us 503-378-6192	ORS Chapter 818.030; OAR Chapter 734, Divisions 51, 82	Authorization for oversized loads. Movement of construction cranes and other equipment and materials may require this permit. If needed, the Applicant’s third-party contractor will obtain this permit and load registration from the Oregon Department of Transportation before transporting large or overweight equipment and therefore this permit should not be included in and governed by the site certificate.

Table E-1. Permits Required for Construction and Operation of the Proposed Facility

Permit	Agency	Authority	Description
Permit to Construct a State Highway Approach	Oregon Department of Transportation Attention: David Knitowski ODOT District 11 63055 North Highway 97 Bend, OR 97058 541-388-6182	OAR Chapter 734, Division 51	Access from Oregon state highways requires an access permit, which may be issued by the local Oregon Department of Transportation District Office. If needed, the Applicant's third-party contractor will obtain this permit directly from the Oregon Department of Transportation and therefore this permit should not be included in and governed by the site certificate.
Permit to Occupy or Perform Operations Upon a State Highway	Oregon Department of Transportation Attention: David Knitowski ODOT District 11 63055 North Highway 97 Bend, OR 97058 541-388-6182	OAR Chapter 734, Division 51	Utility installations within the right-of-way of a state highway in Oregon require a permit issued by the Oregon Department of Transportation. If needed, the Applicant's third-party contractor will obtain this permit directly from the Oregon Department of Transportation and therefore this permit should not be included in and governed by the site certificate.
Archaeological Excavation Permit	Oregon Parks and Recreation Department, State Historic Preservation Office 725 Summer Street NE, Suite C Salem, OR 97301 Matt Diederich, MAIS mattew.diederich@oregon.gov 503-986-0577	ORS Chapters 97, 358, and 390; OAR Chapter 736, Division 51 (Permit and Conditions for Excavation or Removal of Archaeological or Historical Materials on Private Land	This permit is required if excavation is needed within the boundaries of a known cultural site regardless of land ownership. If disturbance to cultural sites cannot be avoided, a SHPO Archaeological Permit will be required to determine if cultural sites are eligible for listing under the National Register of Historic Places (NRHP). An excavation permit will also be required for any data recovery mitigation efforts within an NRHP-eligible site. During Facility construction, if a previously unidentified archaeological site is discovered, all construction will cease and the Applicant will report the finding to SHPO immediately. In that instance, SHPO will require this permit. Should this permit be required, the Applicant will obtain it from SHPO and therefore this permit should not be included in and governed by the site certificate.

Table E-1. Permits Required for Construction and Operation of the Proposed Facility

Permit	Agency	Authority	Description
Local			
Conditional Use Permit	Lake County Planning Department Darwin Johnson Jr., Planning Director 513 Center Street Lakeview, Oregon 97630 djohnson@co.lake.or.us 541-947-6036	Lake County Zoning Ordinance Section 2.04(B)(5) and Section 3.04(B)(6)	Construction and operation of a “Commercial utility facilities for the purpose of generating power for public use by sale” is a Type II conditional use in the A-1 and A-2 zones. The Applicant elects to obtain an EFSC determination under ORS Chapter 469.504(1)(b). Under ORS 469.401(3), following issuance of the site certificate, the County, upon the Applicant’s submission or 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.
Lake County Right-of-Way Permit	Lake County Planning Department Darwin Johnson Jr., Planning Director 513 Center Street Lakeview, Oregon 97630 djohnson@co.lake.or.us 541-947-6036	ORS Chapter 374.305 and Lake County Road Department	Lake County right-of-way use permits are required for use on, to, or through any established Lake County right-of-way for uses such as pole lines, buried cables, road approaches and crossings, and other miscellaneous operations. The Applicant’s third-party contractor will obtain right-of-way use permits directly from Lake County and therefore this permit should not be included in and governed by the site certificate.
Conditional Use Permit	Town of Lakeview Attention: Janine Cannon, Planning Director 525 N. 1st Street Lakeview, OR 97630 541-947-4957	Town of Lakeview’s Development Code (LDC) Table 2.1.110.A(3)(c) and (e), Table 2.2.110.A(5)(c) and (f), Table 2.3.110.A(4)(a) and (b)	Private and public utilities such as electrical transmission lines are permitted outright in the Town of Lakeview’s General Industrial District (M-1) and Central Commercial (CC) Districts. A conditional use permit is required for development of private and public utilities such as electrical transmission lines in the Town of Lakeview’s Residential (R) District. The Applicant elects to obtain an EFSC determination under ORS Chapter 469.504(1)(b). Under ORS 469.401(3), following issuance of the site certificate, the Town of Lakeview, upon the Applicant’s submission or the proper application and fee, shall issue the permits addressed in the site certificate,

Table E-1. Permits Required for Construction and Operation of the Proposed Facility

Permit	Agency	Authority	Description
Site Design Review	Town of Lakeview Attention: Janine Cannon, Planning Director 525 N. 1st Street Lakeview, OR 97630 541-947-4957	LDC 4.2.200(A)	<p>subject only to the conditions set forth in the site certificate and without hearings or other proceedings.</p> <p>Under the LDC, development of public utilities such as electrical transmission line requires a conditional use permit in the Town of Lakeview’s R District. Per LDC Table 4.1.200, conditional use permits require a Type III review. A Site Design Review is a discretionary review applied to all Type III developments [see LDC 4.2.200(A)]. The Site Design Review ensures compliance with development standards in the R district and other design standards and public improvement requirements.</p> <p>As described above, the Applicant elects to obtain an EFSC determination under ORS Chapter 469.504(1)(b), which also applies to local Site Design Review criteria.</p>
Development Review	Town of Lakeview Attention: Janine Cannon, Planning Director 525 N. 1st Street Lakeview, OR 97630 541-947-4957	LDC 4.2.200(B)(8), and (9)	<p>Under LDC 4.2.200(B), the Town of Lakeview applies Development Review as an administrative or “ministerial” review of developments that do not require Site Design Review approval. Development Review may apply to development of an electrical transmission line in the Town of Lakeview’s M-1 and CC districts and is based on objective standards to ensure compliance with the underlying land use district.</p> <p>As described above, the Applicant elects to obtain an EFSC determination under ORS Chapter 469.504(1)(b), which also applies to local Development Review criteria.</p>

Notes:

- ACDP = Air Contaminant Discharge Permit
- CFR = *Code of Federal Regulations*
- DEQ = Oregon Department of Environmental Quality
- NPDES = National Pollutant Discharge Elimination System
- OAR = Oregon Administrative Rule
- SHPO = State Historic Preservation Office
- U.S.C. = *United States Code*

Property Ownership

OAR 345-020-0011(1)(f)

- (f) **Exhibit F.** *A list of the names and mailing addresses of all owners of record, as shown on the most recent property tax assessment roll, of property located within or adjacent to the site boundary as defined in OAR 345-001-0010. In addition to incorporating the list in the NOI, the applicant shall submit the list to the Department of Energy in electronic format acceptable to the Department for the production of mailing labels. Property adjacent to the site boundary means property that is:*
- (A) *Within 100 feet of the site boundary where the site, corridor or micrositing corridor is within an urban growth boundary;*
 - (B) *Within 250 feet of the site boundary where the site, corridor or micrositing corridor is outside an urban growth boundary and not within a farm or forest zone; and*
 - (C) *Within 500 feet of the site boundary where the site, corridor or micrositing corridor is within a farm or forest zone.*

Response

A list of the names and mailing addresses of Lake County owners of record of property located within 500 feet of the proposed Facility site boundary, including the five solar array sites, 34.5-kV collector lines, generation-tie transmission line study area, proposed north and central substations, and access road study area, is provided in Table F-1 of Attachment F as required by OAR 345-021-0010(1)(f)(C) for a site, corridor, or micrositing corridor located within a farm or forest zone. In addition, Table F-1 of Attachment F identifies Lake County owners of record of property located within 100 feet of the Facility site boundary, including segments of the 34.5-kV collector lines, portions of the generation-tie transmission line study area, and the POI as required by OAR 345-021-0010(1)(f)(A) for a site, corridor, or micrositing corridor located within an urban growth boundary (UGB). Pieces of the collector lines, generation-tie transmission line study area, and the entire POI are located within the Town of Lakeview UGB. The Applicant compiled this list based on the most recent property tax assessment data provided by the Lake County Assessor's Office. The Applicant has provided the same list to the Oregon Department of Energy (ODOE) in an electronic Excel format suitable for the production of mailing labels.

Figure F-1 in Attachment F-1 shows the Lake County property tax lots in relation to the Facility site boundary and Town of Lakeview UGB. The tax lot lines and labels are at a scale small enough to be legible so that ODOE can identify a property on the map and cross reference the name and address of the property owner on the Excel spreadsheet. Figure F-1 consists of an overview map and a set of detail maps.

Facility Maps

OAR 345-020-0011(1)(g)

(g) **Exhibit G.** A map or maps showing:

Response

Attachment G contains a series of maps (Figures G-1 through G-6) showing the information required under OAR 345-020-0011(1)(g). These figures are further described in the responses below.

- (A) *The proposed locations of the energy facility site, all related or supporting facility sites and all areas that might be temporarily disturbed during construction of the facility in relation to major roads, water bodies, cities and towns, important landmarks and topographic features.*
- (B) *The proposed locations of the corridors the applicant has identified under subsection (d) in relation to major roads, water bodies, cities and towns, important landmarks and topographic features.*

Response

Figures G-1 and G-2 show the location of the Facility site boundary in relation to major roads, waterbodies, cities and towns, important landmarks, and topographic features.

- (C) *The study area(s) for the proposed facility as defined in OAR 345-001-0010.*
- (D) *The topography of the study area(s) including streams, rivers, lakes, major roads and contour lines.*

Response

Figure G-3 shows the boundaries and topography (including streams, rivers, lakes, major roads, and contours) of the study areas for protected areas (20 miles), scenic resources and public services (10 miles), recreational opportunities (5 miles), threatened and endangered (T&E) plant and animal species areas (5 miles), land use (0.5 mile), and fish and wildlife habitat (0.5 mile). The Applicant developed this map to correspond with the study areas defined under OAR 345-001-0010(59). The Applicant understands that ODOE will formally establish these study areas in the Project Order.

- (E) *All protected areas in the study area as defined in OAR 345-001-0010 for impacts to protected areas.*

Response

Figure G-4 shows protected areas in the 20-mile study area as defined in OAR 345-001-0010(59) and as designated in OAR 345-022-0040.

- (F) *The location of any potential waters of the state or waters of the United States that are on or adjacent to the site.*

Response

Figure G-5 shows the locations of any potential waters of the state or waters of the United States that are on or adjacent to the Facility site.

- (G) *For energy generation facilities, the approximate locations of any other energy generation facilities that are known to the applicant to be permitted at the state or local level within the study area as defined in OAR 345-001-0010 for impacts to public services.*

Response

Figure G-6 shows the locations of the energy generation facilities that are known to the Applicant to be permitted within the study area for public services (10 miles).

Nongenerating Energy Facility

OAR 345-020-0011(1)(h)

(h) **Exhibit H.** *If the proposed facility is a non-generating energy facility for which the applicant must demonstrate need under OAR 345-023-0005, identification of the rule in Division 23 of this chapter under which the applicant intends to demonstrate need and a summary statement of the need and justification for the proposed facility.*

Response

The proposed Facility is not a nongenerating energy facility. Therefore, this exhibit is not applicable.

Land Use

OAR 345-020-0011(1)(i)

- (i) **Exhibit I.** *A statement indicating whether the applicant intends to satisfy the Council's land use standard, OAR 345-022-0030, by obtaining local land use approval under ORS 469.504(1)(a) or by seeking a Council determination under ORS 469.504(1)(b).*

Response

The proposed Facility and related or supporting facilities are in Lake County. Some segments of the 34.5-kV collector line alternatives and generation-tie transmission line study area also cross into the Town of Lakeview. The Applicant will satisfy the Council's land use standard, OAR 345-022-0030, by seeking a Council determination of compliance with Lake County and Town of Lakeview land use standards under ORS 469.504(1)(b).

Environmental Impacts

OAR 345-020-0011(1)(j)

- (j) **Exhibit J.** *Identification of significant potential environmental impacts of construction and operation of the proposed facility on the study areas, including those impacts affecting air quality, surface and ground water quality and availability, wildlife and wildlife habitat, threatened and endangered plant and animal species, historic, cultural and archaeological resources, scenic and aesthetic areas, recreation, and land use.*

Response

This exhibit identifies potential environmental impacts of construction and operation of the proposed Facility on the study areas. Responses are organized into the following sections:

- Air Quality
- Surface and Groundwater Quality and Availability (includes wetlands and waters of the state and United States)
- Wildlife and Wildlife Habitat [study area, as defined in OAR 345-001-0010(59)(c), is 0.5 mile]
- Threatened, Endangered, and Sensitive Plant and Animal Species [study area, as defined in OAR 345-001-0010(59)(a), is 5 miles]
- Historic, Cultural, and Archaeological Resources (study area is within the site boundary)
- Scenic, Aesthetic, and Protected Areas [study area for scenic and aesthetic resources is 10 miles, as defined in OAR 345-001-0010(59)(b), and study area for protected areas is 20 miles, as defined in OAR 345-001-0010(59)(e)]
- Recreation [study area, as defined in OAR 345-001-0010(59)(d) is 5 miles]
- Land Use [study area, as defined in OAR 345-001-0010(59)(c), is 0.5 mile]

Air Quality

During construction, air pollutant combustion emissions will be generated from diesel and gasoline engines in the various vehicles and construction equipment and facilities used in the construction of the Facility.

Fugitive dust may be generated from vehicle traffic on paved and unpaved roads and from equipment during construction activities. The Applicant will apply dust control measures, and will describe these further in the Application for Site Certificate (ASC).

The operation of the Facility will have no effect on air quality. During Facility operations, air pollutant sources will be limited to a small amount of fleet vehicles and equipment used by maintenance staff. The emissions and fugitive dust from these vehicles and equipment will be minor and will not exceed state emissions thresholds. Therefore, these emissions are not quantified and do not require a permit from DEQ.

A Basic ACDP permit may be required from DEQ if a portable concrete batch plant is needed to provide concrete during construction. Obtaining the ACDP will be the responsibility of the batch plant owner or third-party contractor selected for Facility construction.

Surface and Groundwater Quality and Availability

Surface and Groundwater Quality

During construction, the proposed Facility will not discharge pollutants to surface water or groundwater. Any temporary impacts from construction-related stormwater will be regulated under the conditions of the NPDES 1200-C permit and the associated erosion and sediment control plan (ESCP). Both the NPDES permit and the ESCP will be issued by DEQ.

During operations, the O&M building will discharge domestic wastewater to a state-permitted onsite septic system with a drain field or to the Lakeview public sewer system.

Surface and Groundwater Availability

During construction, it is estimated that approximately 5.4 million gallons of water will be required for dust control, road compaction, and other construction uses. Approximately 20,000 gallons of water per day will be needed for construction for approximately 9 months. Daily water use will vary depending on the timing of construction and the weather (e.g., water use for dust control will increase in dry, windy summer conditions). The contractor will arrange for delivery of water to the site via water trucks from a source with an existing water right. Potential sources include the Town of Lakeview, and participating landowners with adequate existing water rights.

The Applicant will confirm the anticipated amount of water required for construction in the ASC. Additionally, the Applicant will confirm that the identified source can meet the Facility's water requirements during construction. If the water source is not sufficient, an alternative source will be considered, or water will be obtained from a new well permitted under a limited water use license.

During Facility operations, minimal water will be used. Water use primarily will occur to support the O&M building located on one of the solar array sites and to periodically wash down the solar modules (panels). Approximately 50 gallons of water per day will be required at the O&M building for uses similar to a standard commercial office (e.g., toilets, sinks, dishwashers). The Applicant intends to connect to the Lakeview water system or install a new onsite well. The well will be permitted for fewer than 5,000 gallons per day. The water for washing the solar panels must be deionized and will be provided by an offsite contractor.

Wetlands and Waters of the State/United States

A desktop analysis of the Facility site boundary was performed to identify potential impacts to potentially jurisdictional wetlands and waters of the State/United States. An analysis of *National Wetlands Inventory* (NWI) maps from the U.S. Fish and Wildlife Service (USFWS, 2018) and *National Hydrography Dataset* (NHD) maps from the U.S. Geological Survey (USGS, 2017) suggests that wetlands exist within the Facility site boundary. NWI and NHD locations and feature types are shown on Figure G-5.

A formal wetland delineation and waters of the State/United States assessment will be conducted to identify potential impacts from construction of the Facility on jurisdictional wetlands and waters. The delineation and assessment will be performed in accordance with the Oregon Removal-Fill Law and Section 404 of the Clean Water Act. Assessment activities will include a more detailed desktop analysis of the entire Facility site boundary and an onsite field investigation of land within the Facility site boundary. Project components will be sited to avoid and minimize impacts to wetlands and waters of United States to the maximum extent practicable. The Applicant will provide a detailed description of potential impacts to wetlands or waters of the State/United States and identify any necessary permits in the ASC.

Wildlife and Wildlife Habitat

CH2M conducted a biological reconnaissance survey on behalf of the Applicant in November 2016 and March 2017. The biological reconnaissance included review of wildlife and habitat data (T&E species, critical habitat, big game range, and Oregon Conservation Strategy [ODFW, 2016] opportunities, habitats, and species) from USFWS, USGS, Oregon Biodiversity Information Center (ORBIC), Oregon Department of Fish and Wildlife (ODFW), Oregon Department of Agriculture (ODA), and California Natural Diversity Database. A site visit was conducted on November 21 and 22, 2016, and March 6, 2017, by Forrest Parsons (Professional Wetland Scientist and biologist) of CH2M to ground-truth desktop-generated data and evaluate potential biological concerns as they relate to siting and permitting the Facility. The survey focused on areas accessible by road within the proposed Facility site boundary and areas within 0.5 mile of the site boundary. The purpose of the survey was to preliminarily identify vegetation communities, wildlife habitat types, wetland types, access routes, and any signs of special-status species or unique habitat features.

The proposed Facility lands are characterized by irrigated hayfields and pasturelands, cultivated crops, shrub-steppe, wetlands and developed right-of-way. Common wildlife species in this type of habitat include small mammals, coyotes, resident fish, and various birds. Common wildlife identified during the site visit included northern harrier (*Circus cyaneus*), red-tailed hawk (*Buteo jamaicensis*), mule deer (*Odocoileus hemionus*), kestrel (*Falco tinnunculus*), and common passerines. Habitat for small mammal and reptile species in the area supports a prey base for raptors and predatory mammals (for example, coyote, fox, and mountain lion). The Facility site boundary and surrounding area are nearly entirely agricultural and provide forage for many big game, bird, and small mammal species that are adapted to agricultural habitats. Most of the proposed Facility lands support mule deer. ODFW has designated winter range for the species within the Facility site boundary. The Facility site boundary contains areas that are mapped as Oregon Conservation Strategy habitats (ODFW, 2016) and as habitats suitable for Oregon Conservation Strategy species.

Projects with a state nexus such as energy facilities subject to the EFSC process are required to abide by the ODFW Habitat Mitigation Policy. This requires assessing impacts and gaining ODFW approval of a habitat mitigation plan. The Applicant, based on the completed biological reconnaissance survey and additional biological surveys, will provide a site-specific habitat analysis as part of the ASC including an ODFW-approved habitat mitigation plan and measures to avoid, minimize, and mitigate impacts to wildlife and wildlife habitats.

Threatened, Endangered, and Sensitive Plant and Animal Species

Methods

Information pertaining to federally listed species was obtained from the USFWS *Information, Planning, and Conservation System* (IPaC) mapping tool and the USFWS species list for Lake County (USFWS, 2017). In 2016, CH2M requested from the ORBIC database records of documented occurrences of rare, threatened, and endangered plant and wildlife species within approximately 2 miles of the Facility site boundary. ORBIC provided the digital data to CH2M in November 2016. The records are confidential and not to be distributed. The Applicant will provide the records to ODFW and ODOE upon request, with the permission of ORBIC (ORBIC, 2016). Other sources that were queried included the ODFW Compass mapping tool (ODFW, 2017) and the ODA list of plants by county (ODA, 2017).

Results

According to the USFWS IPaC mapping tool results, the Facility site contains 11 species “that may occur or could potentially be affected by” the Facility (USFWS, 2017). Table J-1 summarizes the IPaC mapping tool results. No critical habitat was identified using the IPaC mapping tool within the Facility site boundary. Review of the USFWS IPaC mapping tool also shows 27 migratory birds of conservation concern as potentially occurring within the Facility site boundary.

Table J-1. Summary of USFWS IPaC Mapping Tool Results for Federally Listed Species Potentially Occurring within the Site Boundary

Species	Federal Listing
Yellow-billed Cuckoo (<i>Coccyzus americanus</i>)	Threatened
Foskett Speckled Dace (<i>Rhinichthys osculus</i>)	Threatened
Hutton Tui Chub (<i>Gila bicolor</i>)	Threatened
Shortnose Sucker (<i>Chasmistes brevirostris</i>)	Threatened
Warner Sucker (<i>Catostomus warnerensis</i>)	Threatened
Canada Lynx (<i>Lynx canadensis</i>)	Threatened
Gray Wolf (<i>Canis lupus</i>)	Endangered
North American Wolverine (<i>Gulo gulo luscus</i>)	Proposed Threatened
Whitebark Pine (<i>Pinus albicaulis</i>)	Candidate
Greene's Tuctoria (<i>Tuctoria greenei</i>)	Endangered
Slender Orcutt Grass (<i>Orcuttia tenuis</i>)	Threatened

According to ODA, the following five state-listed T&E plants occur in Lake County: Pumice grape-fern (*Botrychium pumicola*), Crosby's buckwheat (*Eriogonum crosbyae*), Boggs Lake hedge hyssop (*Gratiola heterosepala*), Grimy ivesia (*Ivesia rhypara*), and Oregon semaphore grass (*Pleuropogon oregonus*). Onsite investigation found no suitable habitat for any of these plants except Oregon semaphore grass, which occurs in wet meadows (ODA, 2017).

The ODFW Compass mapping tool identified habitat within the Facility site boundary that could potentially support the following special-status wildlife species: gray wolf (*Canis lupus*), California myotis (*Myotis californicus*), long-legged myotis (*Myotis californicus*), hoary bat (*Lasiurus cinereus*), pallid bat (*Antrozus pallidus*), silver-haired bat (*Lasionycteris noctivagans*), snowy egret (*Egretta thula*), golden eagle (*Aquila chrysaetos*), bald eagle (*Haliaeetus leucocephalus*), northern goshawk (*Accipiter gentilis*), ferruginous hawk (*Buteo regalis*), Swainson's hawk (*Buteo swainsoni*), greater sandhill crane (*Antigone canadensis tabida*), yellow rail (*Coturnicops noveboracensis*), long-billed curlew (*Numenius americanus*), black-necked stilt (*Himantopus mexicanus*), Franklin's gull (*Leucophaeus pipixcan*), short-eared owl (*Asio flammeus*), common nighthawk (*Chordeiles minor*), Lewis's woodpecker (*Melanerpes lewis*), olive-sided flycatcher (*Contopus cooperi*), willow flycatcher (*Empidonax trailii adastus*), loggerhead shrike (*Lanius ludovicianus*), western bluebird (*Sialia mexicana*), Oregon vesper sparrow (*Poocetes gramineus affinis*), Brewer's sparrow (*Spizella breweri*), chipping sparrow (*Spizella passerine*), western meadowlark (*Sturnella neglecta*), western rattlesnake (*Crotalus oregonus*), northern sagebrush lizard (*Sceloporus graciosus graciosus*), western toad (*Anaxyrus boreas*), and western bumblebee (*Bombus occidentalis*).

ORBIC did not identify any state-listed threatened, endangered, or proposed plant or animal species within the Facility site boundary. ORBIC identified records of the following Oregon sensitive species within an approximately 2-mile radius of the Facility site boundary: white-tailed jackrabbit (*Lepus townsendii*), pallid bat (*Antrozus pallidus*), greater sandhill crane (*Antigone canadensis tabida*), golden eagle (*Aquila chrysaetos*), Modoc sucker (*Catostomus microps*) Goose Lake sucker (*Catostomus occidentalis lacusanserinus*), Goose Lake redband trout (*Oncorhynchus mykiss*), and prostrate buckwheat (*Eriogonum prociduum*).

Historic, Cultural, and Archaeological Resources

A cultural resources field inventory will be conducted to check for the presence or absence of historic properties and for cultural resources that otherwise might not meet the threshold of significance necessary to qualify them as historic properties. The Applicant will review SHPO guidelines and consult with SHPO regarding appropriate study methodologies and documentation, including consistency with U.S. Secretary of Interior standards for cultural resource surveys under Section 106 of the National Historic Preservation Act (Public Law 89-665).

If any potential historic, cultural, or archaeological resources are found during the field investigation, the Applicant will undertake the appropriate actions to avoid or mitigate significant impacts to archaeological or historical sites, or NRHP-eligible resources. Any archaeological sites discovered during the investigation will be officially recorded and filed with SHPO.

Scenic, Aesthetic, and Protected Areas

The Applicant will perform a visual impact assessment of the potential effects of the Facility on areas identified and managed as scenic resources or for specific scenic qualities. The study areas for the visual impact assessment are 10 miles for scenic and aesthetic resources (ASC Exhibit R) and 20 miles for protected areas (ASC Exhibit L), in accordance with OAR 345-001-0010(59).

A preliminary review of publicly available maps indicates that there are no scenic and aesthetic or protected areas located within the Facility site boundary (see Figure G-4). The larger study area encompasses such scenic, aesthetic, and protected areas as the Oregon Outback Scenic Byway (US 395) and RA Booth Memorial State Park.

Potential impacts to these areas will likely be negligible to minimal because the Facility does not include tall structures or features, may be screened by vegetation and topography, and may be outside of the viewshed of these areas. The visual assessment included in the ASC will include proposed mitigation measures for any significant potential impacts identified.

Recreation

The study area for recreational opportunities consists of a 5-mile buffer around the Facility site boundary, in accordance with OAR 345-001-0010(59). Exhibit T of the ASC will include analysis of the potential impacts.

In general, recreational activities in the study area consist of biking, hiking, fishing, boating, camping, photography, game and bird hunting, and sightseeing. These activities also occur in numerous locations outside the study area, and therefore provide recreational opportunities that are common and “replaceable” (OAR 345-022-0100).

Land Use

The study area for land use consists of a 0.5-mile buffer around the Facility site boundary, in accordance with OAR 345-001-0010(59). The Facility is proposed on land zoned for agricultural use. Some conversion of agricultural land will occur, and these impacts will be fully evaluated in the ASC.

References

Oregon Biodiversity Information Center (ORBIC). 2016. *Rare, Threatened, and Endangered Species of Oregon*. Institute for Natural Resources, Portland State University, Portland, Oregon. Oregon Department of Agriculture.

Oregon Department of Agriculture (ODA) Plant Conservation Program. 2017. *Oregon Listed Plants by County*. Accessed December 18, 2017.

<http://www.oregon.gov/ODA/programs/PlantConservation/Pages/ListedPlants.aspx>.

Oregon Department of Fish and Wildlife (ODFW). 2016. *Oregon Conservation Strategy*. Oregon Department of Fish and Wildlife, Salem, Oregon. <http://oregonconservationstrategy.org/strategy-habitats/>.

Oregon Department of Fish and Wildlife (ODFW). 2017. Compass Online Fish and Wildlife Mapping Tool. Accessed March 17, 2017. <http://dfw.state.or.us/maps/compass/>.

U.S. Fish and Wildlife Service (USFWS). 2017. *Information, Planning, and Conservation System*. <https://ecos.fws.gov/ipac/>.

U.S. Fish and Wildlife Service (USFWS). 2018. *National Wetlands Inventory*. January 4. <https://www.fws.gov/wetlands/>.

U.S. Geological Survey (USGS). 2017. *National Hydrography Dataset*. December 15. https://nhd.usgs.gov/NHD_High_Resolution.html.

Community Service Impacts

OAR 345-020-0011(1)(k)

- (k) **Exhibit K.** Information about significant potential adverse impacts of construction and operation of the proposed facility on the ability of communities in the study area to provide the services listed in OAR 345-022-0110.

Response

This exhibit provides summary-level information about potential significant adverse impacts of construction and operation of the proposed Facility on the ability of communities in the study area [10 miles pursuant to OAR 345-001-0010(59)(b)] to provide sewers and sewage treatment, water, stormwater drainage, solid waste management, housing, traffic safety, police and fire protection, health care, and schools. Additional analysis of potential impacts to each of these community services resulting from construction and operation of the Facility will be included in the ASC.

Sewers and Sewage Treatment

During construction, sanitary waste will be collected onsite in portable toilets. During operations, the O&M building will discharge domestic wastewater to a licensed onsite septic system or into the Town of Lakeview sewer system. Because there will be an estimated maximum of four employees during operations, significant adverse impacts to community sewer systems are not anticipated.

Water

Water will be required during Facility construction for road construction, dust control, and other activities. During construction, the contractor will arrange for delivery of water to the site via water trucks from a source with an existing water right. Potential sources include the Town of Lakeview, and participating landowners with adequate existing water rights.

Approximately 5.4 million gallons of water will be needed for construction. Up to 20,000 gallons per day will be used over an approximate 9-month construction period. Daily water use will vary depending on the timing of construction and the weather (e.g., water use for dust control will increase in dry, windy summer conditions).

During Facility operations, minimal water will be used. Water will be required primarily at the O&M building located on one of the solar array sites for uses similar to a standard commercial office (e.g., toilets, sinks, dishwashers). The water source will either be either the Town of Lakeview or a well, depending on location. If the source is a new onsite well, the Applicant expects to rely on an exempt well allowed under ORS 537.545 to provide water to the O&M building. The Facility will use less than 5,000 gallons per day (estimated water use is 50 gallons per day), which will not require the Applicant to obtain a new water right. The solar panels will require occasional washing. The water for these washings will be provided by an offsite contractor because this is deionized water.

The Applicant will confirm the anticipated amount of water required for construction and operations in the ASC. Additionally, the Applicant will confirm that the identified source is capable of meeting the Facility's water requirements during construction. If the water source is not sufficient, an alternative offsite source will be considered, or water will be obtained from a new onsite well to be permitted under a limited water use license and used during operations.

During Facility construction and operation, water will only be obtained from permitted sources with adequate water rights. Therefore, public water systems will not be adversely affected by construction or operation of the Project.

Stormwater Drainage

Currently, no community in the area provides stormwater drainage service to the area within the Facility site boundary, except for stormwater drainage facilities associated with public roads maintained by Lake County and the Oregon Department of Transportation. Because the Facility encompasses five separate solar array sites and the ground under the arrays will be pervious, stormwater will be able to infiltrate onsite and erosion will be minimized. In addition, there will be gravel around the substations, POI, and O&M building so stormwater can infiltrate onsite. The 34.5-kV collector lines are anticipated to be largely underground or on steel monopoles. The 115-kV overhead generation-tie transmission lines will likely be constructed on steel monopoles. Therefore, construction of the Facility will not result in large, new, impervious areas that generate significant stormwater runoff.

The Facility will be constructed and operated with its own stormwater management systems, consistent with a NPDES 1200-C permit issued by DEQ as well as a DEQ-approved ESCP.

Stormwater management infrastructure installed during construction on the solar array sites will be left in place as needed to continue functioning throughout the life of the Facility and support O&M activities. One example is roadside ditches along service roads. These features will be located on private land, and will not affect stormwater management services provided by any public agency.

Solid Waste Management

Solid waste disposal for the Facility during construction and operations will be provided through a private contract with a local commercial hauler (or haulers) and is not anticipated to disrupt services already being provided to local communities. The public landfill closest to the Facility site boundary is the Lake County Landfill north of the Town of Lakeview. The landfill is proposed to be closed and a new landfill is proposed to be opened adjacent to it to allow for continued landfilling of solid waste (DEQ, 2017). The landfill is owned by Lake County and operated by Lake County Disposal, Inc.

Housing

Construction

During construction, a peak construction workforce of 200 workers will be employed. Most construction workers will be employees of construction and equipment companies under contract to the Applicant. Workers will include a mix of local and nonlocal personnel, with nonlocal personnel more likely for specialized construction (for example, substation and electrical transmission construction, solar array erection, solar array testing). Thus, some construction workers are expected to come from outside of the study area and will require temporary housing. Construction workers hired from areas outside a commutable distance will likely stay in local motels, trailer parks, or other rental units during their stay. The increased demand created by construction workers could potentially impact temporary housing in the vicinity of the Facility if an adequate supply is unavailable. Local hiring may be greater and will depend on the availability of workers with appropriate skills. Additional workers may commute daily from communities outside the Facility study area (e.g., Christmas Valley and towns in northern California such as Alturas), which will lessen the impacts associated with the in-migration of outside workers.

Typical housing options for temporary workers include motels, hotels, apartments, short-term rental homes, and campgrounds or other areas where workers can park trailers or other mobile housing.

Lakeview has six hotels or motels including several large hotel chains. In addition, there are numerous RV parks and campgrounds in the vicinity. Workers from outside the area will benefit the community and local businesses by renting rooms, eating at local restaurants, and purchasing goods and services.

Operations

An estimated two to four operational personnel will be employed at the site. Most of the O&M staff will be hired locally, with the exception of positions that may require previous experience at other solar generation facilities. Some specialized outside contractors also may be required for the repair of the equipment. The assumption is that operations will continue for at least 35 years. No significant adverse impacts are anticipated as a result of housing operational personnel.

Traffic Safety

The primary transporter route is assumed to carry the majority of construction-related heavy-duty and light-duty delivery vehicles, as well as some workforce traffic. This route will likely begin from either east or westbound along OR 140 or north or southbound along US 395.

During construction, trucks will be accessing the Facility on these transportation corridors. Heavy-duty trucks will carry Facility components as well as gravel and other materials required to improve or construct access roads from existing roadways. Lighter-duty trucks will also deliver water, electrical equipment, and other materials. Construction-related vehicles are not expected to cause traffic safety or traffic delays due to the rural nature of the area. Any improvements, if necessary, to county or state roads will be restricted to areas within the county and state rights-of-way and subject to approval by the applicable agency. If necessary, a traffic management plan will be developed in cooperation with Lake County and the Town of Lakeview, to minimize impacts to traffic safety. In addition, the Applicant will enter into road use agreements with Lake County to ensure that public roads impacted by construction will be left in "as good or better" condition than that which existed prior to the start of construction.

During operations, traffic impacts from the two to four employees are not anticipated. The Applicant intends to hire O&M personnel locally, where feasible. Employees will travel to work in their personal vehicles. Specialized personnel responsible for inspections of the solar facilities may be hired from outside the area and may travel in light-duty trucks. Delivery trucks may also access the site during operations on an infrequent basis. An analysis of traffic generated from both construction and operation of the Facility will be included in the ASC.

Police and Fire Protection

Police service is primarily provided by county police departments in the vicinity of the Facility. The Applicant will seek assistance from the Lake County Sheriff's Office for police services, located in Lakeview, Oregon (Lake County, 2017). Additional law enforcement service is available through the Oregon State Police, which has offices in Lakeview (OSP, 2017). The number of new temporary and permanent employees is not anticipated to place significant new demands on law enforcement agencies in the area.

The Applicant will work with the Lakeview Fire Department and the Lakeview Rural Fire Department to determine which entity will provide fire protection within the Facility site boundary. The Applicant will provide construction plans and phasing information to both entities, and identify the location of Facility structures and their points of access.

The Facility will be equipped with fire protection equipment in accordance with the Oregon Fire Code. Given the inherent fire safety features of Facility components and the relatively small number of new temporary and permanent residents, significant new demands on fire protection resources are not anticipated.

Health Care

The nearest hospital to the Facility is Lake District Hospital, located approximately 0.3 mile from the nearest point of the Facility site boundary. Ambulance service in the area is provided by volunteer emergency medical technicians, Lakeview Disaster Unit, Paisley Disaster Unit, and North Lake County Disaster Unit (Lake Health District, 2017).

Impacts on health care could occur if Facility construction activities were to result in an increase in the use of emergency health care services exceeding the capacity of local providers. Impacts on local health care services during both construction and operation will be minimized by careful management of site health and safety risks. The estimated number of new temporary and permanent employees is not expected to place significant new demands on routine health care services.

Schools

The Facility site boundary encompasses Lake County School District 7 (Lake County School District, 2017). Within the 10-mile public service study area, there is a high school, middle school, and three elementary schools. The nearest schools to the Facility site boundary are Lakeview High and Middle School and Fremont/Hay Elementary School, all in the Town of Lakeview.

No significant adverse impacts to schools are anticipated during construction and operation of the Facility. Construction will be temporary and short-term, and much of the peak work period (March through October) will occur during the summer months when school is not in session. Consequently, new students are not expected to relocate to the area as a result of construction.

During Facility operations, a negligible increase in school enrollment may occur from the small increase in local population resulting from new, permanent Facility employees. Impacts on school services will depend on the housing choices of new residents with children, which is unknown. Given the number of schools in the study area, the dispersed area in which new residents are likely to settle, and the small number of new school children expected, it is unlikely that any one school will receive more new students than it can accommodate.

References

Lake County. 2017. *Lake County Sheriff*. Accessed July 18, 2017. <http://www.lakecountyor.org/government/sheriff.php>.

Lake County School District #7. 2017. *Schools*. Accessed July 18, 2017. <http://www.lakeview.k12.or.us/schools/index.php>.

Lake Health District. 2017. *Ambulance Services*. Accessed July 18, 2017. <http://www.lakehealthdistrict.org/getpage.php?name=ambulance&sub=Services>.

Oregon Department of Environmental Quality (DEQ). 2017. *Public Comment Period Extended for Proposed Lake County Permits*. Accessed July 18, 2017. <http://www.oregon.gov/deq/get-involved/documents/070517Lake.pdf>.

Oregon State Police (OSP). *Contact Us*. Accessed July 18, 2017. http://www.oregon.gov/osp/pages/contact_us.aspx.

Water Sources and Use

OAR 345-020-0011(1)(L)

- (L) **Exhibit L.** *Information about anticipated water use during construction and operation of the proposed facility, including:*
- (A) *A description of each source of water and the applicant's estimate of the amount of water the facility will need from each source.*

Response

Construction

The construction contractor will be responsible for obtaining water for construction including any required permits. Water will be required during Facility construction primarily for dust control and road compaction. During construction, the contractor will arrange for delivery of water to the site via water trucks from a source with an existing water right. Potential sources could include the Town of Lakeview or a permitted nonpotable water source. Approximately 20,000 gallons of water per day will be needed for construction for approximately 9 months. Daily water use will vary depending on the timing of construction and the weather (e.g., water use for dust control will increase in dry, windy summer conditions).

In the ASC, the Applicant will confirm the anticipated amount of water required for construction. Additionally, the ASC will confirm that the identified source is capable of meeting the Facility's water requirements during construction.

Operations

During Facility operations, minimal water will be used. Water will be required primarily at the O&M building located on one of the solar array sites for uses similar to a standard commercial office (e.g., toilets, sinks, dishwashers). The water source will either be the Town of Lakeview or a well, depending on location. If there will be a new onsite well, it will be near the O&M building and provide no more than 5,000 gallons per day (estimated water use is 50 gallons per day).

The solar panels will require approximately 20,000 gallons per year for occasional washing. The water for the washing will be provided by an offsite contractor because deionized water is needed.

- (B) *If a new water right is required, the approximate location of the points of diversion and the estimated quantity of water to be taken at each point.*

Response

The Applicant does not anticipate needing new water rights for the proposed Facility. Therefore, this rule is not applicable.

- (C) *For operation, the source of cooling water and the estimated consumptive use of cooling water, based on annual average conditions.*

Response

The proposed Facility does not require cooling water. Therefore, this rule is not applicable.

Carbon Dioxide Emissions

OAR 345-020-0011(1)(m)

(m) **Exhibit M.** *If the proposed facility would emit carbon dioxide, an estimate of the gross rate of carbon dioxide emissions, a table listing all the factors that form the basis for calculating the estimate, and a statement of the means by which the applicant intends to comply with the applicable carbon dioxide emissions standard under OAR 345-024-560, OAR 345-024-600, or OAR 345-024-630.*

Response

The proposed Facility will not emit carbon dioxide. Therefore, this exhibit is not applicable.

Evaluation of Statutes, Rules, and Ordinances

OAR 345-020-0011(1)(n)

(n) **Exhibit N.** Identification, by legal citation, of all state statutes and administrative rules and local government ordinances containing standards or criteria that the proposed facility must meet for the Council to issue a site certificate, other than statutes, rules and ordinances identified in Exhibit E, and identification of the agencies administering those statutes, administrative rules and ordinances. The applicant shall analyze and describe any problems the applicant foresees in satisfying the requirements of any such statute, rule or ordinance.

Response

Table N-1 identifies state statutes, administrative rules, and local government ordinances not identified in Exhibit E. The statutes, rules, and ordinances identified in Table N-1 specify the standards or criteria that the proposed Facility must meet for the Council to issue a site certificate. The Applicant does not anticipate difficulty in meeting specific requirements.

Table N-1. Statutes, Rules, and Ordinances Containing Relevant Standards or Criteria

Department	Legal Citation	Agency Address
Oregon Department of Agriculture	Plant Conservation Biology Program— ORS 564; OAR Chapter 603, Division 73	Oregon Department of Agriculture 635 Capitol Street, N.E. Salem, OR 97301-2532 503-986-4550
Oregon Biodiversity Information Center (formerly the Oregon Natural Heritage Information Center)	ORS 564.105; OAR 603, Division 73 and 345-022-0070	Oregon Biodiversity Information Center Oregon State University Institute for Natural Resources University Center Building, Suite 335 527 SW Hall Street Portland, OR 97201
Oregon Department of Environmental Quality—Hazardous Waste Management	ORS 465 and 466; OAR Chapter 340, Divisions 100-113	Oregon Department of Environmental Quality 811 SW Sixth Avenue Portland, OR 97204-1390 503-229-5696
Oregon Department of Environmental Quality—Noise	ORS 467; OAR Chapter 340, Division 35	Oregon Department of Environmental Quality 811 SW Sixth Avenue Portland, OR 97204-1390 503-229-5696
Oregon Department of Environmental Quality—Solid Waste	ORS 459; OAR Chapter 340, Division 93	Oregon Department of Environmental Quality 811 SW Sixth Avenue Portland, OR 97204-1390 503-229-5696
Oregon Department of Environmental Quality—Water Quality	ORS 468 and 468B; OAR Chapter 340, Divisions 14, 41, 45, 52, and 55	Oregon Department of Environmental Quality 475 NE Bellevue Dr., Suite 110 Bend, OR 97701 541-388-6146

Table N-1. Statutes, Rules, and Ordinances Containing Relevant Standards or Criteria

Department	Legal Citation	Agency Address
Oregon Department of Fish and Wildlife—Habitat Conservation Division	ORS 496 and 506; OAR Chapter 635, Divisions 100 and 415	Oregon Department of Fish and Wildlife 3406 Cherry Avenue N.E. Salem, OR 97303-4924 503-947-6000
Oregon Department of Geology and Mineral Industries	OAR Chapter 632	Oregon Department of Geology and Mineral Industries 800 NE Oregon Street, Suite 965 Portland, OR 97232 971-673-1555
Oregon Department of Land Conservation and Development	ORS Chapter 197, ORS 215.274; OAR Chapter 660	Oregon Department of Land Conservation and Development 635 Capitol Street NE, Suite 150 Salem, OR 97301-2540 503-373-0050
Oregon Office of State Fire Marshal	ORS 453; OAR Chapter 837, Divisions 85 and 95	Oregon Office of State Fire Marshal 4760 Portland Road NE Salem, OR 97305-1760 503-378-3473
Oregon Parks and Recreation Department—Archaeological	Native American Graves and Protected Objects—ORS 97.740-97.760 Archaeological Objects and Sites—ORS 358.905-358.961	State Historic Preservation Office 725 Summer St. NE, Suite C Salem, OR 97301 503-986-0671
Oregon Water Resources Department—Water Rights Division	Appropriation of Water Generally—ORS Chapter 537 Distribution of Water; Watermasters; Change in Use; Transfer or Forfeiture of Water Rights—ORS Chapter 540 Water Resources Administrative Rules—OAR Chapter 690	Department of Water Resources Commerce Building 158 12th NE Salem, OR 97301-4172 503-378-8455

Schedule

OAR 345-020-0011(1)(o)

(o) *Exhibit O. A schedule stating when the applicant expects to submit a preliminary application for a site certificate.*

Response

Table O-1 provides a schedule of key EFSC milestones, including the expected submittal date for the ASC.

Table O-1. Proposed Schedule for Submittal of Notice of Intent and Application for Site Certificate

Activity	Target Completion Date
Applicant submits NOI to EFSC	January 2018
EFSC reviews NOI, distributes public notice, conducts public information meeting, facilitates comment period, and issues Project Order	January 2018 – April 2018
Applicant submits preliminary ASC to EFSC	April 2018

Evidence of Consultation with State Commission on Indian Services

OAR 345-020-0011(1)(p)

(p) Exhibit P. Evidence of consultation with the Legislative Commission on Indian Services to identify each appropriate tribe to consult with regarding the proposed facility's possible effects on Indian historic and cultural resources.

Response

Evidence of consultation with the Legislative Commission on Indian Services is provided in Attachment P.

Attachment A
Articles of Incorporation and
Authorization

Attachment B
Representative Power Conversion
Station

Attachment F
Lake County and Town of Lakeview
Landowners (List and Map)

Attachment G
Figures Referenced in Text

Attachment P
Evidence of Consultation with
Legislative Commission on Indian
Services

Delaware

Page 1

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF FORMATION OF "BLUE MARMOT X LLC", FILED IN THIS OFFICE ON THE TWENTY-FIRST DAY OF SEPTEMBER, A.D. 2016, AT 3:51 O`CLOCK P.M.




Jeffrey W. Bullock, Secretary of State

6159957 8100
SR# 20165885801

Authentication: 203035068
Date: 09-21-16

You may verify this certificate online at corp.delaware.gov/authver.shtml

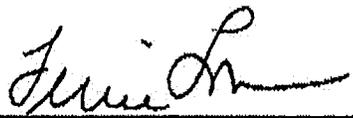
State of Delaware
Secretary of State
Division of Corporations
Delivered 03:51 PM 09/21/2016
FILED 03:51 PM 09/21/2016
SR 20165885801 - FileNumber 6159957

**CERTIFICATE OF FORMATION
OF
BLUE MARMOT X LLC**

This Certificate of Formation of Blue Marmot X LLC (the "Company") is being executed by the undersigned for the purpose of forming a limited liability company pursuant to the Delaware Limited Liability Company Act ("Act").

1. The name of the Company is Blue Marmot X LLC.
2. The name and address of the registered agent of the Company shall be The Corporation Trust Company, 1209 Orange Street, Wilmington, DE 19801.
3. The address of the registered office of the Company in Delaware is 1209 Orange Street, Wilmington, DE 19801.

IN WITNESS WHEREOF, the undersigned, an authorized person or agent or attorney-in-fact of the Company, has caused this Certificate of Formation to be duly executed as of September 21, 2016.

By: 
Name: Leslie A. Freiman
Title: Authorized Representative



Secretary of State
Corporation Division
255 Capitol Street NE, Suite 151
Salem, OR 97310-1327

Phone: (503) 986-2200
www.filinginoregon.com

Registry Number: 1255568-94
Type: FOREIGN LIMITED LIABILITY COMPANY

Next Renewal Date: 10/04/2017

BLUE MARMOT X LLC
808 TRAVIS STE 700
HOUSTON TX 77002

Acknowledgment Letter

The document you submitted was recorded as shown below. Please review and verify the information listed for accuracy.

Document
APPLICATION FOR AUTHORITY

Filed On
10/04/2016

Jurisdiction
DELAWARE

Name
BLUE MARMOT X LLC

Principal Place of Business
808 TRAVIS STE 700
HOUSTON TX 77002

Registered Agent
C T CORPORATION SYSTEM
388 STATE ST STE 420
SALEM OR 97301

Mailing Address
808 TRAVIS STE 700
HOUSTON TX 77002



Application for Authority to Transact Business - Foreign Limited Liability Company

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

FILED
OCT 04 2016

OREGON
SECRETARY OF STATE

REGISTRY NUMBER: 12555608-94
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.

For office use only

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

1) NAME: Blue Marmot X LLC

NOTE: (Must contain the words "Limited Liability Company" or the abbreviations "LLC" or "L.L.C.") Must be identical to the name of record in home jurisdiction.

2) REGISTRY NUMBER IN HOME JURISDICTION Delaware

OR: CERTIFICATE OF EXISTENCE (ATTACHED)

(Please provide a web-verifiable registry number from the entity's home jurisdiction. Certain states, such as Delaware and New Jersey, do not provide status information online. Entities from such places must instead attach an official certificate of existence, current within 60 days of delivery to this office.)

7) REGISTERED AGENT'S PUBLICLY AVAILABLE ADDRESS:

(Must be an Oregon Street Address, which is identical to the registered agent's business office.)

388 State Street, Ste. 420

Salem, OR 97301

3) DATE OF ORGANIZATION: DURATION, IF NOT PERPETUAL:

09/21/16

8) ADDRESS OF PRINCIPAL OFFICE OF THE BUSINESS:

808 Travis, Suite 700

Houston, TX 77002

4) STATE OR COUNTRY OF ORGANIZATION:

Delaware

9) ADDRESS WHERE THE DIVISION MAY MAIL NOTICES:

808 Travis, Suite 700

Houston, TX 77002

5) THIS FOREIGN LIMITED LIABILITY COMPANY SATISFIES THE REQUIREMENTS OF ORS 63.714(3).

6) NAME OF OREGON REGISTERED AGENT:

C T Corporation System

10) HOW WILL THIS LIMITED LIABILITY COMPANY BE MANAGED?

[] This LLC will be member-managed by one or more members.

[x] This LLC will be manager-managed by one or more managers.

11) EXECUTION: (At least one member or manager must sign.)

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:

Printed Name:

Title:

Gabriel Alonso Imaz

Sole Manager

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

Lisa Broomas

PHONE NUMBER: (Include area code.)

713.265.0350

FEES

Required Processing Fee \$275

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

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

Delaware

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The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY "BLUE MARMOT X LLC" IS DULY FORMED UNDER THE LAWS OF THE STATE OF DELAWARE AND IS IN GOOD STANDING AND HAS A LEGAL EXISTENCE SO FAR AS THE RECORDS OF THIS OFFICE SHOW, AS OF THE THIRTIETH DAY OF SEPTEMBER, A.D. 2016.

AND I DO HEREBY FURTHER CERTIFY THAT THE ANNUAL FRANCHISE TAXES HAVE BEEN ASSESSED TO DATE.



6159957 8300

SR# 20166017620

You may verify this certificate online at corp.delaware.gov/authver.shtml


Jeffrey W. Bullock, Secretary of State

Authentication: 203089149

Date: 09-30-16

Delaware

Page 1

The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF AMENDMENT OF "BLUE MARMOT X LLC", CHANGING ITS NAME FROM "BLUE MARMOT X LLC" TO "BLUE MARMOT SOLAR PARK LLC", FILED IN THIS OFFICE ON THE FIFTH DAY OF JANUARY, A.D. 2018, AT 12:25 O'CLOCK P.M.




Jeffrey W. Bullock, Secretary of State

6159957 8100
SR# 20180084116

Authentication: 201929410
Date: 01-08-18

You may verify this certificate online at corp.delaware.gov/authver.shtml

State of Delaware
Secretary of State
Division of Corporations
Delivered 12:25 PM 01/05/2018
FILED 12:25 PM 01/05/2018
SR 20180084116 - File Number 6159957

**CERTIFICATE OF AMENDMENT
TO
CERTIFICATE OF FORMATION
OF
BLUE MARMOT X LLC**

This Certificate of Amendment to the Certificate of Formation of Blue Marmot X LLC (the "LLC") is executed and filed pursuant to the provisions of Section 18-202 of the Delaware Limited Liability Company Act. The undersigned does hereby certify as follows:

1. The name of the limited liability company is Blue Marmot X LLC.
2. The Certificate of Formation of the LLC is hereby amended to reflect a change in the name of the LLC by deleting Article 1. of the Certificate of Formation in its entirety and adding the following:

"1. The name of the LLC is Blue Marmot Solar Park LLC."

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Amendment to the Certificate of Formation as of January 5, 2018.

By: Leslie Freiman
Name: Leslie A. Freiman
Title: Authorized Representative

**BLUE MARMOT SOLAR PARK LLC
CONSENT OF SOLE MANAGER**

The undersigned, the Sole Manager of Blue Marmot Solar Park LLC, a Delaware limited liability company (hereinafter the "Company"), in accordance with Sections 18-302(c) and (d) of the Delaware Limited Liability Company Act, and the limited liability company agreement of the Company (the "LLC Agreement"), hereby declares that the following resolutions shall be recorded in the minute books of the Company;

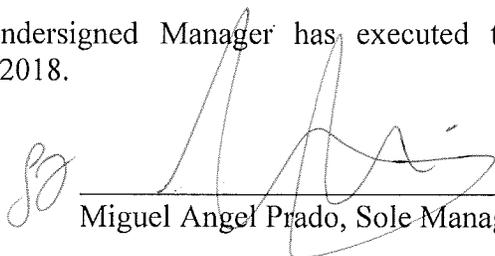
WHEREAS, the Company desires to file a Notice of Intent with the Oregon Energy Facility Siting Council; and

WHEREAS, the Company hereby authorizes William Talbott, Development Project Manager to execute, deliver and cause the Company to perform all tasks necessary in accordance with this Consent, and such actions hereby in all respects are ratified, approved and confirmed.

NOW, THEREFORE, BE IT RESOLVED, that the Company is hereby authorized and directed to file a Notice of Intent with the Oregon Energy Facility Siting Council; and further

RESOLVED, that the authority given hereunder shall be deemed retroactive and any and all acts authorized hereunder performed prior to the passage of this resolution are hereby ratified and affirmed.

IN WITNESS WHEREOF, the undersigned Manager has executed this consent effective as of January 18, 2018.



Miguel Angel Prado, Sole Manager