



June 28, 2019

TTCES-PTLD-2019-101

Sarah Esterson, Senior Siting Analyst

Oregon Department of Energy

550 Capitol St N.E., 1<sup>st</sup> Floor

Salem, OR 97301

**Subject: Final Request for Amendment 4 to the Wheatridge Wind Energy Facility Site Certificate**

Dear Ms. Esterson,

Enclosed is the final Request for Amendment 4 to the Wheatridge Wind Energy Facility Site Certificate. Confidential materials are being submitted under a separate cover.

Sincerely,

A handwritten signature in black ink that reads 'Carrie Konkol'.

Carrie Konkol

Senior Project Manager

Cc: Jesse Marshall, NextEra

Mike Pappalardo, NextEra

Scott Castro, NextEra

Sarah Curtiss Stauffer, Stoel Rives

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# Final Request for Amendment #4 for the Wheatridge Wind Energy Facility

Prepared for



Prepared by



**Tetra Tech, Inc.**

**June 2019**

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## Table of Contents

1.0	Introduction .....	1
2.0	Background and Procedural History.....	1
3.0	Amendment Required under OAR 345-027-0050 and Review Process under OAR 345-027-0051 .....	2
4.0	Certificate Holder Information – OAR 345-027-0060(1)(a).....	3
4.1	Name of the Facility .....	3
4.2	Name and Mailing Address of the Certificate Holder.....	3
4.3	Current Parent Company of Certificate Holder .....	3
4.4	Name and Mailing Address of the Individuals Responsible for Submitting the Request.....	4
5.0	Detailed Description of the Proposed Change – OAR 345-027-0060(1)(b) .....	4
5.1	Effect of Proposed Changes on the Project – OAR 345-027-0060(1)(b)(A) .....	10
5.2	Applicable Laws and Council Rules – OAR 345-027-0060(1)(b)(B).....	11
5.3	Location of the Proposed Change – OAR 345-027-0060(1)(b)(C).....	11
6.0	Division 21 Requirements – OAR 345-027-0060(1)(c) .....	12
7.0	Site Certificate Revisions – OAR 345-027-0060(1)(d) .....	13
8.0	Other Standards and Permits – OAR 345-027-0060(1)(e).....	13
9.0	Property Owners Located within or Adjacent to the Site of the Facility (OAR 345-027-0060(1)(f)) .....	19
10.0	Conclusion.....	19
11.0	References.....	19

## List of Tables

Table 1. Division 21 List of Exhibits for RFA 4 .....	12
Table 2. Standards and Laws Relevant to Proposed Amendment.....	13

## List of Attachments

Attachment 1. Redlined Site Certificate (Supplemental Submittal)

Attachment 2. Division 21 Exhibits

Attachment 3. Carla McLane, Morrow County Planning Director - Correspondence

## Acronyms and Abbreviations

ASC	Application for Site Certificate
Certificate Holder	Wheatridge Wind Energy, LLC
Council	Energy Facility Siting Council
Facility	Wheatridge Wind Energy Facility
NextEra	NextEra Energy Resources, LLC
MW	megawatt
OAR	Oregon Administrative Rules
ODOE	Oregon Department of Energy
ORS	Oregon Revised Statutes
RFA 1	Request for Amendment 1
RFA 2	Request for Amendment 2
RFA 3	Request for Amendment 3
RFA 4	Request for Amendment 4

## 1.0 Introduction

NextEra Energy Resources, LLC (NextEra), on behalf of its wholly-owned subsidiary Wheatridge Wind Energy, LLC (Certificate Holder) is submitting a Request for Amendment 4 (RFA 4) to the Site Certificate for the Wheatridge Wind Energy Facility (Facility). The Facility is an approved, but not yet constructed, wind energy generation facility to be located in Oregon's Morrow and Umatilla counties, with a peak generating capacity of up to 500 megawatts (MW). The Facility, as approved, will consist of up to 292 wind turbines and related or supporting facilities. In RFA 4, the Certificate Holder is proposing five changes to the Facility:

1. Amend the description of the Facility to include photovoltaic solar energy generation equipment to leverage the complementary nature of wind and solar generation to provide more reliable renewable energy generation.
2. Amend the Site Boundary to provide for solar micrositing corridors<sup>1</sup> for the photovoltaic solar energy system.
3. Increase the maximum peak generating capacity for the Facility by up to 150 MW of solar energy generation, for a total Facility maximum peak generating capacity of 650 MW.
4. Add distributed energy storage as a related or supporting facility for solar energy generation, along with new collector lines connecting the solar arrays, and an expansion of an approved substation.
5. Amend four existing site certificate conditions and increase the approved MW of the turbines by approximately 12 percent, from 2.5 MW to 2.8 MW.

The Certificate Holder is requesting that micrositing flexibility, already approved by the Energy Facility Siting Council (Council) for the Facility's wind turbines and related or supporting facilities, be extended to the solar energy generation facilities within the proposed Amended Site Boundary, also known as solar micrositing corridors. This is to allow flexibility in siting the solar energy generation components based on final solar module selection for optimization of the Facility's solar energy generation, in order to reflect technology available at the time of final design.

## 2.0 Background and Procedural History

The approved Facility is divided into two sections, Wheatridge West and Wheatridge East. Wheatridge West is located entirely within Morrow County, bisected by Oregon Highway 207, and is approximately 5 miles northeast of Lexington and approximately 7 miles northwest of Heppner.

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<sup>1</sup> Per OAR 345-001-0010 (32) "micrositing corridor" means a continuous area of land within which construction of facility components may occur, subject to Site Certificate conditions. The solar micrositing corridor will consist of the area where the Facility's solar energy generating equipment, and related or supporting facilities, may be sited.

Wheatridge East is located approximately 16 miles northeast of Heppner, and includes land in both Morrow and Umatilla counties. Wheatridge West and Wheatridge East are connected via a 230-kilovolt transmission line (Intraconnection Line). Additional related and supporting facilities to the Facility include an electrical collection system, collector substations, meteorological towers, communication and supervisory control and data acquisition systems, operations and maintenance buildings, new and improved access roads, and temporary construction areas.

The Council issued the Final Order for the Application for Site Certificate (ASC) for the Wheatridge Wind Energy Facility on April 28, 2017 (ODOE 2017a). The Site Certificate became effective on May 24, 2017. On June 14, 2017, the Certificate Holder filed a Request for Transfer of the Wheatridge Wind Energy Facility Site Certificate; this was Request for Amendment 1 (RFA 1). The First Amended Site Certificate for the Wheatridge Wind Energy Facility was approved in July 2017 and became effective August 11, 2017 (ODOE 2017b).

On May 18, 2018, the Certificate Holder submitted Request for Amendment 2 (RFA 2) and the Request for Amendment 3 (RFA 3) for the Facility<sup>2</sup>. RFA 2 proposes adding two energy storage locations (one in Wheatridge East and one in Wheatridge West). RFA 3 proposes increasing the maximum turbine height allowed. Both of these requests are pending before the Council; the Oregon Department of Energy (ODOE) staff, staff to the Council, issued the Proposed Orders on RFA2 and RFA3 on November 1, 2018. The Certificate Holder assumes that by the time of the Final RFA 4, and before RFA 4 appears before the Council, RFA 2 and RFA 3 will have been approved. Therefore, RFA 4 incorporates by reference the record from RFAs 2 and 3, along with the record of the ASC and RFA 1, to support approval of RFA 4. References to the Site Certificate in RFA 4 reflect the Site Certificate as amended by RFAs 2 and 3.

### **3.0 Amendment Required under OAR 345-027-0050 and Review Process under OAR 345-027-0051**

Oregon Administrative Rules (OAR) 345-027-0050(4) requires a certificate holder to submit a request to amend its site certificate to design, construct, or operate a facility in a manner different from the description in the site certificate, if the proposed change:

- (a) Could result in a significant adverse impact that the Council has not addressed in an earlier order and the impact affects a resource protected by Council standards;*
- (b) Could impair the certificate holder's ability to comply with a site certificate condition; or*
- (c) Could require a new condition or a change to a condition in the site certificate.*

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<sup>2</sup> Energy storage and amending the range of turbine specifications were both included in the Preliminary Request for Amendment 2. However, due to the different amendment review paths for amending turbine specifications (Type B review process) and adding energy storage as a related and supporting facility (Type A review process) as approved by the Council at the June 2018 Council Meeting, RFA 2 was bifurcated and amending the range of turbine specifications became RFA 3.

The changes the Certificate Holder proposes require an amendment under OAR 345-027-0050 (4)(a) and (c). The proposed changes could result in significant adverse impacts that the Council has not addressed in an earlier order, and they were not previously addressed by the Council for the Facility. Therefore, these changes require changes to the Facility description and new or modified conditions in the Site Certificate (see Attachment 1). Moreover, because the proposed changes are complex, they may generate additional interest from reviewing agencies or from the public. There will also be additional impacts that have not previously been reviewed. Due to these circumstances, the Certificate Holder assumes the review process for RFA 4 to be Type A. Pursuant to OAR 345-027-0051(2), the Type A review process consists of rules OAR 345-027-0059, OAR 345-027-0060, OAR 345-027-0063, OAR 345-027-005167, OAR 345-027-0071, and OAR 345-027-0075.

OAR 345-027-0060 outlines the requirements for a request for amendment:

*OAR 345-027-0060 Preliminary Request for Amendment*

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

The requirements of OAR 345-027-0060 are addressed in the following sections and document attachments.

## **4.0 Certificate Holder Information – OAR 345-027-0060(1)(a)**

*OAR 345-027-0060(1)(a) The name of the facility, the name and mailing address of the certificate holder, and the name, mailing address, email address and phone number of the individual responsible for submitting the request.*

### **4.1 Name of the Facility**

Wheatridge Wind Energy Facility

### **4.2 Name and Mailing Address of the Certificate Holder**

Jesse Marshall

Wheatridge Wind Energy, LLC

FEW/JB

700 Universe Blvd.

Juno Beach, FL 33408

### **4.3 Current Parent Company of Certificate Holder**

Matt Handel

NextEra Energy Resources, LLC

FEW/JB  
700 Universe Blvd  
Juno Beach, FL 33408

#### **4.4 Name and Mailing Address of the Individuals Responsible for Submitting the Request**

Mike Pappalardo  
Environmental Manager  
NextEra Energy Resources, LLC  
3256 Wintercreek Drive  
Eugene, OR 97405  
Mike.Pappalardo@nexteraenergy.com

### **5.0 Detailed Description of the Proposed Change – OAR 345-027-0060(1)(b)**

*OAR 345-027-0060(1)(b) A detailed description of the proposed change, including:*

As noted above, the Certificate Holder proposes five changes to the approved Facility in RFA 4:

- 1. Amend description of the Facility to include photovoltaic solar energy generation –** The Certificate Holder proposes to add solar energy generation to the existing Facility. This will allow the Certificate Holder to leverage the complementary nature of wind and solar generation to provide more reliable renewable energy and energy source flexibility at the Facility. This will reduce the cost of energy and minimize resource impacts by balancing the energy supply and use of related or supporting facilities, including common transmission and operations infrastructure. Energy will be generated by one or more solar arrays consisting of photovoltaic panels mounted onto tracking modules and arranged in strings within the solar micro-siting areas. Strings of modules will be connected by electrical collector lines to each other and to inverters that will convert the direct current power generated by panels to alternating current power. Transformers will be placed near the inverters to step up power to 34.5 kilovolts for underground transmission to the previously approved Wheatridge West Substation. The number of modules, configuration, dimensions, total energy generating capacity, and mounting system will be determined during final design and equipment selection/procurement.
- 2. Amend the Site Boundary and add solar micro-siting corridors –** The Certificate Holder proposes to add approximately 1,527 acres of land adjacent to the Approved Site Boundary (13,097 acres) in Wheatridge West. The Amended Site Boundary, which consists of 2,294 acres, provides for designated solar micro-siting corridors at two locations that overlap with the approved wind micro-siting corridor, along with two collector lines to connect the solar

arrays to the substation. No turbines will be constructed outside of the wind micro-siting corridors, and no solar modules will be constructed outside of the solar micro-siting corridors. Exhibit C (in Attachment 2) provides a description of each solar micro-siting corridor and the anticipated worst-case scenario impacts associated with RFA 4.

Similar to the approved approach for wind turbines, the Certificate Holder requests permitting flexibility to allow a range of photovoltaic solar technologies and will stipulate the precise details and layout of solar energy generation and related energy storage during final design and engineering, prior to construction. There will be two designated solar micro-siting corridors (Solar Array 1 to the north, and Solar Array 2 to the south). The solar micro-siting corridors will also include private access roads, service roads, gates and security fence. The Certificate Holder is describing the full build-out potential at each solar micro-siting corridor to analyze the greatest potential impact for each resource. Exhibit B (in Attachment 2) provides a detailed description of typical solar energy facility components.

- 3. Increase maximum peak generating capacity for the facility by up to 150 megawatts (MW), for a total of 650 MW** – As part of integrating solar into the Facility, the Certificate Holder proposes to add up to 150 MW of photovoltaic solar energy generation to the 500 MW wind energy generation facility, for a total Facility generating capacity of up to 650 MW. Solar technology efficiency is improving rapidly, and as a result the Certificate Holder is requesting the flexibility to maximize the amount of MW generated within the solar micro-siting corridors, depending on the technology available closer to the time of construction. Therefore, the actual solar energy generating capacity will depend on technology available at the time of construction, but will not exceed 150 MW and will not occupy more than 2,294 acres (the area of the solar micro-siting corridors).
- 4. Add distributed energy storage as a related or supporting facility for solar energy generation, new collector lines connecting the solar arrays and an expansion of an approved substation** – Together, solar energy generation and distributed energy storage can improve the operation of the electrical grid, reduce the need for additional generation, and provide additional options to meet peak energy demands. Batteries store power generated when the sun is shining, then dispatch the stored power to the grid to supplement dips in operation – such as when clouds roll in and temporarily reduce the sunlight reaching solar panels. The stored power can also be dispatched during periods of peak customer demand, such as summer afternoons and evening hours, when the sun is going down but the air conditioning or other electrical needs remain high.

As noted above, the Facility is being developed with the goal of offering maximum efficiency and flexibility in its use of space and available technology. Therefore, the Certificate Holder would like the option of using distributed energy storage facilities. Distributed energy storage facilities are located at multiple locations throughout the solar arrays. The distributed energy storage facilities proposed as part of RFA 4 will be an additional option along with the 20 and 30-MW energy storage sites described in RFA 2.

The previously approved substation within Wheatridge West will be used, but may have an increased footprint of up to 5 acres to accommodate additional equipment needed for additional energy generation. Two collector lines provide alternatives for the solar arrays to electrically connect generation facilities to the substation. The Certificate Holder will also use other approved related or supporting facilities, as necessary, to support solar energy generation at the Facility, such as the operations and maintenance building and new/improved access roads.

5. **Amend four existing site certificate conditions and increase the approved MW of the turbines by approximately 12 percent** – The Certificate Holder is proposing to amend four conditions and increase the approved MW of the turbines from 2.5 to 2.8 MW<sup>3</sup> in consideration of micrositing and final design and additional agency and ODOE consultation during micrositing and final design for Wheatridge west. The proposed changes are the result of technological advancement since the time the original site certificate was issued and review of the conditions in consideration of more detailed design, additional and updated information from site specific review during final design, additional ODOE and agency consultation and compliance with Council Standards.

- **Amend Site Certificate Condition GEN-LU-03 meteorological (met) tower requirements** – The Certificate Holder is proposing to amend the condition accordingly:

*GEN-LU-03: During design and construction, the certificate holder shall implement **one** of the following actions on all meteorological towers approved through the site certificate:*

*a. Paint the towers in alternating bands of white and red or aviation orange; ~~and~~ or*

*b. Install aviation lighting as recommended by the Federal Aviation Administration.*

The met towers will require lighting because they will be the same height as the turbine hub: 89 meters or 292 feet. FAA regulations generally require anything over 200 feet to include lighting. The met towers will be constructed in a linear pattern in line with the turbines, rather than a random, clustered pattern that would make an area completely inaccessible by air. Aviation lighting allows for the met towers to blend uniformly into the turbine string thereby reducing any potential visual impact. If shorter met towers are used and lighting isn't required by the FAA, the Certificate Holder will paint the towers in alternating bands of white and red or aviation orange or will install aviation lighting. The Certificate Holder notes that no other site certificates for permitted or operational wind farms require met towers to be painted alternating bands of white and red or aviation orange, even though most

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<sup>3</sup> MWs are rounded from 2.52 to 2.5 and 2.82 to 2.8.

wind farms are sited entirely in, partially in, or near agricultural fields. In addition, the Certificate Holder has operated the Stateline Wind Facility for over 17 years, which includes met towers, and has not had any incidents with spray pilots. As part of site certificate compliance with condition OPR-LU-01, the Certificate Holder will submit an as-built survey to Morrow County and ODOE, thereby providing detailed Facility layout information to the local government, to make this information available to those working near the area.

There are no substantive criteria that address or require painting met towers. Therefore, the proposed changes do not affect the Certificate Holder's ability to comply with the statewide planning goals adopted by the Land Conservation and Development Commission or with Umatilla and Morrow counties' comprehensive plans, zoning ordinances, and applicable, substantive criteria. Therefore, the proposed condition change complies with the Land Use Standard (OAR 345-022-0030).

- **Amend Site Certificate Condition PRE-LU-08: Installation of gates and signs to private access roads** – The Certificate Holder proposes to amend this condition to include “in Umatilla County” to be consistent with the Umatilla County Development Code, and in Morrow County, it will defer to the property owner, as the standard is not included in the Morrow County Zoning Ordinance. Carla McLane, Morrow County Planning Director stated that:

*The requirement you reference below is not a part of the Morrow County Zoning Ordinance, nor is it a requirement that I would support. As I shared on the phone this seems to be much more an issue between the landowner and the project developer. I would be supportive of the change in Condition as you have presented it below. (See Attachment 3)*

In addition, the only other site certificates that require a similar condition are those required to for local development code consistency: only those facilities in Gilliam and Umatilla counties. The gates can be an impediment to farm operations, and gates and signs can identify the roads as not solely farm roads; therefore making them more prone to trespassing and vandalism. The proposed changes do not affect the facility's ability to comply with the statewide planning goals adopted by the Land Conservation and Development Commission and as noted above will be consistent with Umatilla and Morrow counties comprehensive plan and zoning ordinances applicable substantive criteria. Therefore, the proposed condition change complies with the Land Use Standard (OAR 345-022-0030) and the Certificate Holder is proposing to amend the condition accordingly:

*PRE-LU-08: Prior to facility construction, the certificate holder shall install gates and no trespassing signs at all private access roads established or improved for the purpose of facility construction and operation **in Umatilla County and in Morrow County only as requested by the project landowner.***

- **Amend Site Certificate Condition CON-FW-01: Cease of construction during mule deer winter range** – The Certificate Holder is proposing minor changes to condition CON-FW-01 after consultation with ODFW and ODOE on June 17, 2019. The proposed changes to the condition provide the opportunity for alternative measures to avoid, minimize, or mitigate impacts to mule deer winter range during winter. The proposed changes are consistent with other site certificates, Summit Ridge, and ODFW’s comment on the Wheatridge Wind Energy Facility Application for Site Certificate Draft Proposed Order that stated (Cherry, 2016):

*The Draft DPO states in Fish and Wildlife Condition 3 that no construction shall occur in mule deer winter range during winter, defined as December 1 to March 31. As per the ODFW Wildlife Habitat Mitigation Policy, the mitigation goal for Category 2 habitat is a tiered, hierarchical process, first to avoid; second to minimize impacts through alternatives to the proposed development action; and third to mitigate impacts, if unavoidable through reliable in-kind, in proximity habitat mitigation to achieve no net loss of either pre-development habitat quantity or quality, and to provide a net benefit of habitat quantity or quality. ODFW supports Fish and Wildlife Condition 3 as a means of avoiding a critical time frame for wintering mule deer in the project area. However, ODFW acknowledges that in certain circumstances such avoidance may not be feasible. In such circumstances, ODFW recommends mitigation for unavoidable impacts be considered and agreed to by all parties prior to the finalization of the HMP.*

In addition, the WMMP (Condition PRE-FW-02) and Habitat Mitigation Plan (Condition PRE-FW-04) will be prepared in coordination with ODFW. Ultimately, the Certificate Holder shall implement appropriate measures to assure that the design, construction and operation of the facility are consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025, as approved by ODOE, in consultation with ODFW and consistent with the Fish and Wildlife Standard (OAR 345-022-0060). Therefore, the Certificate Holder proposes to amend the condition accordingly:

*CON-FW-01: No construction shall occur in mule deer winter range during winter, defined as December 1 to March 31. Mule deer winter range is based on data to be provided by ODFW at the time of construction. **Upon request by the certificate holder, the Department may provide exceptions to this restriction. The certificate holder’s request must include a justification for the request, including any actions the certificate holder will take to avoid, minimize, or mitigate impacts to mule deer winter range during winter in the relevant area. The Department will consult with ODFW on any request made under this condition.***

- Amend Site Certificate Condition CON-FW-02: Buffer zones for nest sites** – The Certificate Holder is proposing minor changes to condition CON-FW-02 after consultation with ODFW and ODOE on June 17, 2019. The proposed changes to the condition provide the opportunity for alternative measures to avoid, minimize, or mitigate impacts to provide suitable nest protection, if necessary, and as coordinated with and approved by ODOE and ODFW. The proposed changes are consistent with other site certificates (e.g., Summit Ridge). Ultimately, the Certificate Holder shall implement appropriate measures to assure that the design, construction and operation of the facility are consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025, as approved by the ODOE, in consultation with ODFW and consistent with the Fish and Wildlife Standard (OAR 345-022-0060). The WMMP (Condition PRE-FW-02) and Habitat Mitigation Plan (Condition PRE-FW-04) will be prepared in coordination with ODOE and ODFW. Therefore, the Certificate Holder is proposing to amend the condition accordingly:

*CON-FW-02: During construction within the time periods listed below, the certificate holder shall implement buffer zones around nest sites of the species listed below. No ground-disturbing activities within the buffer zone shall occur during the seasonal restrictions. Upon request by the certificate holder, the Department may provide exceptions to this restriction. The certificate holder's request must include a justification for the request, including any actions the certificate holder will take to avoid, minimize, or mitigate impacts to the nest sites of the species listed below during the seasonal restrictions. The Department will consult with ODFW on any request made under this condition.*

*The construction workforce and facility employees must be provided maps with the locations of the buffer zones and be instructed to avoid ground-disturbing activity within the buffer zone during construction activities.*

Nesting Species	Buffer Size (Radius Around Nest Site)	Avoidance Buffers in Effect
Western burrowing owl	0.25 miles	April 1 to August 15
Ferruginous hawk	0.25 miles	March 15 to August 15
Swainson's hawk	0.25 miles	April 1 to August 15

- Increase the approved MW of the turbines by approximately 12% from 2.5 MW to 2.8 MW** – The Certificate Holder requested and the Council granted micrositing flexibility within the Site Boundary as part of the ASC and as noted in the Final Order of the ASC. Micrositing considerations include the turbine selected and available for the facility, optimization of capture of the wind energy resource, geotechnical factors, and avoidance of higher-value wildlife habitat, among others.

Selection of a turbine type can result in more cost-effective energy generation. The Certificate Holder is proposing to use the same turbine and turbine dimensions reviewed in RFA 3, but with an increase name plate capacity: from 2.5 MW to 2.8 MW. This would not change the turbine range analyzed for impacts. In addition, the noise specifications submitted in RFA 3 are the same for the 2.8 MW turbine. The MW increase is solely the result of technological advancements in the software used for the turbines. This proposed change would require no change to the existing site certificate because the MW per turbine is not referenced in the site certificate. This will not result in any change to the approved MW for the facility.

## **5.1 Effect of Proposed Changes on the Project – OAR 345-027-0060(1)(b)(A)**

*OAR 345-027-0060(1)(b)(A) a description of how the proposed change affects the facility,*

The Facility, as approved, is a wind energy generation facility. RFA 4 proposes to add solar energy generation, along with related or supporting facilities as described above and in Exhibits B and C (Attachment 2) of RFA 4. This will allow the Facility to respond to market needs, take advantage of available transmission capacity, and overcome the challenges posed by the intermittent nature of wind and solar energy. The wind turbines and solar energy generation will provide power to the same grid connection points, which provides the opportunity for optimal utilization of power generation and transmission capacities. Adding solar energy generation to the Facility will increase the maximum peak generating capacity for the Facility by up to 150 MW. This further supports Oregon's renewable energy law, which requires 50 percent of the state's electric power to be generated by renewable energy sources by 2040.

Although RFA 4 proposes to add to the Approved Site Boundary, these new areas are between areas of the Approved Site Boundary (see Exhibit C, Figure C-1, in Attachment 2). Therefore, because of their proximity to the Approved Site Boundary, the areas of Amended Site Boundary do not alter most of the various resource Analysis Areas that were reviewed in the ASC. In general, because of their proximity to the Approved Site Boundary, the new areas of the Site Boundary have similar habitat types, topography, and land uses to the Approved Site Boundary. Therefore, although there will be some additional impacts to certain resources resulting from the proposed modifications, these impacts will generally be similar in nature to those that have already been analyzed for the approved Facility.

RFA 4 proposes to add the option of distributed energy storage, in addition to the energy storage sites reviewed in RFA 2. Although distributed energy storage connects to the energy source differently than the energy storage reviewed in RFA 2 (see Exhibit B in Attachment 2 for a more detailed description), the type (lithium-ion), structure, and how the batteries operate is essentially the same.

As detailed in the following sections and in the attachments, although the proposed changes provide for a new source of energy generation for the Facility and a larger Site Boundary, the Certificate Holder can still comply with all Site Certificate conditions previously adopted by the Council for the Facility. Minimal edits to existing Site Certificate conditions are needed to reflect the

additional solar generation facilities (see Attachment 1). Additional proposed changes, amendments to site certificate conditions, and a minor increase the approved MW for the turbines are minor refinements to the Facility description and site certificate, and is consistent with the micro siting for the wind facility. Ultimately, the proposed changes will maximize the latest technology to minimize impacts, while supporting renewable energy production in the region and helping the state meet its renewable energy goals.

## **5.2 Applicable Laws and Council Rules – OAR 345-027-0060(1)(b)(B)**

*OAR 345-027-0060(1)(b)(B) a description of how the proposed change affects those resources or interests protected by applicable laws and Council standards, and*

In general, the proposed changes for RFA 4 do not affect the resources or interests protected by applicable laws and Council standards in a substantially different way than what the Council already approved for the Facility (see Section 7). The Certificate Holder has reviewed and considered current local, state, and federal law as referenced throughout the exhibits in Attachment 2. No laws were identified that would prohibit the proposed changes requested in RFA 4. Compliance with applicable laws is integrated into the Site Certificate conditions, including conditions related to pre-construction habitat surveys, noise analysis, setback verification, the National Pollutant Discharge Elimination System 1200-C permit, consultation with the Oregon Department of Fish and Wildlife, Department of Geology and Mineral Industries, and the Federal Aviation Administration 7460-1 filings, among others. The proposed changes do not alter the Certificate Holder's ability to comply with the Site Certificate conditions for the Facility. Ultimately, although the Facility may be operated in a slightly different manner than previously approved by the Council as a result of RFA 4, substantial changes to the Site Certificate are not necessary to incorporate and meet Council standards and other applicable laws. Sections 6 and 7, and the exhibits provided in Attachment 2, further demonstrate how the proposed changes are consistent with the Council's previous findings for the Facility.

## **5.3 Location of the Proposed Change – OAR 345-027-0060(1)(b)(C)**

*OAR 345-027-0060(1)(b)(C) the specific location of the proposed change, and any updated maps and/or geospatial data layers relevant to the proposed change.*

The Amended Site Boundary includes new solar micro siting corridors for an additional 1,527 acres added to the 13,097 acres of the Approved Site Boundary for a total Amended Site Boundary of 14,624 acres; this is an approximately 12 percent increase in the size of the Approved Site Boundary (see Exhibit C, Figure C-2, in Attachment 2). The solar micro siting corridors overlap in some areas with the existing wind micro siting corridors. No turbines will be constructed outside of the wind micro siting corridors and no solar arrays will be constructed outside of the solar micro siting corridors. As noted in previous sections, the Certificate Holder is continuing to request micro siting flexibility for Facility components. As described in the Final Order on Amendment 1 (ODOE 2017b), "The certificate holder requested flexibility to locate components of the energy facility and its related and supporting facilities within a micro siting corridor to allow adjustment of

the specific location of components, while establishing outer boundaries of potential construction for purposes of evaluating potential impacts.” Exhibit C (Attachment 2) provides potential worst-case scenario impact calculations as relevant to the proposed changes. In compliance with Site Certificate Condition PRE-FW-01, impact calculations will be recalculated prior to construction based on the final design.

## **6.0 Division 21 Requirements – OAR 345-027-0060(1)(c)**

*OAR 345-027-0060(1)(c) References to any specific Division 21 information that may be required for the Department to make its findings.*

The Certificate Holder has addressed applicable specific Division 21 information in exhibits in Attachment 2. Exhibit labeling reflects the requirements of OAR 345-021-0010. However, because this is a Request for Amendment rather than an Application for Site Certificate, not all exhibits are applicable (see Table 1)<sup>4</sup>. The exhibits provide the necessary information for ODOE to make its findings, and based on those findings, that the Council can find that the Facility, as proposed, continues to comply with the requirements of the Oregon Energy Facility Site Statutes, Oregon Revised Statutes (ORS) 469.300 to 469.520.

**Table 1. Division 21 List of Exhibits for RFA 4**

A – Applicant Information	O – Water Use
B – Project Description	P – Fish and Wildlife Habitats and Species
C – Property Location and Maps	Q – Threatened and Endangered Species
D – Organizational Information	R – Scenic Resources
E – Permits Needed for Construction and Operation	S – Historic, Cultural, and Archeological Resources
F – Property Ownership	T – Recreation
G – Material Analysis	U – Public Services
H – Geologic Hazards Evaluation	V – Waste Management
I – Soil Evaluation	W – Site Restoration
J – Wetlands and Other Jurisdictional Waters	X – Noise
K – Land Use	AA – Electric and Magnetic Fields
L – Protected Areas	CC – Additional Statutes, Rules, and Ordinances
M – Financial Analysis	

<sup>4</sup> Exhibits not applicable to RFA 4 are Exhibit N – Non-generating Facility Information, Exhibit Y – Carbon Dioxide Emissions, Exhibit Z – Cooling Towers, Exhibit BB – Other Information, and Exhibit DD – Specific Standards.

## 7.0 Site Certificate Revisions – OAR 345-027-0060(1)(d)

*OAR 345-027-0060(1)(d) The specific language of the site certificate, including conditions, that the certificate holder proposes to change, add or delete through the amendment.*

A redlined Site Certificate is included as Attachment 1. Generally, the proposed changes to language in the Site Certificate include amending the Facility description to include solar energy generation and related facilities and amending existing conditions that apply to specific Facility components rather than the Facility as whole, to include solar energy generation facilities, as applicable and minor amendments in consideration of micro-siting for the wind facility.

## 8.0 Other Standards and Permits – OAR 345-027-0060(1)(e)

*OAR 345-027-0060(1)(e) A list of the Council standards and all other laws - including statutes, rules and ordinances - applicable to the proposed change, and an analysis of whether the facility, with the proposed change, would comply with those applicable laws and Council standards. For the purpose of this rule, a law or Council standard is “applicable” if the Council would apply or consider the law or Council standard under OAR 345-027-0075(2).*

The Council standards relevant to RFA 4 include Division 22 (General Standards for Siting Facilities) and Division 24 (Specific Standards for Siting Facilities). Division 23, which applies to non-generating facilities, does not apply to wind or solar generating facilities. Similarly, inapplicable provisions of Division 24 (e.g., standards applicable to gas plants, gas storage, non-generating facilities) are not discussed.

The proposed changes to the Facility do not alter the basis for the Council’s earlier findings for the Facility. The primary purpose of RFA 4 is to take advantage of market demand and technological advances. Table 2 identifies the Council standards and laws reviewed as part of RFA 4, their applicability, and the Site Certificate conditions that govern Facility compliance for each standard.

**Table 2. Standards and Laws Relevant to Proposed Amendment**

Standard	Applicability and Compliance	Related Site Certificate Condition(s)
OAR 345-022-0010 Organizational Expertise	Applicable and complies. The Wheatridge management team and the NextEra family of companies have deep regional expertise, derived over years of successfully permitting and operating hundreds of MWs of wind energy projects in the Oregon and hundreds of MW of solar throughout the U.S.	GEN-OE-01: Responsibility of non-compliance GEN-OE-02: Report of site certificate violations GEN-OE-03: Report of change in corporate structure GEN-OE-04: Compliance with laws for battery disposal & transport PRE-OE-01: Notification of contractor identities PRE-OE-02: Notification of construction manager PRE-OE-03: Compliance of construction workers PRE-OE-04: Notification of non-surveying activities

**FINAL REQUEST FOR AMENDMENT #4  
FOR THE WHEATRIDGE WIND ENERGY FACILITY**

Standard	Applicability and Compliance	Related Site Certificate Condition(s)
	See Exhibit D for accompanying analysis.	PRE-OE-05: Proof of aggregate source and county permits PRE-OE-06: Proof of third party approvals and permits GEN-GS-01: Commencement of construction GEN-GS-02: Completion of construction GEN-GS-03: Compliance during all phases GEN-GS-04: Permission to construct GEN-GS-05: Notification of environmental impacts GEN-GS-06: Inclusion of all representations GEN-GS-07: Vegetation restoration GEN-GS-08: Construct to prioritize human safety GEN-GS-09: Notification of foundation changes GEN-GS-10: Notification of other geological observations GEN-GS-11: Notification of new owners OPR-GS-01: Submission of legal description
OAR 345-022-0020 Structural Standard	Applicable and complies. See Exhibit H, which includes updated Facility information regarding climate change and resiliency.	GEN-SS-01: Compliance with building codes PRE-SS-01: Geological investigation reporting PRE-SS-02: Investigation of active faults PRE-SS-03: Investigation of slope instability PRE-SS-04: Investigation of loess soil
OAR 345-022-0022 Soil Protection	Applicable and complies. Additional permanent and temporary disturbance will occur as a result of construction of the solar arrays. See Exhibits C and I.	PRE-SP-01: Spill Prevention, Control, and Countermeasure construction plans PRE-SP-02: Restoration of agricultural soils PRE-SP-03: Septic system permitting OPR-SP-01: Prevention of erosion, soil disturbance CON-SP-01: Erosion and Sediment Control Plan CON-SP-02: Best management practices to be included in Erosion and Sediment Control Plan PRO-SP-01: Submission of operational Spill Prevention, Control, and Countermeasure
OAR 345-022-0030 Land Use	Applicable and complies. See Exhibit K which includes a Goal 3 Exception for solar on high-value farmland. The Facility, as proposed, will not force a significant change in accepted farm practices, nor will it significantly increase the cost of farm practices.	GEN-LU-01: Compliance with county setbacks GEN-LU-02: County road permits and standards GEN-LU-03: Meteorological tower requirements GEN-LU-04: Usage of minimum land area GEN-LU-05: Blending with natural surroundings GEN-LU-06: Micro siting to minimum road/highway setbacks GEN-LU-07: Blending of operations and maintenance building GEN-LU-08: Best management of access roads GEN-LU-09: Notification of project infrastructure locations GEN-LU-10: Delivery of annual report

**FINAL REQUEST FOR AMENDMENT #4  
FOR THE WHEATRIDGE WIND ENERGY FACILITY**

Standard	Applicability and Compliance	Related Site Certificate Condition(s)
		PRE-LU-01: Obtain local permitting PRE-LU-02: Obtain Conditional Use Permit PRE-LU-03: Preparation of Weed Control Plan PRE-LU-04: Recording of a Covenant Not to Sue for Morrow County PRE-LU-05: Consultation with landowners PRE-LU-06: Identification of construction traffic concerns PRE-LU-07: Obtaining county zoning permits PRE-LU-08: Installation of gates and signs to private access roads PRE-LU-09: Recording of a Covenant Not to Sue for Umatilla County OPR-LU-01: Submission of as-built surveys for construction phases OPR-LU-02: Restoration of disturbed areas OPR-LU-03: Completion of final retirement plan OPR-LU-04: Preparation of Operating and Facility Maintenance Plan OPR-LU-05: Submission of as-built changes OPR-LU-06: Retirement restoration activities CON-LU-01: Minimization of footprint CON-LU-02: Installation of bird deterring devices CON-LU-03: Installation of underground cable system
OAR 345-022-0040 Protected Areas	Applicable and complies. Visual, noise and traffic impacts were reviewed for the proposed changes. The proposed changes do not modify the Council's previous finding for protected areas. See Exhibit L.	N/A
OAR 345-022-0050 Retirement and Financial Assurance	Applicable and complies. With the proposed changes, the Certificate Holder is still able to restore the site to a useful, nonhazardous condition following permanent cessation of construction or operation of the Facility. See Exhibits M and W.	GEN-RF-01: Prevention of non-restorable site PRE-RF-01: Letter of credit to restore site to non-hazardous condition PRE-RF-02: Letter of credit naming State as payee RET-RF-01: Compliance with retirement plan OPR-RF-01: Evidence of monthly inspections of battery storage and insurance for high loss catastrophic events RET-RF-02: Retirement of facility upon cessation of activities
OAR 345-022-0060 Fish and Wildlife Habitat	Applicable and complies. The land added into the Amended Site Boundary is in areas	GEN-FW-01: Speed limit requirement GEN-FW-02: Compliance with Avian Power Line Interaction Committee designs

**FINAL REQUEST FOR AMENDMENT #4  
FOR THE WHEATRIDGE WIND ENERGY FACILITY**

Standard	Applicability and Compliance	Related Site Certificate Condition(s)
	<p>surveyed for fish and wildlife habitat as documented in Exhibit P. The Habitat Mitigation Plan will be finalized after final design to account for Facility impacts per Condition PRG-FW-04. See Exhibit P.</p>	<p>PRE-FW-01: Confirmation of habitat categories, nests via habitat survey            PRE-FW-02: Implementation of Wildlife Monitoring and Mitigation Plan            PRE-FW-03: Flagging of environmentally sensitive areas            PRE-FW-04: Approval of Habitat Mitigation Plan            PRE-FW-05: Approval of Revegetation Plan            CON-FW-01: Cease of construction during mule deer winter range            CON-FW-02: Buffer zones for nest sites            CON-FW-03: Environmental training by professional            CON-FW-04: Appointment of on-site environmental inspector</p>
<p>OAR 345-022-0070 Threatened and Endangered Species</p>	<p>Applicable and complies. The Facility will be constructed within the Amended Site Boundary where impacts to threatened and endangered species have been reviewed. See Exhibit Q.</p>	<p>PRE-TE-01: Determination of Washington ground squirrel boundaries            PRE-TE-02: Implementation of Wildlife Monitoring and Mitigation Plan for Washington ground squirrels            PRE-TE-03: Avoidance of Laurent's milkvetch impacts</p>
<p>OAR 345-022-0080 Scenic Resources</p>	<p>Applicable and complies. The ASC reviewed visual impacts for the project on Scenic Resources for turbines up to 525 feet. The maximum height of the solar panels will be 16 feet at full tilt; the potential impacts from the solar arrays on Scenic Resources are analyzed in Exhibit R. The proposed changes do not modify the Council's previous finding for Scenic areas.</p>	<p>GEN-SR-01: Reduction of lighting facility visual impacts            GEN-SR-02: Minimization of visual impacts</p>
<p>OAR 345-022-0090 Historic, Cultural and Archaeological Resources</p>	<p>Applicable and complies. Surveys were conducted for the Amended Site Boundary and identified resources will be protected per Site Certificate conditions and an Unanticipated Discovery Plan. See Exhibit S.</p>	<p>PRE-HC-01: Submission of final design            PRE-HC-02: Marking of buffer areas            PRE-HC-03: Training by qualified archeologist            CON-HC-01: Flagging of 200-foot avoidance buffer            CON-HC-02: Work cease due to historical find</p>
<p>OAR 345-022-0100 Recreation</p>	<p>Applicable and complies. See Exhibit T. The proposed changes do not modify the</p>	<p>N/A</p>

**FINAL REQUEST FOR AMENDMENT #4  
FOR THE WHEATRIDGE WIND ENERGY FACILITY**

Standard	Applicability and Compliance	Related Site Certificate Condition(s)
	Council's previous finding for recreation areas.	
OAR 345-022-0110 Public Services	Applicable and complies. Adding solar energy generation facilities does not alter the basis for the Council's prior findings for public services because they are in the same service areas reviewed in the ASC and peak construction employment and traffic estimates remain the same. The proposed changes do not alter the Certificate Holder's ability to comply with existing Site Certificate conditions. See Exhibit U.	GEN-PS-01: Coordination with solid waste handler GEN-PS-02: Installation of security measures GEN-PS-03: Fire prevention and response training GEN-PS-04: 100-foot vegetation free zone around battery storage systems PRE-PS-01: Preparation of Traffic Management Plan PRE-PS-02: Road Use Agreements with counties PRE-PS-03: Access road and private road modification approvals PRE-PS-04: Submission of Notice of Proposed Construction of Alteration PRE-PS-05: Preparation of Emergency Management Plan PRE-PS-06: Development of health and safety plan PRE-PS-07: Assurance of first aid/CPR/AED personnel CON-PS-01: Waste management plan protocols CON-PS-02: Establish on-site security CON-PS-03: Assurance of fall, high angle, confined space trained personnel CON-PS-04: Usage of concrete pads, nonflammable ground cover CON-PS-05: Maintenance of non-vegetated area PRO-PS-01: Fall protection/tower rescue training PRO-PS-02: Submission of site plan to fire protection officials PRO-PS-03: Assurance of current first aid/CPR/AED personnel OPR-PS-01: Discharge of wastewater OPR-PS-02: On-site well water usage OPR-PS-03: Implementation of waste management plan OPR-PS-04: Current contact information for personnel
OAR 345-022-0120 Waste Minimization	Applicable and complies. The proposed changes are not anticipated to substantially increase the amount of solid waste and wastewater generated by the Facility. See Exhibit V.	PRE-WM-01: Minimum waste management plan requirements PRE-WM-02: Confirmation of no surface/ground/drinking water impacts CON-WM-01: Requirements of off-site soil disposal CON-PS-01: Construction Waste Management Plan
OAR 345-024-0010 Public Health and Safety Standards for	Not Applicable. The Council previously found the standards, specific to wind facilities, were met. There will	GEN-WF-01: Following handling instructions GEN-WF-02: Notification of accidents/failures CON-WF-01: Installation of step-up transformers CON-WF-02: Maintenance of self-monitoring devices

**FINAL REQUEST FOR AMENDMENT #4  
FOR THE WHEATRIDGE WIND ENERGY FACILITY**

<b>Standard</b>	<b>Applicability and Compliance</b>	<b>Related Site Certificate Condition(s)</b>
Wind Energy Facilities	be no physical changes to the approved wind energy facilities as part of RFA 4.	OPR-WF-01: Assurance of operation security fencing and gates PRE-PS-04: FAA and ODA aeronautical studies and determinations.
OAR 345-024-0015 Siting Standards for Wind Energy Facilities	Not Applicable. The Council previously found the standards, specific to wind facilities, were met. There will be no physical changes to the approved wind energy facilities as part of RFA 4. The Facility, as proposed, is being designed to reduce cumulative adverse environmental effects.	N/A
OAR 345-024-0090 Transmission Lines	Not Applicable. No changes are proposed to the approved 230-kV intraconnection line and no new transmission lines under Council jurisdiction are proposed.	GEN-GS-12: Specification of corridor
OAR 340-035-0035 Noise	Applicable and complies. See Exhibit X. Noise analysis is being completed as part of wind and solar micro-siting to minimize noise impacts.	PRE-NC-01: Final facility design noise analysis and noise waiver if applicable. CON-NC-01: Measure to reduce noise impacts during construction OPR-NC-01: NRO mode turbines operating noise level documentation. OPR-NC-02: Certificate Holder to maintain a noise complaint response system. OPR-NC-03: Certificate holder will provide a monitoring plan for noise levels in response to a noise complaint.
Removal-Fill Law	Applicable. See Exhibit J. A removal-fill permit is not needed for the Facility because the Facility will not temporarily or permanently impact waters of the state.	N/A
Water Rights	Applicable. See Exhibit O. The increase in water volume from the proposed changes will be negligible in comparison to other land uses and the water sources remain the same as for the approved Facility.	N/A

## **9.0 Property Owners Located within or Adjacent to the Site of the Facility (OAR 345-027-0060(1)(f))**

A revised property owner list is included in Exhibit F.

## **10.0 Conclusion**

Based on this submittal and attached exhibits in Attachment 2, the Council can find that the Facility, as modified by RFA 4, continues to comply with the requirements of the Oregon Energy Facility Site Statutes, ORS 469.300 to 469.520, with all other Oregon statutes and administrative rules applicable to the amendment of the Site Certificate that are within the Council's jurisdiction, and that the existing and amended Site Certificate conditions ensure that the Facility will continue to comply with the applicable laws, standards, and rules. For these reasons, the Certificate Holder respectfully requests approval of RFA 4.

## **11.0 References**

- ODOE 2017a. Final Order in the Matter of the Application for a Site Certificate for the Wheatridge Wind Energy Facility. April 2017.
- ODOE. 2017b. Final Order in the Matter of the Request for Transfer (Amendment #1) for the Wheatridge Wind Energy Facility. July 2017.

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# Attachment 1. Redlined Site Certificate

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

**~~Third~~ Fourth  
Amended Site  
Certificate for the  
Wheatridge Wind Energy Facility**

**ISSUANCE DATES**

<b>Site Certificate</b>	<b>April 28, 2017</b>
<b>First Amended Site Certificate</b>	<b>July 27, 2017</b>
<b>Second Amended Site Certificate</b>	<b>November 16, 2018</b>
<b>Third Amended Site Certificate</b>	<b>December 14, 2018</b>
<b>Fourth Amended Site Certificate</b>	<b>XXX XX, 2019</b>

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# Table of Contents

<b>1.0</b>	<b>Introduction and Site Certification</b>	<b>1</b>
<b>2.0</b>	<b>Facility Location</b>	<b>3</b>
<b>2.1</b>	<b>Site Boundary</b>	<b>3</b>
<b>2.2</b>	<b>Micrositing Corridor</b>	<b>4</b>
<b>2.3</b>	<b>Intraconnection Transmission Line Corridor</b>	<b>4</b>
<b>3.0</b>	<b>Facility Description</b>	<b>5</b>
<b>3.1</b>	<b>Energy Facility</b>	<b>5</b>
<b>3.2</b>	<b>Related or Supporting Facilities</b>	<b>5</b>
<b>4.0</b>	<b>Site Certificate Conditions</b>	<b>11</b>
<b>4.1</b>	<b>Condition Format</b>	<b>11</b>
<b>4.2</b>	<b>General Conditions (GEN): Design, Construction and Operations</b>	<b>12</b>
<b>4.3</b>	<b>Pre-Construction (PRE) Conditions</b>	<b>21</b>
<b>4.4</b>	<b>Construction (CON) Conditions</b>	<b>35</b>
<b>4.5</b>	<b>Pre-Operational (PRO) Conditions</b>	<b>41</b>
<b>4.6</b>	<b>Operational (OPR) Conditions</b>	<b>43</b>
<b>4.7</b>	<b>Retirement Conditions (RET)</b>	<b>47</b>
<b>5.0</b>	<b>Successors and Assigns</b>	<b>48</b>
<b>6.0</b>	<b>Severability and Construction</b>	<b>48</b>
<b>7.0</b>	<b>Execution</b>	<b>49</b>

# WHEATRIDGE WIND ENERGY FACILITY SITE CERTIFICATE

## Acronyms and Abbreviations

ASC	Application for Site Certificate
Council	Oregon Energy Facility Siting Council
Department	Oregon Department of Energy
DOGAMI	Oregon Department of Geology and Mineral Industries
ESCP	Erosion and Sediment Control Plan
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and Maintenance
OAR	Oregon Administrative Rule
ODFW	Oregon Department of Fish and Wildlife
ORS	Oregon Revised Statute
NRHP	National Register of Historic Places
WGS	Washington Ground Squirrel

## 1.0 Introduction and Site Certification

This site certificate is a binding agreement between the State of Oregon (State), acting through the Energy Facility Siting Council (Council), and Wheatridge Wind Energy, LLC (certificate holder), which is a wholly-owned subsidiary of NextEra Energy Resources, LLC (NextEra or parent company). As authorized under Oregon Revised Statute (ORS) Chapter 469, the Council issues this site certificate authorizing certificate holder to construct, operate and retire the Wheatridge Wind Energy Facility (facility) at the below described site within Morrow and Umatilla counties, subject to the conditions set forth herein.

Both the State and certificate holder must abide by local ordinances, state law and the rules of the Council in effect on the date this site certificate is executed. However, upon a clear showing of a significant threat to public health, safety, or the environment that requires application of later-adopted laws or rules, the Council may require compliance with such later-adopted laws or rules (ORS 469.401(2)).

The findings of fact, reasoning and conclusions of law underlying the terms and conditions of this site certificate are set forth in the following documents, incorporated herein by this reference: (a) the *Final Order on the Application for Site Certificate for the Wheatridge Wind Energy Facility* issued on April 28, 2017 (hereafter, *Final Order on the Application*); (b) *Final Order on Request for Transfer* issued on July 27, 2017; *Final Order on Request for Amendment 3* issued on November 16, 2018; ~~and~~ *Final Order on Request for Amendment 2* issued on December 14, 2018; ~~and~~ *Final Order on Request for Amendment 4* issued on XXX XX, 2019. In interpreting this site certificate, any ambiguity will be clarified by reference to the following, in order of priority: (1) this *Final Order on Request for Amendment 2*; (2) *Final Order on Request for Amendment 3*; (3) *Final Order on Request for Amendment 1*; (4) *Final Order on the Application*, and (4) the record of the proceedings that led to the above reference orders. This site certificate binds the State and all counties, cities and political subdivisions in Oregon as to the approval of the site and the construction, operation, and retirement of the facility as to matters that are addressed in and governed by this site certificate (ORS 469.401(3)). This site certificate does not address, and is not binding with respect to, matters that are not included in and governed by this site certificate, and such matters include, but are not limited to: employee health and safety; building code compliance; wage and hour or other labor regulations; local government fees and charges; other design or operational issues that do not relate to siting the facility (ORS 469.401(4)); and permits issued under statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council (ORS 469.503(3)).

The definitions in ORS 469.300 and OAR 345-001-0010 apply to the terms used in this site certificate, except where otherwise stated, or where the context clearly indicates otherwise.

Each affected state agency, county, city, and political subdivision in Oregon with authority to issue a permit, license, or other approval addressed in or governed by this site certificate, shall upon submission of the proper application and payment of the proper fees, but without hearings or other proceedings, issue such permit, license or other approval subject only to conditions set forth in this site certificate. In addition, each state agency or local government agency that issues a permit, license or other approval for this facility shall continue to exercise enforcement authority over such permit, license or other approval (ORS 469.401(3)). For those permits,

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

The certificate holder must construct, operate and retire the facility in accordance with all applicable rules as provided for in Oregon Administrative Rule (OAR) Chapter 345, Division 26. After issuance of this site certificate, the Council shall have continuing authority over the site and may inspect, or direct the Oregon Department of Energy (Department) to inspect, or request another state agency or local government to inspect, the site at any time in order to ensure that the facility is being operated consistently with the terms and conditions of this site certificate (ORS 469.430).

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

The Council recognizes that many specific tasks related to the design, construction, operation and retirement of the facility will be undertaken by the certificate holder's agents or contractors. Nevertheless, the certificate holder is responsible for ensuring compliance with all provisions of the site certificate.

The duration of this site certificate shall be the life of the facility, subject to termination pursuant to OAR 345-027-0010 or the rules in effect on the date that termination is sought, or revocation under ORS 469.440 and OAR 345-029-0100 or the statutes and rules in effect on the date that revocation is ordered. The Council shall not change the conditions of this site certificate except as provided for in OAR Chapter 345, Division 27.

## 2.0 Facility Location

The energy facility and its related and supporting facilities are located within Morrow and Umatilla counties. The site boundary, as defined in OAR 345-001-0010, encompasses approximately ~~13,097~~ 14,624 acres of private land and includes the perimeter of the energy facility site, its related and supporting facilities, all temporary laydown and staging areas and all transmission corridors and micrositing corridors proposed by the certificate holder, as approved by the Council.

The energy facility is divided into two groups, Wheatridge West and Wheatridge East. Wheatridge West is located entirely within Morrow County, bisected by Oregon Highway 207, approximately 5 miles northeast of Lexington and approximately 7 miles northwest of Heppner. Wheatridge East is located approximately 16 miles northeast of Heppner and includes land in both Morrow and Umatilla counties. Wheatridge West and Wheatridge East are connected via a 230 kV transmission line or “intraconnection” transmission line (see facility site boundary map provided in Attachment A).

### 2.1 Site Boundary

The site boundary encompasses a total of ~~13,097~~ 14,624 acres of privately owned land: 2,956 acres in Wheatridge East, ~~8,515~~ 10,042 acres in Wheatridge West, and 1,626 acres in the intraconnection transmission line corridor. Table 1 identifies the Public Land Survey System sections in which the site boundary is located.

**Table 1. Location of Site Boundary by Township, Range and Section**

Township	Range	Section(s)
<b>Wheatridge East</b>		
1N	28E	4, 5, 8, 9, 16, 17, 21
2N	28E	2, 3, 9, 10, 11, 14, 15, 16, 21, 22, 27, 28, 29, 32, 33
<b>Wheatridge West</b>		
2N	25E	25, 26, 27, 34, 35, 36
1N	25E	1, 2, 11, 12, 13, 14, 15, 22, 23, 24
1N	26E	4, 6, 7, 8, 9, 15, 16, 17, 18, 19, 20, 21, 22, 28, 29, 30, 32, 33
1S	25E	1, 12
1S	26E	2, 3, 4, 5, 6, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 34, 35, 36
2S	26E	1, 12
<b>Intraconnection Corridor</b>		
1S	27E	7, 12, 13, 14, 15, 16, 17, 18, 21, 22, 23, 24
1S	28E	3, 4, 7, 8, 9, 16, 17, 18
1N	28E	28, 33

For this facility, the certificate holder requested that the site boundary represent the “micrositing corridor” for the placement of facility components to allow some flexibility in specific component locations and design in response to site-specific conditions and engineering requirements to be determined prior to construction. The Council permits final siting flexibility within a micrositing corridor when the certificate holder demonstrates that requirements of all applicable standards have been satisfied by adequately evaluating the entire corridor and location of facility components anywhere within the corridor.

## **2.2 Micrositing Corridor**

The certificate holder requested flexibility to locate components of the energy facility and its related and supporting facilities within a micrositing corridor to allow adjustment of the specific location of components, while establishing outer boundaries of potential construction for purposes of evaluating potential impacts. As described above, for this facility, the site boundary represents the micrositing corridor. For wind micrositing corridors, there is a minimum of approximately 660 feet in width around turbines, and wider in some locations. The site boundary width around site access roads and electrical collection lines (collector lines) is narrower, between 200 feet and 500 feet in width. The micrositing corridor is wider for the area surrounding the substations, meteorological towers (met towers), the operation and maintenance (O&M) buildings, and construction yards. The solar micrositing corridors which overlap wind micrositing corridors are wider to accommodate the polygon arrangements of solar arrays and to include private access roads, service roads, gates and security fence.

## **2.3 Intraconnection Transmission Line Corridor**

The certificate holder obtained approval of four routing options for the 230 kV intraconnection transmission line that interconnects Wheatridge West and Wheatridge East for the transmission of generated power. The intraconnection transmission line corridor is approximately 1,000-feet in width and ranges in length from 24.5 to 31.5 miles, based upon the four approved transmission line route options.

The four approved transmission line route options range in length from 24.5 to 31.5 miles and would follow the same alignment for approximately 18 miles from the Wheatridge East substation to the crossing at Sand Hollow Road. For the remainder of the route, Options 1 and 3 traverse the same alignment, with Option 1 extending 7 miles longer than Option 3; Option 2 and 4 traverse the same alignment, with Option 2 extending 3.5 miles longer than Option 4. Option 1 and 2 differ for an approximately 4 mile segment located between Sand Hollow Road and the Wheatridge West substation (primary), with Option 2 traversing from Sand Hollow Road through the alternative (2b) Wheatridge West substation to the primary (1) Wheatridge West substation. The four approved routing options and associated transmission line corridors are presented in Attachment A of the site certificate (and are clearly delineated in figures provided in ASC Exhibit C).

### 3.0 Facility Description

#### 3.1 Energy Facility

The energy facility includes individual wind turbines, each consisting of a nacelle, a three-bladed rotor, turbine tower and foundation. The nacelle houses the equipment such as the gearbox, generator, brakes, and control systems for the turbine. The total height of the turbine tower and blades (tip-height) ranges between 431 and 476 feet, depending on the turbine model selected. The total generating capacity of the facility turbines will not exceed 500 MW, and the total number of turbines will not exceed 292.

The base of each tower foundation requires a cleared area (typically a gravel pad) up to 80 feet in diameter. The turbines are grouped in linear “strings” within the micrositing corridor and interconnect with a 34.5 kV electrical collection system (described below). Most turbine types include a generator step-up (GSU) transformer installed at the base of the tower that would be used to increase the voltage of the turbine to that of the electrical collection system. Table 2 shows the range of turbine specifications approved for use at the facility site.

**Table 2: Approved Wind Turbine Dimensions**

Specification	Maximum (ft)
Blade Length	204.1
Hub Height	291.3
Rotor Diameter	416.7
Total Height (tower height plus blade length)	499.7
Aboveground Blade-Tip Clearance	70.5
Wind turbine types with the maximum dimension specifications shall be equipped with Low Noise Trailing Edge blades.	

The energy facility also includes one or more solar arrays consisting of photovoltaic panels mounted onto tracking modules and arranged in strings within the solar micrositing corridors. Strings of modules will be connected by electrical collector lines to each other and to inverters that will convert the direct current power generated by panels to alternating current power. Transformers will be placed near the inverters to step up power to 34.5 kilovolts for transmission to a previously approved Wheatridge West Substation. The number of modules, configuration, dimensions, total energy generating capacity, and mounting system will be determined during final design and equipment selection/procurement.

#### 3.2 Related or Supporting Facilities

The facility includes the following related or supporting facilities described below:

- Electrical collection system (includes up to **88 91** miles of mostly underground 34.5 kV collector lines)
- Up to three collector substations
- Up to 32 miles of up to two overhead, parallel 230 kV transmission lines
- Up to 12 permanent meteorological (met) towers
- Communication and Supervisory Control and Data Acquisition (SCADA) System
- Up to two operations and maintenance (O&M) buildings
- Up to 73 miles of new or improved access roads
- Additional temporary construction areas (including staging areas and one or more temporary concrete batch plant areas)
- Battery Storage Systems and Interconnection Facilities

### Electrical Collection System

The electrical collection system includes up to **88 91** miles of mostly underground 34.5 kV collector lines. Electrical connections are located underground or in enclosed junction boxes between the turbine and the pad-mounted GSU transformer. From the GSU transformer to the collector lines the connections are installed along and between the turbine strings to collect power generated by each wind turbine and to route the power to one of three collector substations, which step up the power from 34.5 kV to 230 kV.

The collector lines are underground, to the extent practicable, in trenches approximately three-feet wide and not less than two- to three-feet deep, generally alongside access roads, to minimize ground disturbance. Where land use and soil conditions make a buried depth of three-feet infeasible, collector lines may be buried at a depth of less than three feet, while still adhering to National Electrical Safety Code (NESC) standards.

Collector lines may be run overhead in situations where a buried cable would be infeasible or would create unnecessary impacts, such as at stream or canyon crossings. Overhead collector lines are supported by a wooden or steel pole structure. Each support pole has been buried approximately 6 feet in the ground and extends to a height of approximately 60 feet above ground, spaced 100 to 200 feet apart. Overhead collector lines are only anticipated in Wheatridge West. The facility includes up to 10.8 miles of overhead collector lines; however, the specific locations of overhead collector lines will not be known until site geotechnical work has been completed during pre-construction activities.

No more than **88 91** miles of collector lines would be needed for the facility.

### Collector Substations

The facility includes up to two substations within Wheatridge West and one substation within Wheatridge East. The proposed substation locations are presented in ASC Exhibit C. However, Wheatridge has requested, and Council grants, the ability to microsite the final location and number (up to three) of substations within the micrositing corridor.

Prior to construction, substation sites will be cleared and graded, with a bed of crushed rock applied for a durable surface. Each collector substation is located on a two- to **five-ten**-acre site, enclosed by a locked eight-foot tall wire mesh fence. Each substation consists of transformers, transmission line

termination structures, a bus bar, circuit breakers and fuses, control systems, meters, and other equipment.

### 230 kV Intraconnection Transmission Line

The facility includes one or two parallel overhead 230 kV intraconnection transmission lines supported by H-frame or monopole structures constructed of either wood or steel that extends 24.5 to 31.5 miles in length, depending on the route option selected. The 230 kV overhead transmission line structures are approximately 60 to 150 feet tall and spaced approximately 400 to 800 feet apart depending on the terrain. Each transmission line route requires acquisition of an approximately 150-foot wide right-of-way from private landowners.

The four approved transmission line routing options and associated corridors for the intraconnection transmission line are described below (see Attachment A figure and figures contained in ASC Exhibit C):

- Option 1: Two Project Substations to Longhorn
  - This option runs from Substation 3 in Wheatridge East to Substation 1 in Wheatridge West and then to the proposed UEC/CB Strawberry substation, just to the west of Wheatridge West, for interconnection to a UEC or UEC/CB operated Gen-tie Line to the proposed BPA Longhorn substation. The intraconnection line route is 31.5 miles (50.5 kilometers) in length.
- Option 2: Three Project Substations to Longhorn (Final facility design with battery storage system would not include this routing option)
  - This option runs from Substation 3 in Wheatridge East to Substation 2b in Wheatridge West, then on to Substation 2a in Wheatridge West, and then to the proposed UEC/CB Strawberry substation, just west of Wheatridge West, for interconnection to a UEC or UEC/CB operated Gen-tie Line to the proposed BPA Longhorn substation. The intraconnection line route is 31.3 miles (50.3 kilometers) in length.
- Option 3: Two Project Substations to Stanfield
  - This option runs from Substation 1 in Wheatridge West to Substation 3 in Wheatridge East for interconnection to a UEC operated Gen-tie Line to the proposed BPA Stanfield substation. The intraconnection line route is 24.5 miles (39.4 kilometers) in length.
- Option 4: Three Project Substations to Stanfield (Final facility design with battery storage system would not include this routing option)
  - This option runs from Substation 2a in Wheatridge West to Substation 2b in Wheatridge West, and then to Substation 3 in Wheatridge East for interconnection to a UEC operated Gen-tie Line to the proposed BPA Stanfield substation. The

intraconnection line route is 27.8 miles (44.7 kilometers) in length.

### Meteorological Towers

The facility includes up to 12 permanent met towers. Up to five met towers are sited in Wheatridge East and up to seven met towers are sited in Wheatridge West for the collection of wind speed and direction data. Each met tower has a free-standing, non-guyed design and is approximately 328 feet (100 meters) in height. Installation of permanent met towers results in approximately 98-feet (30-meters) in diameter of temporary land disturbance per tower and approximately 32-feet (10-meter) in diameter of permanent land disturbance per tower. Permanent met towers are fitted with safety lighting and paint as required by the Federal Aviation Administration (FAA).

### Communication and SCADA System

The facility includes a communication system, consisting of fiber optic and copper communication lines that connect the turbines, met towers, and substations to the O&M buildings. A SCADA system is installed in the O&M buildings to enable remote operation to collect operating data for each wind turbine, and to archive wind and performance data. SCADA system wires are collocated with the collector lines both in the underground trenches and overhead, if necessary.

### O&M Buildings

The facility includes up to two O&M buildings, each located on up to 1.1 acres, one within Wheatridge East and one within Wheatridge West. Each O&M building consists of a single-story, prefabricated structure approximately 6,000 to 9,000 square feet in size, and includes an office, break room, kitchen, lavatory with shower, utility room, covered vehicle parking, storage for maintenance supplies and equipment, and SCADA system. A permanent, fenced, graveled parking and storage area for employees, visitors, and equipment is located adjacent to each O&M building. Each building is served by an on-site well and septic system and power supplied by a local service provider using overhead and/or underground lines.

### Access Roads

Primary access to the facility site is from Interstate 84 (I-84) via Bombing Range Road or Oregon Route 207 (OR-207). The certificate holder completed improvements to existing public roads to accommodate construction activities, including flattening crests or filling dips, widening sharp corners, or adding road base material; the certificate holder is required to consult with the appropriate county road master on specific improvements prior to construction. The certificate holder committed to completing upgrade to existing roads according to applicable state and county road standards and after consultation with Morrow and Umatilla County staff. The certificate holder is required to implement a road use agreement with each county to specify requirements, including that all existing public roads used to access the site would be left in as good or better condition than that which existed prior to the start of construction.

Access to the turbines, solar arrays, construction yards, substations, and O&M buildings is from a network of private access roads constructed or improved by the certificate holder. The certificate holder will grade and gravel all newly constructed and improved site access roads to meet load

requirements for heavy construction equipment, as necessary. Following turbine construction, the certificate holder will narrow the site access roads for use during operations and maintenance. The additional disturbed width required during construction will be restored following the completion of construction by removing gravel surfacing, restoring appropriate contours with erosion and stormwater control best management practices (BMPs), decompacting as needed, and revegetating the area appropriately.

In the maximum impact scenario, the facility will require up to 73 miles of access roads, **not including those internal to the solar arrays fence line.**

Temporary access roads were needed for the construction of the intraconnection transmission line(s). The intraconnection transmission line(s) can be constructed and maintained using only large trucks rather than heavy construction cranes, and construction will occur during the dry time of year when the ground surface is hard enough to support those vehicles. Therefore, the interconnection transmission lines do not include permanent access roads. The total mileage of the temporary access roads needed for constructing the intraconnection transmission line(s) depends on the intraconnection line route option chosen. The shortest route would require approximately 22.8 miles of access roads, while the longest would require approximately 25.5 miles.

#### Additional Construction Yards

The facility includes up to four temporary construction yards located within the site boundary to facilitate the delivery and assembly of material and equipment. The construction yards are used for temporary storage of diesel and gasoline fuels, which are located in an above-ground 1,000-gallon diesel and 500-gallon gasoline tank, within designated secondary containments areas.

Each construction yard occupies between 15 and 20 acres, and was graded and gravel surfaced. The certificate holder is required to restore all construction yards to pre-construction conditions unless an agreement with the landowner leads to some or all of the construction yard being retained after construction.

In addition, the certificate holder may utilize one or more temporary concrete batch plant areas, located within the construction yard area. The temporary concrete batch plants are permitted and operated by the selected contractor.

#### Battery Storage Systems and Interconnection Facilities

**Battery Storage Sites:** The battery storage systems include the following components:

- Series of modular containers or a building per system (approximately 80 feet long, 100 feet wide and 15-20 feet tall for the 20 MW system); approximately 190 feet long, 100 feet wide and 15-20 feet tall for the 30 MW system)
  - Each system would contain lithium-ion batteries within battery modules placed in anchored racks within containers or building.
  - Approximately eighteen 2.7 mega-voltampere (MVA) inverters with associated step up transformers with a combined footprint approximately 8 feet by 4 feet.

- Each system would be equipped with a gas pressured deluge fire suppression system, independent smoke detection system, and external fire water tank
- Each system would include a cooling system comprised of a bank of four power conditioning system fan units with motor
- Control house, approximately 16 feet by 11 feet, with an external heating, ventilation and air conditioning unit (HVAC)
- Protective device; skid-mounted power transformer; and bi-directional inverter

Battery and inverter equipment would be electrically connected via a combination of aboveground cable trays, underground conduit, and covered cable trenches. Site surfacing would remain primarily gravel. The battery storage systems would interconnect with facility substations via feeder lines.

**Distributed Battery Storage:** The facility includes distributed energy storage throughout and within the fence line of the solar arrays. There will be approximately 41 sites of lithium-ion batteries in concrete containers or similar containment. Each container will measure up to 12 feet wide, 36 feet long, and 10 feet tall. Lithium-ion battery systems are modular systems. Each module contains multiple smaller battery cells, each measuring up to 3.2 by 7 centimeters. Modules are placed in anchored racks within the concrete containers; typically, each rack houses 12 battery modules along with a switchgear assembly. Cooling units will be placed either on top of the concrete containers or along the side. The number of distributed battery storage sites, configuration, dimensions, and specifications of associated systems will be determined during final design and equipment selection/procurement.

## 4.0 Site Certificate Conditions

### 4.1 Condition Format

The conditions in Sections 4.2 through 4.7 of this Site Certificate are organized and coded to indicate the phase of implementation, the standard the condition is required to satisfy, and an identification number (1, 2, 3, etc.)<sup>1</sup>. The table below presents a “key” for phase of implementation:

Key	Type of Conditions/Phase of Implementation
GEN	General Conditions: Design, Construction and Operation
PRE	Pre-Construction Conditions
CON	Construction Conditions
PRO	Pre-Operational Conditions
OPR	Operational Conditions
RET	Retirement Conditions

The standards are presented using an acronym; for example, the General Standard of Review is represented in the condition numbering as “GS”; the Soil Protection standard is represented in the condition numbering as “SP” and so forth.

For example, the coding of Condition GEN-GS-01 represents that the condition is a general condition (GEN) to be implemented during design, construction and operation of the facility, is required to satisfy the Council’s General Standard of Review, and is condition number 1.

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<sup>1</sup> The identification number is not representative of an order that conditions must be implemented; it is intended only to represent a numerical value for identifying the condition.

## 4.2 General Conditions (GEN): Design, Construction and Operations

Condition Number	General (GEN) Conditions
<b>STANDARD: GENERAL STANDARD OF REVIEW (GS) [OAR 345-022-0000]</b>	
GEN-GS-01	<p>The certificate holder shall begin construction of the facility by May 24, 2020. On or before May 24, 2020, the certificate holder shall provide written notification to the Department that it has met the construction commencement deadline. Construction is defined in OAR 345-001-0010.</p> <p>[Final Order on ASC, General Standard Condition 1; AMD2] [Mandatory Condition OAR 345-025-0006(4)]</p>
GEN-GS-02	<p>The certificate holder shall complete construction of the facility by May 24, 2023. The certificate holder shall promptly notify the Department of the date of completion of construction.</p> <p>[Final Order on ASC, General Standard Condition 2; AMD2] [Mandatory Condition OAR 345-025-0006(4)]</p>
GEN-GS-03	<p>The certificate holder shall design, construct, operate, and retire the facility:</p> <ol style="list-style-type: none"> <li>a. Substantially as described in the site certificate;</li> <li>b. In compliance with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances in effect at the time the site certificate is issued; and</li> <li>c. In compliance with all applicable permit requirements of other state agencies.</li> </ol> <p>[Final Order on ASC, Mandatory Condition 2] [OAR 345-025-0006(3)]</p>
GEN-GS-04	<p>Except as necessary for the initial survey or as otherwise allowed for wind energy facilities, transmission lines or pipelines under this section, the certificate holder shall not begin construction, as defined in OAR 345-001-0010, or create a clearing on any part of the site until the certificate holder has construction rights on all parts of the site. For the purpose of this rule, “construction rights” means the legal right to engage in construction activities. For wind energy facilities, transmission lines or pipelines, if the certificate holder does not have construction rights on all parts of the site, the certificate holder may nevertheless begin construction, as defined in OAR 345-001-0010, or create a clearing on a part of the site if the certificate holder has construction rights on that part of the site and:</p> <ol style="list-style-type: none"> <li>a. The certificate holder would construct and operate part of the facility on that part of the site even if a change in the planned route of a transmission line or pipeline occurs during the certificate holder’s negotiations to acquire construction rights on another part of the site; or</li> <li>b. The certificate holder would construct and operate part of a wind energy facility on that part of the site even if other parts of the facility were modified by amendment of the site certificate or were not built.</li> </ol> <p>[Final Order on ASC, Mandatory Condition 3] [OAR 345-025-0006 (5)]</p>
GEN-GS-05	<p>If the certificate holder becomes aware of a significant environmental change or impact attributable to the facility, the certificate holder shall, as soon as possible, submit a written report to the department describing the impact on the facility and any affected site certificate conditions.</p> <p>[Final Order on ASC, Mandatory Condition 4] [OAR 345-027-0020(6)]</p>

GEN-GS-06

The Council shall include as conditions in the site certificate all representations in the site certificate application and supporting record the Council deems to be binding commitments made by the applicant.

[Final Order on ASC, Mandatory Condition 5] [OAR 345-025-0006(10)]

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GEN-GS-07	<p>Upon completion of construction, the certificate holder shall restore vegetation to the extent practicable and shall landscape all areas disturbed by construction in a manner compatible with the surroundings and proposed use. Upon completion of construction, the certificate holder shall remove all temporary structures not required for facility operation and dispose of all timber, brush, refuse and flammable or combustible material resulting from clearing of land and construction of the facility.</p> <p>[Final Order on ASC, Mandatory Condition 6] [OAR 345--025-0006(11)]</p>
GEN-GS-08	<p>The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. As used in this rule "seismic hazard" includes ground shaking, ground failure, landslide, liquefaction triggering and consequences (including flow failure, settlement buoyancy, and lateral spreading), cyclic softening of clays and silts, fault rupture, directivity effects and soil-structure interaction. For coastal sites, this also includes tsunami hazards and seismically-induced coastal subsidence.</p> <p>[Final Order on ASC, Mandatory Condition 7] [OAR 345-025-0006(12)]</p>
GEN-GS-09	<p>The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate. After the Department receives the notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division and to propose mitigation actions.</p> <p>[Final Order on ASC, Mandatory Condition 8] [OAR 345-025-0006 (13)]</p>
GEN-GS-10	<p>The certificate holder shall notify the department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site. After the Department receives notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division to propose and implement corrective or mitigation actions.</p> <p>[Final Order on ASC, Mandatory Condition 9] [OAR 345-025-0006 (14)]</p>
GEN-GS-11	<p>Before any transfer of ownership of the facility or ownership of the site certificate holder, the certificate holder shall inform the department of the proposed new owners. The requirements of OAR 345-027-0100 apply to any transfer of ownership that requires a transfer of the site certificate.</p> <p>[Final Order on ASC, Mandatory Condition 10] [OAR 345--025-0006 (15)]</p>
GEN-GS-12	<p>The Council shall specify an approved corridor in the site certificate and shall allow the certificate holder to construct the pipeline or transmission line anywhere within the corridor, subject to the conditions of the site certificate. If the applicant has analyzed more than one corridor in its application for a site certificate, the Council may, subject to the Council's standards, approve more than one corridor.</p> <p><i>[The transmission line corridors approved by EFSC pursuant to this condition is described in Section 2.3 of the site certificate, and presented in the facility site map (see Attachment A of the site certificate).</i></p> <p><i>[Final Order on ASC, Site Specific Condition 1] [OAR 345-025-0010(5)]</i></p>
<b>STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]</b>	
GEN-OE-01	<p>Any matter of non-compliance under the site certificate is the responsibility of the certificate holder. Any notice of violation issued under the site certificate will be issued to the certificate holder. Any civil penalties under the site certificate will be levied on the certificate holder.</p>

	[Final Order on ASC, Organizational Expertise Condition 5]
GEN-OE-02	In addition to the requirements of OAR 345-026-0170, within 72 hours after discovery of incidents or circumstances that violate the terms or conditions of the site certificate, the certificate holder must report the conditions or circumstances to the department. [Final Order on ASC, Organizational Expertise Condition 6]
GEN-OE-03	During facility construction and operation, the certificate holder shall report to the Department, within 7 days, any change in the corporate structure of the parent company, NextEra Energy Resources, LLC. The certificate holder shall report promptly to the Department any change in its access to the resources, expertise, and personnel of NextEra Energy Resources, LLC. [Amendment #1 , Organizational Expertise Condition 9]
GEN-OE-04	The certificate holder shall: <ul style="list-style-type: none"> <li>a. Prior to and during construction, as applicable, provide evidence to the Department that a contractual agreement has been obtained for transport and disposal of battery and battery waste by a licensed hauler and requires the third-party to comply with all applicable laws and regulations, including applicable provisions of 49 CFR 173.185.</li> <li>b. Prior to transporting and disposing of battery and battery waste during facility operations, provide evidence to the Department that a contractual agreement has been obtained for transport and disposal of battery and battery waste by a licensed hauler and requires the third-party to comply with all applicable laws and regulations, including applicable provisions of 49 CFR 173.185.</li> </ul> [Final Order on AMD2, Organizational Expertise Condition 10]
<b>STANDARD: STRUCTURAL (SS) [OAR 345-022-0020]</b>	
GEN-SS-01	The certificate holder shall design, engineer, and construct the facility in accordance with the current versions of the latest International Building Code, Oregon Structural Specialty Code, and building codes as adopted by the State of Oregon at the time of construction. [Final Order on ASC, Structural Standard Condition 2]

**STANDARD: LAND USE (LU) [OAR 345-022-0030]**

GEN-LU-01	<p>The certificate holder shall design the facility to comply with the following wind turbine setback distances in Morrow County:</p> <ol style="list-style-type: none"><li>a. Wind turbines shall be setback from the property line of any abutting property of any non-participant property owners a minimum of 110 percent of maximum blade tip height of the wind turbine tower.</li><li>b. Wind turbines shall be setback 100 feet from all property boundaries, including participant property boundaries within the site boundary, if practicable.</li><li>c. Wind turbine foundations shall not be located on any property boundary, including participant property boundaries within the site boundary.</li><li>d. Wind turbines shall be setback 110% of the overall tower-to-blade tip height from the boundary right-of-way of county roads, state and interstate highways.</li></ol> <p>[Final Order on ASC; AMD3 Land Use Condition 1]</p>
GEN-LU-02	<p>During design and construction of the facility, the certificate holder shall:</p> <ol style="list-style-type: none"><li>a. Obtain an access permit for changes in access on Morrow County roads; and</li><li>b. Improve or develop private access roads impacting intersections with Morrow County roads in compliance with Morrow County access standards.</li></ol> <p>[Final Order on ASC, Land Use Condition 4]</p>
GEN-LU-03	<p>During design and construction, the certificate holder shall implement the following actions on all meteorological towers approved through the site certificate:</p> <ol style="list-style-type: none"><li>a. Paint the towers in alternating bands of white and red or aviation orange; <del>and or</del></li><li>b. Install aviation lighting as recommended by the Federal Aviation Administration.</li></ol> <p>[Final Order on ASC, Land Use Condition 9]</p>
GEN-LU-04	<p>The certificate holder shall design and construct the facility using the minimum land area necessary for safe construction and operation. The certificate holder shall locate access roads and temporary construction laydown and staging areas to minimize disturbance of farming practices and, wherever feasible, shall place turbines and transmission interconnection lines along the margins of cultivated areas to reduce the potential for conflict with farm operations. Where possible, underground communication and electrical lines shall be buried within the area disturbed by temporary road widening.</p> <p>[Final Order on ASC, Land Use Condition 11]</p>
GEN-LU-05	<p>During design and construction of the facility, the certificate holder shall ensure that fencing and landscaping selected and used for the O&amp;M building and similar facility components sited within Morrow County blend with the nature of the surrounding area.</p> <p>[Final Order on ASC, Land Use Condition 14]</p>
GEN-LU-06	<p>During micrositing of the facility, the certificate holder shall ensure that wind turbines are sited based on a minimum setback of:</p> <ol style="list-style-type: none"><li>a. 110% of the overall tower-to-blade tip height from the boundary right-of-way of county roads and state and interstate highways in Umatilla and Morrow counties.</li><li>b. 2 miles from turbine towers to a city urban growth boundary.</li><li>c. 1 mile from turbine towers to land within Umatilla County lands zoned Unincorporated Community.</li><li>d. 2 miles from turbine towers to rural residences within Umatilla County.</li><li>e. 164 feet (50 meters) from tower and facility components to known archeological, historical and cultural sites or CTUIR cultural site.</li></ol> <p>[Final Order on ASC;AMD3 Land Use Condition 16;]</p>

GEN-LU-07

During design and construction, the certificate holder must ensure that the O&M building in Umatilla County is consistent with the character of similar agricultural buildings used by commercial farmers or ranchers in Umatilla County.

[Final Order on ASC, Land Use Condition 20]

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GEN-LU-08	<p>During facility design and construction of new access roads and road improvements, the certificate holder shall implement best management practices after consultation with the Umatilla County Soil Water Conservation district. The new and improved road designs must be reviewed and certified by a civil engineer.</p> <p>[Final Order on ASC, Land Use Condition 22]</p>
GEN-LU-09	<p>Before beginning electrical production, the certificate hold shall provide the location of each turbine tower, electrical collecting lines, the O&amp;M building, the substation, project access roads, and portion of the intraconnection transmission line located in Umatilla County to the department and Umatilla County in a format suitable for GPS mapping.</p> <p>[Final Order on ASC, Land Use Condition 24]</p>
GEN-LU-10	<p>During construction and operation of the facility, the certificate holder shall deliver a copy of the annual report required under OAR 345-026-0080 to the Umatilla County Planning Commission on an annual basis.</p> <p>[Final Order on ASC, Land Use Condition 28]</p>
<b>STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]</b>	
GEN-RF-01	<p>The certificate holder shall prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder.</p> <p>[Final Order on ASC, Retirement and Financial Assurance Condition 1] [Mandatory Condition OAR 345-025-0006(7)]</p>
<b>STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]</b>	
GEN-FW-01	<p>During construction and operation, the certificate holder shall impose a 20 mile per hour speed limit on new and improved private access roads, which have been approved as a related and supporting facility to the energy facility.</p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 2]</p>
GEN-FW-02	<p>The certificate holder shall construct all overhead collector and transmission intraconnection lines in accordance with the latest Avian Power Line Interaction Committee design standards, and shall only install permanent meteorological towers that are unguyed.</p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 6]</p>
<b>STANDARD: SCENIC RESOURCES (SR) [OAR 345-022-0080]</b>	
GEN-SR-01	<p>To reduce visual impacts associated with lighting facility structures, other than lighting on structures subject to the requirements of the Federal Aviation Administration or the Oregon Department of Aviation, the certificate holder shall implement the following measures:</p> <ul style="list-style-type: none"> <li>a. Outdoor night lighting at the collector substations, Operations and Maintenance Buildings, and battery storage systems, must be <ul style="list-style-type: none"> <li>i. The minimum number and intensity required for safety and security;</li> <li>ii. Directed downward and inward within the facility to minimize backscatter and offsite light trespass; and</li> <li>iii. Have motion sensors and switches to keep lights turned off when not needed.</li> </ul> </li> </ul> <p>[Final Order on ASC, Scenic Resources Condition 1, AMD2]</p>

GEN-SR-02	<p>The certificate holder shall:</p> <ol style="list-style-type: none"> <li>a. Design and construct the O&amp;M buildings and battery storage systems to be generally consistent with the character of agricultural buildings used by farmers or ranchers in the area, and the buildings shall be finished in a neutral color to blend with the surrounding landscape;</li> <li>b. Paint or otherwise finish turbine structures in a grey, white, or off-white, low reflectivity coating to minimize reflection and contrast with the sky, unless required otherwise by the local code applicable to the structure location.</li> <li>c. Design and construct support towers for the intraconnection transmission lines using either wood or steel structures and utilize finish with a low reflectivity coating;</li> <li>d. Finish substation structures and battery storage systems utilizing neutral colors to blend with the surrounding landscape;</li> <li>e. Minimize use of lighting and design lighting to prevent offsite glare;</li> <li>f. Not display advertising or commercial signage on any part of the proposed facility;</li> <li>g. Limit vegetation clearing and ground disturbance to the minimum area necessary to safely and efficiently install the facility equipment;</li> <li>h. Water access roads and other areas of ground disturbance during construction, as needed, to avoid the generation of airborne dust; and</li> <li>i. Restore and revegetate temporary impact areas as soon as practicable following completion of construction.</li> </ol> <p>[Final Order on ASC, Scenic Resources Condition 2, AMD2]</p>
<b>STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]</b>	
GEN-PS-01	<p>During construction and operation, the certificate holder shall coordinate with its solid waste handler to provide the information solicited through the Oregon Department of Environmental Quality's Recycling Collector Survey to the Morrow County waste shed representative on an annual basis.</p> <p>[Final Order on ASC, Public Services Condition 5]</p>
GEN-PS-02	<p>The certificate holder shall construct turbine towers with no exterior ladders or access to the turbine blades and shall install locked tower access doors. The O&amp;M buildings shall be fenced. The certificate holder shall keep tower access doors and O&amp;M buildings locked at all times, except when authorized personnel are present.</p> <p>[Final Order on ASC, Public Services Condition 11]</p>

GEN-PS-03	<p>Prior to construction and operation of the facility, , the certificate holder must provide employee fire prevention and response training that includes instruction on facility fire hazards, fire safety, emergency notification procedures, use of fire safety equipment, and fire safety rules and regulations. The certificate holder shall notify the department and the first-response agencies listed in the Emergency Management Plan developed to comply with Public Services Condition 13 at least 30 days prior to the annual training to provide an opportunity to participate in the training. Equivalent training shall be provided to new employees or subcontractors working on site that are hired during the fire season. The certificate holder must retain records of the training and provide them to the department upon request.</p> <p>[Final Order on ASC, Public Services Condition 18]</p>
GEN-PS-04	<p>The certificate holder shall design, construct and maintain the battery storage systems within a 100 foot vegetation free zone.</p> <p>[Final Order on AMD2, Public Services Condition 23]</p>
<b>STANDARD: PUBLIC HEALTH AND SAFETY FOR WIND FACILITIES (WF) [OAR 345-024-0010]</b>	
GEN-WF-01	<p>During construction and operation, the certificate holder shall follow manufacturers' recommended handling instructions and procedures to prevent damage to turbine or turbine tower components.</p> <p>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 3]</p>
GEN-WF-02	<p>The certificate holder shall notify the department, the Morrow County Planning Department and the Umatilla County Planning Department within 72 hours of any accidents including mechanical failures on the site associated with construction or operation of the facility that may result in public health or safety concerns.</p> <p>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 5]</p>

### 4.3 Pre-Construction (PRE) Conditions

Condition Number	Pre-Construction (PRE) Conditions
<b>STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]</b>	
PRE-OE-01	<p>Before beginning construction, the certificate holder shall notify the department of the identity and qualifications of the major design, engineering and construction contractor(s) for the facility. The certificate holder shall select contractors that have substantial experience in the design, engineering and construction of similar facilities. The certificate holder shall report to the department any changes of major contractors.</p> <p>[Final Order on ASC, Organizational Expertise Condition 1]</p>
PRE-OE-02	<p>Before beginning construction, the certificate holder shall notify the department of the identity and qualifications of the construction manager to demonstrate that the construction manager is qualified in environmental compliance and has the capability to ensure compliance with all site certificate conditions.</p> <p>[Final Order on ASC, Organizational Expertise Condition 2]</p>
PRE-OE-03	<p>Prior to construction, the certificate holder shall contractually require all construction contractors and subcontractors involved in the construction of the facility to comply with all applicable laws and regulations and with the terms and conditions of the site certificate. Such contractual provisions shall not operate to relieve the certificate holder of responsibility under the site certificate.</p> <p>[Final Order on ASC, Organizational Expertise Condition 3]</p>
PRE-OE-04	<p>Before beginning construction, the certificate holder shall notify the department before conducting any work on the site that does not qualify as surveying, exploration, or other activities to define or characterize the site. The notice must include a description of the work and evidence that its value is less than \$250,000 or evidence that the certificate holder has satisfied all conditions that are required prior to beginning construction.</p> <p>[Final Order on ASC, Organizational Expertise Condition 4]</p>
PRE-OE-05	<p>Prior to construction, the certificate holder must provide the department and Umatilla and Morrow Counties with the name(s) and location(s) of the aggregate source and evidence of the source’s county permit(s).</p> <p>[Final Order on ASC, Organizational Expertise Condition 7]</p>
PRE-OE-06	<p>Before beginning construction on any phase of the facility, the certificate holder must provide evidence to the department and Morrow and Umatilla counties that the third party that will construct, own and operate the interconnection transmission line has obtained all necessary approvals and permits for that interconnection transmission line and that the certificate holder has a contract with the third party for use of the transmission line.</p> <p>[Final Order on ASC, Organizational Expertise Condition 8]</p>

**STANDARD: STRUCTURAL (SS) [OAR 345-022-0020]**

PRE-SS-01	<p>Before beginning construction, the certificate holder must:</p> <ol style="list-style-type: none"><li>a) Submit a protocol to the Department and Oregon Department of Geology &amp; Mineral Industries (DOGAMI), for review, with the applicable codes, standards, and guidelines to be used, and proposed geotechnical work to be conducted for the site-specific geotechnical investigation report.</li><li>b) Following receipt and review of Department and DOGAMI comments on the protocol per (a), the certificate holder shall conduct a site-specific geological and geotechnical investigation, and shall report its findings to DOGAMI and the department. The report shall be used by the certificate holder in final facility layout and design. The department shall review, in consultation with DOGAMI, and confirm that the investigation report includes an adequate assessment of the following information:<ul style="list-style-type: none"><li>• Subsurface soil and geologic conditions of the site boundary</li><li>• Define and delineate geological and geotechnical hazards, and means to mitigate these hazards</li><li>• Geotechnical design criteria and data for the turbine foundations, foundations of substations, O&amp;M buildings, battery storage systems, roads, and other related and supporting facilities</li><li>• Design data for installation of underground and overhead collector lines, and overhead transmission lines</li><li>• Investigation of specific areas with potential for slope instability and landslide hazards. Landslide hazard evaluation shall be conducted by LIDAR and field work, as recommended by DOGAMI</li><li>• Investigations of the swell and collapse potential of loess soils within the site boundary.</li></ul></li></ol> <p>[Final Order on ASC, Structural Standard Condition 1; AMD2]</p>
PRE-SS-02	<p>Prior to construction, the certificate holder shall include as part of the geotechnical investigation required per Structural Standard Condition 1, an investigation of all potentially active faults within the site boundary, including the fault labeled as 2438 on Figures H-1 and H-2 of ASC Exhibit H. The investigation shall include a description of the potentially active faults, their potential risk to the facility, and any additional mitigation that will be undertaken by the certificate holder to ensure safe design, construction, and operation of the facility.</p> <p>[Final Order on ASC, Structural Standard Condition 3]</p>
PRE-SS-03	<p>Prior to construction, the certificate holder shall include as part of the geotechnical investigation required per Structural Standard Condition 1 an investigation of specific areas with potential for slope instability and shall site turbine strings appropriate to avoid potential hazards. The landslide hazards shall be investigated and mapped before final facility layout and design. The landslide hazard evaluation shall be conducted by a combination of LIDAR and field work.</p> <p>[Final Order on ASC, Structural Standard Condition 4]</p>
PRE-SS-04	<p>Prior to construction, the certificate holder shall include as part of the geotechnical investigation required per Structural Standard Condition 1, an investigation of the swell and collapse potential of loess soil in the site boundary. Based on the results of the investigation, the certificate holder shall include mitigation measures including, as necessary, over-excavating and replacing loess soil with structural fill, wetting and compacting, deep foundations, or avoidance of specific areas.</p> <p>[Final Order on ASC, Structural Standard Condition 5]</p>

**STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]**

PRE-SP-01	<p>Prior to beginning construction, the certificate holder shall provide a copy of a DEQ-approved construction Spill Prevention Control and Countermeasures (SPCC) plan, to be implemented during</p>
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facility construction. The SPCC plan shall include the measures described in Exhibit I of ASC and in the final order approving the site certificate. [Final Order on ASC, Soil Protection Condition 3]
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PRE-SP-02	<p>Prior to construction, the certificate holder shall ensure that the final Revegetation Plan includes a program to protect and restore agricultural soils temporarily disturbed during facility construction. As described in the final order, agriculture soils shall be properly excavated, stored, and replaced by soil horizon. Topsoil shall be preserved and replaced. The Revegetation Plan shall be finalized pursuant to Fish and Wildlife Habitat Condition 11.</p> <p>[Final Order on ASC, Soil Protection Condition 4]</p>
PRE-SP-03	<p>Prior to beginning construction of the O&amp;M buildings, the certificate holder shall secure any necessary septic system permits from DEQ. Copies of the necessary permits must be provided to the department prior to beginning construction of the O&amp;M buildings.</p> <p>[Final Order on ASC, Soil Protection Condition 7]</p>
<b>STANDARD: LAND USE (LU) [OAR 345-022-0030]</b>	
PRE-LU-01	<p>Before beginning construction, the certificate holder shall complete the following:</p> <ol style="list-style-type: none"> <li>a. Pay the requisite fee and obtain a Zoning Permit from Morrow County for all facility components sited in Morrow County; and</li> <li>b. Obtain all other necessary local permits, including building permits.</li> <li>c. Provide the county with a building permit application, a third party technical report which includes: <ol style="list-style-type: none"> <li>1. Evaluates fire hazards and;</li> <li>2. Presents mitigation and recommendations for a fire suppression system designed for the battery storage systems.</li> </ol> </li> <li>d. The certificate holder shall provide copies of the third-party technical report and issued permits to the Department.</li> </ol> <p>[Final Order on ASC, Land Use Condition 3; AMD2]</p>
PRE-LU-02	<p>Before beginning construction, the certificate holder shall pay the requisite fee and obtain a Conditional Use Permit as required under Morrow County Zoning Ordinance Article 6 Section 6.015.</p> <p>[Final Order on ASC, Land Use Condition 5]</p>
PRE-LU-03	<p>Before beginning construction, the certificate holder shall prepare a Weed Control Plan that is consistent with Morrow and Umatilla County weed control requirements to be approved by the department. The department shall consult with Morrow and Umatilla counties and ODFW. The final plan must be submitted to the department no less than 30 days prior to the beginning of construction. The certificate holder shall implement the requirements of the approved plan during all phases of construction and operation of the facility.</p> <p>[Final Order on ASC, Land Use Condition 6]</p>
PRE-LU-04	<p>Before beginning construction, the certificate holder shall record in the real property records of Morrow County a Covenant Not to Sue with regard to generally accepted farming practices on adjacent farmland.</p> <p>[Final Order on ASC, Land Use Condition 7]</p>
PRE-LU-05	<p>Prior to beginning construction, the certificate holder shall consult with surrounding landowners and lessees and shall consider proposed measures to reduce or avoid any adverse impacts to farm practices on surrounding lands and to avoid any increase in farming costs during construction and operation of the facility. Prior to beginning construction, the certificate holder shall provide evidence of this consultation to the department, Morrow County, and Umatilla County.</p> <p>[Final Order on ASC, Land Use Condition 12]</p>

PRE-LU-06	<p>Before beginning construction, the certificate holder shall work with the Morrow County Road Department to identify specific construction traffic related concerns, and develop a traffic management plan that specifies necessary traffic control measures to mitigate the effects of the temporary increase in traffic. The certificate holder must provide a copy of the traffic management plan to the department and Morrow County, and must implement the traffic management plan during construction.</p> <p>[Final Order on ASC, Land Use Condition 13]</p>
PRE-LU-07	<p>Before beginning construction, the certificate holder must:</p> <ol style="list-style-type: none"> <li>a. Pay the requisite fee(s) and obtain a Zoning Permit(s) from Umatilla County for facility components sited within Umatilla County, including, but not limited to, turbines, substation, O&amp;M building, and the intraconnection line.</li> <li>b. Provide the Department and county with a building permit application that includes a third party technical report which: <ol style="list-style-type: none"> <li>1. Evaluates fire hazards, and</li> <li>2. Presents mitigation and recommendations for a fire suppression system designed for the battery storage systems.</li> </ol> </li> <li>c. The certificate holder shall provide copies of the third-party technical report and issued permits to the Department.</li> </ol> <p>[Final Order on ASC, Land Use Condition 15; AMD2]</p>
PRE-LU-08	<p>Prior to facility construction, the certificate holder shall install gates and no trespassing signs at all private access roads established or improved for the purpose of facility construction and operation <b>in Umatilla County and in Morrow County only as requested by the project landowner.</b></p> <p>[Final Order on ASC, Land Use Condition 18]</p>
PRE-LU-09	<p>Before beginning construction, the certificate holder shall record in the real property records of Umatilla County a Covenant Not to Sue with regard to generally accepted farming practices on adjacent farmland.</p> <p>[Final Order on ASC, Land Use Condition 21]</p>
<b>STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]</b>	
PRE-RF-01	<p>Before beginning construction of the facility, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition. The certificate holder shall maintain a bond or letter of credit in effect at all times until the facility has been retired. The Council may specify different amounts for the bond or letter of credit during construction and during operation of the facility.</p> <p>[Final Order on ASC, Retirement and Financial Assurance Condition 4] [Mandatory Condition OAR 345-025-0006(8)]</p>

PRE-RF-02

Before beginning construction of the facility, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit naming the State of Oregon, acting by and through the Council, as beneficiary or payee. The initial bond or letter of credit amount for the facility is \$19.5 million dollars (Q3 2018 dollars), to be adjusted to the date of issuance, and adjusted on an annual basis thereafter, as described in sub-paragraph (b) of this condition:

- (a) The certificate holder may adjust the amount of the initial bond or letter of credit based on the final design configuration of the facility. Any revision to the restoration costs should be adjusted to the date of issuance as described in (b) and subject to review and approval by the Council.
- (b) The certificate holder shall adjust the amount of the bond or letter of credit using the following calculation:
  - (1) Adjust the amount of the bond or letter of credit (expressed in Q3 2018 dollars) to present value, using the U.S. Gross Domestic Product Implicit Price Deflator, Chain-Weight, as published in the Oregon Department of Administrative Services' "Oregon Economic and Revenue Forecast" or by any successor agency and using the third quarter 2018 index value and the quarterly index value for the date of issuance of the new bond or letter of credit. If at any time the index is no longer published, the Council shall select a comparable calculation to adjust third quarter 2018dollars to present value.
  - (2) Round the result total to the nearest \$1,000 to determine the financial assurance amount.
- (c) The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.
- (d) The certificate holder shall use a form of bond or letter of credit approved by the Council. The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council under OAR 345-026-0080. The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.

[Final Order on ASC, Retirement and Financial Assurance Condition 5; AMD2]

**STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]**

PRE-FW-01	<p>Prior to final site design and facility layout, the certificate holder shall conduct a field-based habitat survey to confirm the habitat categories of all areas that will be affected by facility components, as well as the locations of any sensitive resources such as active raptor and other bird nests. The survey shall be planned in consultation with the department and ODFW, and survey protocols shall be confirmed with the department and ODFW. Following completion of the field survey, and final layout design and engineering, the certificate holder shall provide the department and ODFW a report containing the results of the survey, showing expected final location of all facility components, the habitat categories of all areas that will be affected by facility components, and the locations of any sensitive resources.</p> <p>The report shall also include an updated version of Table FW-1 Potential Temporary and Permanent Impacts by Habitat Category and Type of the final order, showing the acres of expected temporary and permanent impacts to each habitat category, type, and sub-type. The pre-construction survey shall be used to complete final design, facility layout, and micro-siting of facility components. As part of the report, the certificate holder shall include its impact assessment methodology and calculations, including assumed temporary and permanent impact acreage for each transmission structure, wind turbine, access road, and all other facility components. If construction laydown yards are to be retained post construction, due to a landowner request or otherwise, the construction laydown yards must be calculated as permanent impacts, not temporary.</p> <p>In classifying the affected habitat into habitat categories, the certificate holder shall consult with the department and ODFW. The certificate holder shall not begin construction of the facility until the habitat assessment, categorization, and impact assessment has been approved by the department, in consultation with ODFW. The certificate holder shall not construct any facility components within areas of Category 1 habitat and shall avoid temporary disturbance of Category 1 habitat.</p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 1]</p>
PRE-FW-02	<p>Prior to construction, the certificate holder shall finalize and implement the Wildlife Monitoring and Mitigation Plan (WMMP) provided in Attachment F of this order, based on the final facility design, as approved by the department in consultation with ODFW.</p> <ol style="list-style-type: none"><li>a. The final WMMP must be submitted and ODOE's concurrence received prior to the beginning of construction. ODOE shall consult with ODFW on the final WMMP. The certificate holder shall implement the requirements of the approved WMMP during all phases of construction and operation of the facility.</li><li>b. The WMMP may be amended from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council ("Council"). Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of the WMMP agreed to by the Department.</li></ol> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 4]</p>
PRE-FW-03	<p>Prior to construction, the certificate holder shall flag all environmentally sensitive areas as restricted work zones. Restricted work zones shall include but not be limited to areas with sensitive or protected plant species, including candidate species, wetlands and waterways that are not authorized for construction impacts, areas with seasonal restrictions, and active state sensitive species bird nests.</p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 8]</p>

PRE-FW-04	<p>Before beginning construction the certificate holder shall prepare and receive approval from the department of a final Habitat Mitigation Plan. The final Habitat Mitigation Plan shall be based on the final facility design and shall be approved by the department in consultation with ODFW. The Council retains the authority to approve, reject or modify the final HMP.</p> <ol style="list-style-type: none"> <li>a. The final Habitat Mitigation Plan and the department’s approval must be received prior to beginning construction. The department shall consult with ODFW on the final plan. The certificate holder shall implement the requirements of the approved plan during all phases of construction and operation of the facility.</li> <li>b. The certificate holder shall calculate the size of the habitat mitigation area according to the final design configuration of the facility and the estimated areas of habitat affected in each habitat category, in consultation with the department, as per the pre-construction survey results and impact assessment calculations called for in Fish and Wildlife Habitat Condition 1.</li> <li>c. The certificate holder shall acquire the legal right to create, enhance, maintain, and protect the habitat mitigation area, as long as the site certificate is in effect, by means of an outright purchase, conservation easement or similar conveyance and shall provide a copy of the documentation to the department prior to the start of construction. Within the habitat mitigation area, the certificate holder shall improve the habitat quality as described in the final Habitat Mitigation Plan.</li> <li>d. The final HMP shall include an implementation schedule for all mitigation actions, including securing the conservation easement, conducting the ecological uplift actions at the habitat mitigation area, revegetation and restoration of temporarily impacted areas, and monitoring. The mitigation actions shall be implemented according to the following schedule, as included in the HMP: <ol style="list-style-type: none"> <li>i. Restoration and revegetation of temporary construction-related impact area shall be conducted as soon as possible following construction.</li> <li>ii. The certificate holder shall obtain legal authority to conduct the required mitigation work at the compensatory habitat mitigation site before commencing construction. The habitat enhancement actions at the compensatory habitat mitigation site shall be implemented concurrent with construction.</li> </ol> </li> <li>e. The final HMP shall include a monitoring and reporting program for evaluating the effectiveness of all mitigation actions, including restoration of temporarily impacted areas and ecological uplift actions at the habitat mitigation area.</li> <li>f. The final HMP shall include mitigation in compliance with the Council’s Fish and Wildlife Habitat standard, including mitigation for temporary impacts to Category 4 habitat (shrub-steppe habitat); and, mitigation for all Category 2 habitat impacts that meet the mitigation goal of no net loss of habitat quality or quantity, plus a net benefit of habitat quality or quantity.</li> <li>g. The final HMP may be amended from time to time by agreement of the certificate holder and the Oregon Energy Facility Siting Council (“Council”). Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan. The Department shall notify the Council of all amendments, and the Council retains the authority to approve, reject, or modify any amendment of this plan agreed to by the Department.</li> </ol> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 10]</p>
PRE-FW-05	<p>Before beginning construction, the certificate holder shall prepare and receive approval of a final Revegetation Plan, provided as Attachment E to this order, from the department, in consultation with Umatilla and Morrow counties and ODFW. The certificate holder shall implement the requirements of the approved plan during all phases of construction and operation of the facility.</p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 11]</p>

**STANDARD: THREATENED AND ENDANGERED SPECIES (TE) [OAR 345-022-0070]**

<p>PRE-TE-01</p>	<p>Prior to construction, the certificate holder shall determine the boundaries of Category 1 Washington ground squirrel habitat. The certificate holder shall hire a qualified professional biologist who has experience in detection of Washington ground squirrel to conduct pre-construction surveys using a survey protocol approved by the department in consultation with ODFW. The biologist shall survey all areas of suitable habitat within 1,000 feet of any ground disturbing activity. Ground disturbing activity refers to any potential impact, whether permanent or temporary. The protocol surveys shall be conducted in the active squirrel season (March 1 to May 31) prior to construction commencement. The protocol survey is valid for three years. If construction begins within three years of conducting the protocol survey, but not within one year of the protocol survey, the certificate holder shall conduct a pre-construction survey only within areas of suitable Washington ground squirrel habitat where ground disturbing activity would occur.</p> <p>The certificate holder shall provide written reports of the surveys to the department and to ODFW and shall identify the boundaries of Category 1 Washington ground squirrel (WGS) habitat. The certificate holder shall not begin construction within suitable habitat until the identified boundaries of Category 1 WGS habitat have been approved by the department, in consultation with ODFW.</p> <p>The certificate holder shall avoid any permanent or temporary disturbance in all Category 1 WGS habitat. The certificate holder shall ensure that these sensitive areas are correctly marked with exclusion flagging and avoided during construction.</p> <p>[Final Order on ASC, Threatened and Endangered Species Condition 1]</p>
<p>PRE-TE-02</p>	<p>In accordance with Fish and Wildlife Habitat Condition 4, prior to construction, the certificate holder shall finalize and implement the Wildlife Monitoring and Mitigation Plan (WMMP) provided in Attachment F of this order, based on the final facility design, as approved by the department in consultation with ODFW. The final WMMP shall include a program to monitor potential impacts from facility operation on Washington ground squirrel. Monitoring shall be of any known colonies and shall be completed on the same schedule as the raptor nest monitoring for the facility. The monitoring surveys shall include returning to the known colonies to determine occupancy and the extent of the colony as well as a general explanation of the amount of use at the colony. If the colony is not found within the known boundary of the historic location a survey 500 feet out from the known colony will be conducted to determine if the colony has shifted over time. Any new colonies that are located during other monitoring activities, such as raptor nest monitoring surveys, shall be documented and the extent of those colonies should be delineated as well. These newly discovered colonies shall also be included in any future WGS monitoring activities.</p> <p>[Final Order on ASC, Threatened and Endangered Species Condition 2]</p>
<p>PRE-TE-03</p>	<p>To avoid potential impacts to Laurent’s milkvetch, the certificate holder must:</p> <ol style="list-style-type: none"> <li>i. Conduct preconstruction plant surveys for Laurent’s milkvetch within 1,000-feet of temporary and permanent disturbance from the 230 kV intraconnection transmission line; and, within 500-feet of temporary and permanent disturbance from all other facility components, unless extent of survey area within suitable habitat from temporary and permanent disturbance is otherwise agreed upon by the Department on consultation with Oregon Department of Agriculture. If the species is found to occur, the certificate holder must install protection flagging around the plant population and avoid any ground disturbance within this zone.</li> <li>ii. Ensure that any plant protection zone established under (a) above is included on construction plans showing the final design locations.</li> </ol>

iii. If herbicides are used to control weeds, the certificate holder shall follow the manufacturer’s guidelines in establishing a buffer area around confirmed populations of Laurent’s milkvetch. Herbicides must not be used within the established buffers.  
 [Final Order on ASC; AMD3; Threatened and Endangered Species Condition 3]

**STANDARD: HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES (HC) [OAR 345-022-0090]**

PRE-HC-01	<p>Before beginning construction, the certificate holder shall provide to the department a map showing the final design locations of all components of the facility, the areas that will be temporarily disturbed during construction and the areas that were surveyed in 2013-14 for historic, cultural, and archaeological resources.          [Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 1]</p>
PRE-HC-02	<p>Before beginning construction, the certificate holder shall mark the buffer areas established under Historic, Cultural, and Archeological Resources Condition 3 for all identified historic, cultural, or archaeological resource sites (including those of unknown age) on construction maps and drawings as “no entry” areas. A copy of current maps and drawings must be maintained onsite during construction and made available to the department upon request.          [Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 2]</p>
PRE-HC-03	<p>Before beginning construction, the certificate holder shall ensure that a qualified archeologist, as defined in OAR 736-051-0070, trains construction contractors on how to identify sensitive historic, cultural, and archaeological resources present onsite and on measures to avoid accidental damage to identified resource sites. Records of such training must be maintained onsite during construction, and made available to the department upon request.          [Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 4]</p>

**STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]**

PRE-PS-01	<p>Prior to construction, the certificate holder shall prepare a Traffic Management Plan that includes the procedures and actions described in this order and the mitigation measures identified in ASC Exhibit U, Section 3.5.4. The plan shall be approved by the department in consultation with the appropriate transportation service providers. The plan shall be maintained onsite and implemented throughout construction of the facility.</p> <p>In addition, the certificate holder shall include the following information in the plan:</p> <ol style="list-style-type: none"> <li>a. Procedures to provide advance notice to all affected local jurisdictions and adjacent landowners of construction deliveries and the potential for heavy traffic on local roads;</li> <li>b. A policy of including traffic control procedures in contract specifications for construction of the facility;</li> <li>c. Procedures to maintain at least one travel lane at all times to the extent reasonably possible so that roads will not be closed to traffic because of construction vehicles;</li> <li>d. A policy of ensuring that no equipment or machinery is parked or stored on any county road whether inside or outside the site boundary. The certificate holder may temporarily park equipment off the road but within county rights-of-way with the approval of the Morrow County and Umatilla County Public Works Departments;</li> <li>e. A policy to encourage and promote carpooling for the construction workforce; and</li> <li>f. Procedures to keep state highways and county roads free of gravel that may be tracked out on intersecting roads at facility access points.</li> </ol> <p>[Final Order on ASC, Public Services Condition 6]</p>
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PRE-PS-02	<p>Before beginning construction, the certificate holder must enter into Road Use Agreements with the Morrow County and Umatilla County Public Works Departments. The Agreements must include, at a minimum, a pre-construction assessment of road surfaces under Morrow County and Umatilla County jurisdiction, construction monitoring, and post-construction inspection and repair. A copy of the Road Use Agreements with Morrow County and Umatilla County must be submitted to the department before beginning construction. If required by Morrow County or Umatilla County, the certificate holder shall post bonds to ensure funds are available to repair and maintain roads affected by the facility.</p> <p>[Final Order on ASC, Public Services Condition 7]</p>
PRE-PS-03	<p>The certificate holder shall design and construct new access roads and private road improvements to standards approved by Umatilla County or Morrow County. Where modifications of county roads are necessary, the certificate holder shall construct the modifications entirely within the county road rights-of-way and in conformance with county road design standards subject to the approval of the Umatilla County and Morrow County Public Works Departments.</p> <p>[Final Order on ASC, Public Services Condition 8]</p>
PRE-PS-04	<p>Before beginning construction, the certificate holder shall submit to the Federal Aviation Administration (FAA) and the Oregon Department of Aviation an FAA Form 7460-1 Notice of Proposed Construction or Alteration for each turbine. Before beginning construction, the certificate holder shall submit to the department the results of the Oregon Department of Aviation aeronautical study and determination. If the department, in consultation with the Oregon Department of Aviation, determines that any turbine would adversely impact an airport's ability to provide service by obstructing the airport's primary or horizontal surface, the department, in consultation with the Oregon Department of Aviation and the certificate holder, shall determine appropriate mitigation, if any, prior to construction.</p> <p>[Final Order on ASC, Public Services Condition 9]</p>

<p>PRE-PS-05</p>	<p>Prior to construction, the certificate holder shall prepare an Emergency Management Plan that includes the procedures and actions described in this order and in ASC Exhibit U. The certificate holder shall submit the plan to ODOE for review and approval in consultation with the appropriate local fire protection districts (including the City of Heppner Volunteer Fire Department, Lone Rural Fire Protection District, and Echo Rural Fire Protection District) prior to construction. The plan shall be maintained onsite and implemented throughout construction and operation of the facility. Any updates to the plan shall be provided to the department within 30 days. All onsite workers shall be trained on the fire prevention and safety procedures contained in the plan prior to working on the facility.</p> <p>Additional information that shall be included in the plan:</p> <ol style="list-style-type: none"> <li>a. Current contact information of at least two facility personnel available to respond on a 24-hour basis in case of an emergency on the facility site. The contact information must include name, telephone number(s), physical location, and email address for the listed contact(s). An updated list must be provided to the fire protection agencies immediately upon any change of contact information. A copy of the contact list, and any updates as they occur, must also be provided to the Department, along with a list of the agencies that received the contact information.</li> <li>b. Identification of agencies that participated in developing the plan;</li> <li>c. Identification of agencies that are designated as first response agencies or are included in any mutual aid agreements with the facility;</li> <li>d. A list of any other mutual aid agreements or fire protection associations in the vicinity of the facility;</li> <li>e. Contact information for each agency listed above;</li> <li>f. Communication protocols for both routine and emergency events and the incident command system to be used in the event a fire response by multiple agencies is needed at the facility;</li> <li>g. Access and fire response at the facility site during construction and operations. Fire response plans during construction should address regular and frequent communication amongst the agencies regarding the number and location of construction sites within the site boundary, access roads that are completed and those still under construction, and a temporary signage system until permanent addresses and signs are in place;</li> <li>h. The designated meeting location in case of evacuation;</li> <li>i. Staff training requirements; and</li> </ol> <p>Copies of mutual aid, fire protection association, or other agreements entered into concerning fire protection at the facility site.</p> <p>[Final Order on ASC, Public Services Condition 13]</p>
<p>PRE-PS-06</p>	<p>Before beginning construction, the certificate holder shall develop and implement, or require its contractors to develop and implement, a site health and safety plan that informs workers and others onsite about first aid techniques and what to do in case of an emergency. The health and safety plan will include preventative measures, important telephone numbers, the locations of onsite fire extinguishers, and the names, locations and contact information of nearby hospitals. All onsite workers shall be trained in safety and emergency response, as per the site health and safety plan. The site health and safety plan must be updated on an annual basis, maintained throughout the construction and operations and maintenance phases of the facility, and available upon request by the department.</p> <p>[Final Order on ASC, Public Services Condition 20]</p>

PRE-PS-07	<p>Before beginning construction, the certificate holder shall ensure that all construction workers are certified in first aid, cardio pulmonary resuscitation (CPR), and the use of an automated external defibrillator (AED). The certificate holder must retain records of the certifications and provide them to the department upon request. The certificate holder shall also ensure that an AED is available onsite at all times that construction activities are occurring.</p> <p>[Final Order on ASC, Public Services Condition 21]</p>
<b>STANDARD: WASTE MINIMIZATION (WM,) [OAR 345-022-0120]</b>	
PRE-WM-01	<p>Prior to construction, the certificate holder shall develop a construction waste management plan, to be implemented during all phases of facility construction, which includes at a minimum the following details:</p> <ol style="list-style-type: none"> <li>a. Specification of the number and types of waste containers to be maintained at construction sites and construction yards</li> <li>b. Description of waste segregation methods for recycling or disposal.</li> <li>c. Names and locations of appropriate recycling and waste disposal facilities, collection requirements, and hauling requirements to be used during construction.</li> </ol> <p>The certificate holder shall maintain a copy of the construction waste management plan onsite and shall provide to the department a report on plan implementation in the 6-month construction report required pursuant to OAR 345-026-0080(1)(a).</p> <p>[Final Order on ASC, Waste Minimization Condition 2]</p>
PRE-WM-02	<p>Prior to construction, the certificate holder shall investigate and confirm that no surface waters, shallow groundwater, or drinking water sources will be adversely impacted by the usage of concrete washout water in the foundations of facility components, and shall submit an investigation report to the department. Prior to construction, the department, in consultation with DEQ, shall review the results of the investigation report and shall verify that the plan to dispose of concrete washout water in the foundations of facility components is unlikely to adversely impact surface waters, shallow groundwater, or drinking water sources. The applicant's investigation shall be based on the anticipated final facility layout and design. If the results of the investigation show that the proposed concrete washout water disposal method would cause adverse impacts to surface water, shallow groundwater, or drinking water sources, the applicant shall propose mitigation measures to reduce potential impacts, for review and approval by the department in consultation with DEQ, prior to construction.</p> <p>[Final Order on ASC, Waste Minimization Condition 3]</p>
<b>STANDARD: SITING STANDARDS FOR TRANSMISSION LINES (TL) [OAR 345-024-0090]</b>	
PRE-TL-01	<p>Prior to construction, the certificate holder shall schedule a time to brief the OPUC Safety, Reliability, and Security Division (Safety) Staff as to how it will comply with OAR Chapter 860, Division 024 during design, construction, operations, and maintenance of the facilities.</p> <p>[Final Order on ASC, Siting Standard Condition 2]</p>

**STANDARD: NOISE CONTROL REGULATION (NC) [OAR 345-035-0035]**

PRE-NC-01

Prior to construction, the certificate holder shall provide to the department:

- a. Information that identifies the final design locations of all facility components to be built at the facility;
- b. The maximum sound power level for the facility components and the maximum sound power level and octave band data for the turbine type(s) and transformers selected for the facility based on manufacturers' warranties or confirmed by other means acceptable to the department;
- c. The results of the noise analysis of the final facility design performed in a manner consistent with the requirements of OAR 340-035-0035(1)(b)(B) (iii)(IV) and (VI). The analysis must demonstrate to the satisfaction of the department that the total noise generated by the facility (including turbines and transformers) would meet the ambient noise degradation test and maximum allowable test at the appropriate measurement point for all potentially-affected noise sensitive properties, or that the certificate holder has obtained the legally effective easement or real covenant for expected exceedances of the ambient noise degradation test described (d) below. The analysis must also identify the noise reduction operation (NRO) mode approach that will be used during facility operation and include a figure that depicts the turbines that will be operating in NRO mode and the associated dBA reduction level; if required to meet the maximum allowable decibel threshold of 50 dBA; and,
- d. For each noise-sensitive property where the certificate holder relies on a noise waiver to demonstrate compliance in accordance with OAR 340-035-0035(1)(b)(B)(iii)(III), a copy of the legally effective easement or real covenant pursuant to which the owner of the property authorizes the certificate holder's operation of the facility to increase ambient statistical noise levels  $L_{10}$  and  $L_{50}$  by more than 10 dBA at the appropriate measurement point. The legally effective easement or real covenant must: include a legal description of the burdened property (the noise sensitive property); be recorded in the real property records of the county; expressly benefit the property on which the wind energy facility is located; expressly run with the land and bind all future owners, lessees or holders of any interest in the burdened property; and not be subject to revocation without the certificate holder's written approval.

[Final Order on ASC; AMD3; Noise Control Condition 2]

#### 4.4 Construction (CON) Conditions

Condition Number	Construction (CON) Conditions
<b>STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]</b>	
CON-SP-01	<p>During construction, the certificate holder shall conduct all work in compliance with a final Erosion and Sediment Control Plan (ESCP) that is satisfactory to the Oregon Department of Environmental Quality as required under the National Pollutant Discharge Elimination System Construction Stormwater Discharge General Permit 1200-C.</p> <p>[Final Order on ASC, Soil Protection Condition 1]</p>
CON-SP-02	<p>During construction, the erosion and sediment control best management practices and measures as described in ASC Exhibit I, Section 5.2 and listed in the final order approving the site certificate shall be included and implemented as part of the final ESCP.</p> <p>[Final Order on ASC, Soil Protection Condition 2]</p>
<b>STANDARD: LAND USE (LU) [OAR 345-022-0030]</b>	
CON-LU-01	<p>During construction, the certificate holder shall comply with the following requirements:</p> <ol style="list-style-type: none"> <li>Construction vehicles shall use previously disturbed areas including existing roadways and tracks.</li> <li>Temporary construction yards and laydown areas shall be located within the future footprint of permanent structures to the extent practicable.</li> <li>New, permanent roadways will be the minimum width allowed while still being consistent with safe use and satisfying county road and safety standards.</li> <li>Underground communication and electrical lines will be buried within the area disturbed by temporary road widening to the extent practicable.</li> </ol> <p>[Final Order on ASC, Land Use Condition 8]</p>
CON-LU-02	<p>During construction, the certificate holder shall install smooth turbine tower structures and turbine nacelles that lack perching or nesting opportunities for birds.</p> <p>[Final Order on ASC, Land Use Condition 17]</p>
CON-LU-03	<p>During construction, the certificate holder shall install the electrical cable collector system underground, where practicable. In agricultural areas, the collector system lines must be installed at a depth of 3 feet or deeper as necessary to prevent adverse impacts on agriculture operations. In all other areas, the collector system lines must be installed a minimum of 3 feet where practicable.</p> <p>[Final Order on ASC, Land Use Condition 19]</p>
<b>STANDARD: FISH AND WILDLIFE HABITAT (FW) [OAR 345-022-0060]</b>	
CON-FW-01	<p>No construction shall occur in mule deer winter range during winter, defined as December 1 to March 31. Mule deer winter range is based on data to be provided by ODFW at the time of construction. <b>Upon request by the certificate holder, the Department may provide exceptions to this restriction. The certificate holder’s request must include a justification for the request, including any actions the certificate holder will take to avoid, minimize, or mitigate impacts to mule deer winter range during winter in the relevant area. The Department will consult with ODFW on any request made under this condition.</b></p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 3]</p>

CON-FW-02	<p>During construction within the time periods listed below, the certificate holder shall implement buffer zones around nest sites of the species listed below. No ground-disturbing activities within the buffer zone shall occur during the seasonal restrictions. <b>Upon request by the certificate holder, the Department may provide exceptions to this restriction. The certificate holder's request must include a justification for the request, including any actions the certificate holder will take to avoid, minimize, or mitigate impacts to the nest sites of the species listed below during the seasonal restrictions. The Department will consult with ODFW on any request made under this condition.</b></p> <p>The construction workforce and facility employees must be provided maps with the locations of the buffer zones and be instructed to avoid ground-disturbing activity within the buffer zone during construction activities.</p>		
	<u>Nesting Species</u>	<u>Buffer Size (Radius Around Nest Site):</u>	<u>Avoidance Buffers in Effect from:</u>
	<u>Western burrowing owl</u>	<u>0.25 mile</u>	<u>April 1 to August 15</u>
	<u>Ferruginous hawk</u>	<u>0.25 mile</u>	<u>March 15 to August 15</u>
	<u>Swainson's hawk</u>	<u>0.25 mile</u>	<u>April 1 to August 15</u>

[Final Order on ASC; AMD3 Fish and Wildlife Habitat Condition 5]

CON-FW-03	<p>During construction, the certificate holder shall employ a qualified environmental professional to provide environmental training to all personnel prior to working onsite, related to sensitive species present onsite, precautions to avoid injuring or destroying wildlife or sensitive wildlife habitat, exclusion areas, permit requirements and other environmental issues. All personnel shall be given clear maps showing areas that are off-limits for construction, and shall be prohibited from working outside of the areas in the site boundary that have been surveyed and approved for construction. The certificate holder shall instruct construction personnel to report any injured or dead wildlife detected while on the site to the appropriate onsite environmental manager. Records of completed training shall be maintained onsite and made available to the department upon request.</p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 7]</p>
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CON-FW-04	<p>During construction, the certificate holder shall employ at a minimum one environmental inspector to be onsite daily. The environmental inspector shall oversee permit compliance and construction, and ensure that known sensitive environmental resources are protected. The environmental inspector shall prepare a weekly report during construction, documenting permit compliance and documenting any corrective actions taken. Reports shall be kept on file and available for inspection by the department upon request.</p> <p>[Final Order on ASC, Fish and Wildlife Habitat Condition 9]</p>
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**STANDARD: HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES (HC) [OAR 345-022-0090]**

CON-HC-01	<p>Immediately prior to construction activities, the certificate holder must flag or otherwise mark a 200-foot avoidance buffer around historic archaeological sites, as identified by the maps and drawings prepared in accordance with Historic, Cultural, and Archeological Resources Conditions 1 and 2. No disturbance is allowed within the buffer zones. For historic archaeological sites, an archeological monitor must be present if construction activities are required within 200-feet of sites identified as potentially eligible for listing on the National Register of Historic Places (NRHP). The certificate holder may use existing private roads within the buffer areas but may not widen or improve private roads within the buffer areas. The no-entry restriction does not apply to public road rights-of-way within buffer areas. Flagging or marking should be removed immediately upon cessation of activities in the area that pose a threat of disturbance to the site being protected.</p> <p>[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 3]</p>
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CON-HC-02	<p>During construction, the certificate holder shall ensure that construction personnel cease all ground-disturbing activities in the immediate area if any archeological or cultural resources are found during construction of the facility until a qualified archeologist can evaluate the significance of the find. The certificate holder shall notify the department and the Oregon State Historic Preservation Office (SHPO) of the find. If ODOE, in consultation with SHPO, determines that the resource meets the definition of an archaeological object, archaeological site, or is eligible or likely to be eligible for listing on the (NRHP), the certificate holder shall, in consultation with the department, SHPO, interested Tribes and other appropriate parties, make recommendations to the Council for mitigation, including avoidance, field documentation and data recovery. The certificate holder shall not restart work in the affected area until the department, in consultation with SHPO, agree that the certificate holder has demonstrated that it has complied with archeological resources protection regulations.</p> <p>[Final Order on ASC, Historic, Cultural, and Archeological Resources Condition 5]</p>
<b>STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]</b>	
CON-PS-01	<p>During construction, the certificate holder shall include the following additional measures in the construction waste management plan required by Waste Minimization Condition 2:</p> <ol style="list-style-type: none"> <li>a. Recycling steel and other metal scrap.</li> <li>b. Recycling wood waste.</li> <li>c. Recycling packaging wastes such as paper and cardboard.</li> <li>d. Collecting non-recyclable waste for transport to a local landfill by a licensed waste hauler or by using facility equipment and personnel to haul the waste. Waste hauling by facility personnel within Morrow County shall be performed in compliance with the Morrow County Solid Waste Management Ordinance, which requires that all loads be covered and secured.</li> <li>e. Segregating all hazardous and universal wastes such as used oil, oily rags and oil-absorbent materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous and universal wastes.</li> <li>f. Discharging concrete truck rinse-out within foundation holes, completing truck wash-down off-site, and burying other concrete waste as fill on-site whenever possible.</li> </ol> <p>[Final Order on ASC, Public Services Condition 3]</p>
CON-PS-02	<p>During construction of the facility, the certificate holder shall provide for 24-hour on-site security, and shall establish effective communications between on-site security personnel and the Morrow County Sheriff's Office and Umatilla County Sheriff's Office.</p> <p>[Final Order on ASC, Public Services Condition 10]</p>
CON-PS-03	<p>During construction of the facility, the certificate holder shall ensure that turbine construction personnel are trained and equipped for fall protection, high angle, and confined space rescue. The certificate holder must retain records of the training and provide them to the department upon request.</p> <p>[Final Order on ASC, Public Services Condition 14]</p>
CON-PS-04	<p>During construction, the certificate holder shall design turbines to be constructed on concrete pads with a minimum of 10 feet of nonflammable and non-erosive ground cover on all sides. The certificate holder shall cover turbine pad areas with nonflammable, non-erosive material immediately following exposure during construction and shall maintain the pad area covering during facility operation.</p> <p>[Final Order on ASC, Public Services Condition 16]</p>

CON-PS-05	<p>During construction the certificate holder must maintain an area clear of vegetation for fire prevention around construction sites, including turbines and towers and any areas where work includes welding, cutting, grinding, or other flame- or spark-producing operations. [Final Order on ASC, Public Services Condition 17]</p>
<b>STANDARD: WASTE MINIMIZATION (WM) [OAR 345-022-0120]</b>	
CON-WM-01	<p>During construction, the certificate holder shall require construction contractors to complete the following for any off-site disposal of excess soil during construction activities:</p> <ol style="list-style-type: none"> <li>a. Obtain and provide the certificate holder with a signed consent agreement between contractor and the party receiving the earth materials authorizing the acceptance and disposal of the excess soil; and,</li> <li>b. Confirm that all disposal sites have been inspected and approved by the certificate holder’s environmental personnel to ensure that sensitive environmental resources, such as wetlands or high quality habitats, would not be impacted.</li> </ol> <p>The certificate holder shall maintain copies of all signed consent agreements and disposal site inspection and approvals onsite and shall provide to the department in the 6-month construction report required pursuant to OAR 345-026-0080(1)(a). [Final Order on ASC, Waste Minimization Condition 1]</p>
<b>STANDARD: PUBLIC HEALTH AND SAFETY FOR WIND FACILITIES (WF) [OAR 345-024-0010]</b>	
CON-WF-01	<p>During construction, the certificate holder shall install pad-mounted step-up transformers at the base of each tower in steel boxes designed to protect the public from electrical hazards. [Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 1]</p>
CON-WF-02	<p>Prior to and during operations the certificate holder shall:</p> <ol style="list-style-type: none"> <li>a. Install and maintain self-monitoring devices on each turbine, linked to sensors at the operations and maintenance building, connected to a fault annunciation panel or supervisory control and data acquisition (SCADA) system to alert operators to potentially dangerous conditions.</li> <li>b. The certificate holder shall maintain automatic equipment protection features in each turbine that would shut down the turbine and reduce the chance of a mechanical problem causing a fire. The certificate holder shall immediately remedy any dangerous conditions.</li> <li>c. Submit to the Department materials or other documentation demonstrating the facility’s operational safety-monitoring program and cause analysis program, for review and approval. The program shall, at a minimum, include requirements for regular turbine blade and turbine tower component inspections and maintenance, based on wind turbine manufacturer recommended frequency.</li> <li>d. The certificate holder shall document inspection and maintenance activities including but not limited to date, turbine number, inspection type (regular or other), turbine tower and blade condition, maintenance requirements (i.e. equipment used, component repair or replacement description, impacted area location and size), and wind turbine operating status. This information shall be submitted to the Department pursuant to OAR 345-026-0080 in the facility’s annual compliance report.</li> <li>e. In the event of blade or tower failure, the certificate holder shall report the incident to the Department within 72 hours, in accordance with OAR 345-026-0170(1), and shall, within 90-days of blade or tower failure event, submit a cause analysis to the Department for its compliance evaluation.</li> </ol> <p>[Final Order on ASC;AMD3; Public Health and Safety Standards for Wind Facilities Condition 4]</p>

**STANDARD: SITING STANDARDS FOR TRANSMISSION LINES (TL) [OAR 345-024-0090]**

CON-TL-01	<p>During construction, the certificate holder shall take reasonable steps to reduce or manage human exposure to electromagnetic fields, including:</p> <ul style="list-style-type: none"><li>a. Constructing all aboveground collector and transmission lines at least 200 feet from any residence or other occupied structure, measured from the centerline of the transmission line.</li><li>b. Constructing all aboveground 34.5-kV transmission lines with a minimum clearance of 25 feet from the ground.</li><li>c. Constructing all aboveground 230-kV transmission lines with a minimum clearance of 30 feet from the ground.</li><li>d. Developing and implementing a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, irrigation systems, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the line (OAR 345-027-0023(4)).</li><li>e. Providing to landowners a map of underground and overhead transmission lines on their property and advising landowners of possible health and safety risks from induced currents caused by electric and magnetic fields.</li><li>f. Designing and maintaining all transmission lines so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public.</li><li>g. Increasing the intraconnection transmission line height, shielding the electric field, or installing access barriers, if needed, to prevent induced current and nuisance shock of mobile vehicles.</li><li>h. Designing and maintaining all transmission lines so that induced voltages during operation are as low as reasonably achievable.</li><li>i. Designing, constructing and operating the transmission line in accordance with the requirements of the 2012 Edition of the National Electrical Safety Code approved on June 3, 2011 by the American National Standards Institute (OAR 345-027-0023(4)).</li><li>j. Implement a safety protocol to ensure adherence to NESC grounding requirements</li></ul> <p>[Final Order on ASC, Siting Standard Condition 1]</p>
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**STANDARD: NOISE CONTROL REGULATION (NC) [OAR 345-035-0035]**

CON-NC-01

During construction, to reduce construction noise impacts at nearby residences, the certificate holder shall:

- a. Establish and enforce construction site and access road speed limits;
- b. Utilize electrically-powered equipment instead of pneumatic or internal combustion powered equipment, where feasible;
- c. Locate material stockpiles and mobile equipment staging, parking, and maintenance areas as far as practicable away from noise sensitive properties;
- d. Utilize noise-producing signals, including horns, whistles, alarms, and bells for safety warning purposes only;
- e. Equip all noise-producing construction equipment and vehicles using internal combustion engines with mufflers, air-inlet silencers where appropriate, and any other shrouds, shields, or other noise-reducing features in good operating condition that meet or exceed original factory specification. Mobile or fixed “package” equipment (e.g., arc-welders, air compressors) shall be equipped with shrouds and noise control features that are readily available for that type of equipment; and,
- f. Establish a noise complaint response system. All construction noise complaints will be logged within 48 hours of issuance. The construction supervisor shall have the responsibility and authority to receive and resolve noise complaints. A clear appeal process to the owner shall be established prior to the start of construction that will allow for resolution of noise problems that cannot be resolved by the site supervisor in a reasonable period of time. Records of noise complaints during construction must be made available to authorized representatives of the department upon request.

[Final Order on ASC, Noise Control Condition 1]

#### 4.5 Pre-Operational (PRO) Conditions

Condition Number	Pre-Operational (PRO) Conditions
<b>STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]</b>	
PRO-SP-01	<p>Prior to beginning facility operation, the certificate holder shall provide the Department a copy of an operational SPCC plan, if required per DEQ’s Hazardous Waste Program. If an SPCC plan is not required, the certificate holder shall prepare and submit to the Department for review and approval an operational Spill Prevention and Management plan. The Spill Prevention and Management Plan shall include at a minimum the following procedures and BMPs:</p> <ul style="list-style-type: none"> <li>• Procedures for oil and hazardous material emergency response consistent with OAR 340, Division 100-122 and 142</li> <li>• Procedures demonstrating compliance with all applicable local, state, and federal environmental laws and regulations for handling hazardous materials used onsite in a manner that protects public health, safety, and the environment</li> <li>• Current inventory (type and quantity) of all hazardous materials stored onsite, specifying the amounts at each O&amp;M building, substation and battery storage system components</li> <li>• Restriction limiting onsite storage of diesel fuel or gasoline</li> <li>• Requirement to store lubricating and dielectric oils in quantities equal to or greater than 55-gallons in qualified oil-filled equipment</li> <li>• Preventative measures and procedures to avoid spills               <ul style="list-style-type: none"> <li>○ Procedures for chemical storage</li> <li>○ Procedures for chemical transfer</li> <li>○ Procedures for chemical transportation</li> <li>○ Procedures for fueling and maintenance of equipment and vehicles</li> <li>○ Employee training and education</li> </ul> </li> <li>• Clean-up and response procedures, in case of an accidental spill or release</li> <li>• Proper storage procedures</li> <li>• Reporting procedures in case of an accidental spill or release</li> </ul> <p>[Final Order on ASC, Soil Protection Condition 5; AMD2]</p>
<b>STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]</b>	
PRO-PS-01	<p>Prior to operation of the facility, the certificate holder shall ensure that operations personnel are trained and equipped for fall protection and tower rescue, including high angle and confined space rescue. Refresher training in high angle and confined space rescue must be provided to operations personnel on an annual basis throughout the operational life of the facility. The certificate holder must retain records of the training and provide them to the department upon request.</p> <p>[Final Order on ASC, Public Services Condition 15]</p>
PRO-PS-02	<p>Before beginning operation of the facility, the certificate holder must provide a final site plan to the identified fire protection districts and first-responders included in the Emergency Management Plan. The certificate holder must indicate on the site plan the identification number assigned to each turbine and the actual location of all facility structures. The certificate</p>

	<p>holder shall provide an updated site plan if additional turbines or other structures are later added to the facility.  [Final Order on ASC, Public Services Condition 19]</p>
<p>PRO-PS-03</p>	<p>Prior to operation, the certificate holder must ensure that operations personnel remain current in their first aid/CPR/AED certifications throughout the operational life of the facility. The certificate holder must retain records of the certifications and provide them to the department upon request. The certificate holder shall also ensure that an AED is available onsite at all times that operations and maintenance personnel are at the facility.  [Final Order on ASC, Public Services Condition 22]</p>

#### 4.6 Operational (OPR) Conditions

Condition Number	Operational (OPR) Conditions
<b>STANDARD: GENERAL STANDARD OF REVIEW (GS) [OAR 345-022-0000]</b>	
OPR-GS-01	<p>The certificate holder shall submit a legal description of the site to the Oregon Department of Energy within 90 days after beginning operation of the facility. The legal description required by this rule means a description of metes and bounds or a description of the site by reference to a map and geographic data that clearly and specifically identify the outer boundaries that contain all parts of the facility.</p> <p>[Final Order on ASC, Mandatory Condition 1] [OAR 345-025-0060(2)]</p>
<b>STANDARD: SOIL PROTECTION (SP) [OAR 345-022-0022]</b>	
OPR-SP-01	<p>During facility operation, the certificate holder shall:</p> <ol style="list-style-type: none"> <li>a. Routinely inspect and maintain all facility components including roads, pads, and other facility components and, as necessary, maintain or repair erosion and sediment control measures and reduce potential facility contribution to erosion.</li> <li>b. Restrict vehicles to constructed access roads, and ensure material laydown or other maintenance activities occur within graveled areas or within the maintenance area of the O&amp;M buildings to avoid unnecessary compaction, erosion, or spill risk to the area surrounding the facility.</li> <li>c. If in order to serve the operational needs of the energy facility, or related and supporting facilities, the certificate holder intends to substantially modify an existing road or construct a new road, the certificate holder must submit and receive Council approval of an amendment to the site certificate prior to the modification or construction.</li> </ol> <p>[Final Order on ASC, Soil Protection Condition 6]</p>
<b>STANDARD: LAND USE (LU) [OAR 345-022-0030]</b>	
OPR-LU-01	<p>Within one month of commencement of commercial operation, the certificate holder shall submit an as-built survey for each construction phase that demonstrates compliance with the setback requirements in Land Use Condition 1 to the department and Morrow County.</p> <p>[Final Order on ASC, Land Use Condition 2]</p>
OPR-LU-02	<p>During operation of the facility, the certificate holder shall restore areas that are temporarily disturbed during facility maintenance or repair activities using the same methods and monitoring procedures described in the final Revegetation Plan referenced in Fish and Wildlife Habitat Condition 11.</p> <p>[Final Order on ASC, Land Use Condition 10]</p>
OPR-LU-03	<p>Before beginning decommissioning activities, the certificate holder must provide a copy of the final retirement plan to Morrow County and Umatilla County.</p> <p>[Final Order on ASC, Land Use Condition 23]</p>
OPR-LU-04	<p>Before beginning electrical production, the certificate holder shall prepare an Operating and Facility Maintenance Plan (Plan) and submit the Plan to the department for approval in consultation with Umatilla and Morrow Counties.</p> <p>[Final Order on ASC, Land Use Condition 25]</p>

OPR-LU-05	<p>Within 90 days of the commencement of electrical service from Wheatridge East, the certificate holder shall provide a summary of as-built changes to the department and Umatilla County. [Final Order on ASC, Land Use Condition 26]</p>
OPR-LU-06	<p>Prior to facility retirement, the certificate holder must include the following minimum restoration activities in the proposed final retirement plan it submits to the Council pursuant to OAR 345-027-0110 or its equivalent:</p> <ol style="list-style-type: none"> <li>1. Dismantle turbines, towers, pad mounted transformers, meteorological towers and related aboveground equipment, and remove concrete pads to a depth of at least three feet below the surface grade.</li> <li>2. Remove underground collection and communication cables that are buried less than three feet in depth and are deemed by Council to be a hazard or a source of interference with surface resource uses.</li> <li>3. Remove gravel from areas surrounding turbine pads.</li> <li>4. Remove and restore private access roads unless the landowners directs otherwise.</li> <li>5. Following removal of facility components, grade disturbed areas as close as reasonably possible to the original contours and restore soils to a condition compatible with farm uses or other resources uses.</li> <li>6. Revegetate disturbed areas in consultation with the land owner and in a manner consistent with the final Revegetation Plan referenced in Fish and Wildlife Habitat Condition 11.</li> <li>7. If the landowner wishes to retain certain facilities, provide a letter from the land owner that identifies the roads, cleared pads, fences, gates and other improvements to be retained and a commitment from the land owner to maintain the identified facilities for farm or other purposes permitted under the applicable zone.</li> </ol> <p>[Final Order on ASC, Land Use Condition 27]</p>
<b>STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]</b>	
OPR-RF-01	<p>During facility operation, the certificate holder shall:</p> <ol style="list-style-type: none"> <li>(a) Conduct monthly inspections of the battery storage systems, in accordance with manufacturer specifications. The certificate holder shall maintain documentation of inspections, including any corrective actions, and shall submit copies of inspection documentation in its annual report to the Department.</li> <li>(b) Provide evidence in its annual report to the Department of active property coverage under its commercial business insurance from high loss-catastrophic events, including but not limited to, onsite fire or explosion.</li> </ol> <p>[Final Order on AMD2, Retirement and Financial Assurance Condition 6]</p>
<b>STANDARD: PUBLIC SERVICES (PS) [OAR 345-022-0110]</b>	
OPR-PS-01	<p>During operation of the facility, the certificate holder shall discharge sanitary wastewater generated at the O&amp;M buildings to licensed on-site septic systems in compliance with State permit requirements. The certificate holder shall design each septic system for a discharge capacity of less than 2,500 gallons per day. [Final Order on ASC, Public Services Condition 1]</p>
OPR-PS-02	<p>Except as provided in this condition, during facility operation, the certificate holder shall obtain water for on-site uses from on-site wells located near the O&amp;M buildings. The certificate holder shall construct on-site wells subject to compliance with the provisions of ORS 537.765 relating to keeping a well log. The certificate holder shall not use more than 5,000 gallons of water per day from each of the two on-site wells. The certificate holder may obtain water from other sources for on-site uses subject to prior approval by the Department.</p>

	[Final Order on ASC, Public Services Condition 2]
OPR-PS-03	<p>(a) Prior to operation, the certificate holder shall submit to the Department for approval its Operational Waste Management Plan that includes but is not limited to the following:</p> <ol style="list-style-type: none"> <li>1. Onsite handling procedure for operational replacement of damaged, defective or recalled lithium-ion batteries. The procedure shall identify applicable 49 CFR 173.185 provisions and address, at a minimum, onsite handling, packaging, interim storage, and segregation requirements.</li> <li>2. Training employees to handle, replace, and store damaged, defective or recalled lithium-ion batteries; minimize and recycle solid waste.</li> <li>3. Recycling paper products, metals, glass, and plastics.</li> <li>4. Recycling used oil and hydraulic fluid.</li> <li>5. Collecting non-recyclable waste for transport to a local landfill by a licensed waste hauler or by using facility equipment and personnel to haul the waste. Waste hauling by facility personnel within Morrow County shall be performed in compliance with the Morrow County Solid Waste Management Ordinance, Section 5.000 Public Responsibilities, 5.010 Transportation of Solid Waste and 5.030 Responsibility for Propose Disposal of Hazardous Waste which requires that all loads be covered and secured and that operators be responsible for hazardous waste disposal in accordance with applicable regulatory requirements.</li> <li>6. Segregating all hazardous and universal, non-recyclable wastes such as used oil, oily rags and oil-absorbent materials, mercury-containing lights, lithium-ion batteries, lead-acid and nickel-cadmium batteries, and replaced, damaged, defective or recalled lithium-ion batteries for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous and universal wastes.</li> </ol> <p>(b) During operation, the certificate holder shall implement the approved Operational Waste Management Plan.</p> <p>[Final Order on ASC, Public Services Condition 4; AMD2]</p>
OPR-PS-04	<p>During operation, the certificate holder shall ensure that appropriate law enforcement agency personnel have an up-to-date list of the names and telephone numbers of facility personnel available to respond on a 24-hour basis in case of an emergency at the facility site.</p> <p>[Final Order on ASC, Public Services Condition 12]</p>
<b>STANDARD: PUBLIC HEALTH AND SAFETY FOR WIND FACILITIES (WF) [OAR 345-024-0010]</b>	
OPR-WF-01	<p>During operation, the certificate holder shall ensure each facility substation and battery storage systems are enclosed with appropriate fencing and locked gates to protect the public from electrical hazards.</p> <p>[Final Order on ASC, Public Health and Safety Standards for Wind Facilities Condition 2; AMD2]</p>

**STANDARD: SITING STANDARDS FOR TRANSMISSION LINES (TL) [OAR 345-024-0090]**

OPR-TL-01	<p>During operation, the certificate holder shall:</p> <ol style="list-style-type: none"><li>(1) Update the OPUC Safety Staff as to how the operator will comply with OAR Chapter 860, Division 024 on an ongoing basis considering future operations, maintenance, emergency response, and alterations until facility retirement.</li><li>(2) File the following required information with the Commission:<ol style="list-style-type: none"><li>a. 758.013 Operator of electric power line to provide Public Utility Commission with safety information; availability of information to public utilities. (1) Each person who is subject to the Public Utility Commission’s authority under ORS 757.035 and who engages in the operation of an electric power line as described in ORS 757.035 must provide the commission with the following information before January 2 of each even-numbered year:<ol style="list-style-type: none"><li>i. The name and contact information of the person that is responsible for the operation and maintenance of the electric power line, and for ensuring that the electric power line is safe, on an ongoing basis; and</li><li>ii. The name and contact information of the person who is responsible for responding to conditions that present an imminent threat to the safety of employees, customers and the public.</li><li>iii. In the event that the contact information described in subsection (1) of this section changes or that ownership of the electric power line changes, the person who engages in the operation of the electric power line must notify the commission of the change as soon as practicable, but no later than within 90 days.</li><li>iv. If the person described in subsection (1) of this section is not the public utility, as defined in ORS 757.005, in whose service territory the electric power line is located, the commission shall make the information provided to the commission under subsection (1) of this section available to the public utility in whose service territory the electric power line is located. [2013 c.235 §3]</li></ol></li></ol></li><li>(3) Provide OPUC Safety Staff with:<ol style="list-style-type: none"><li>a. Maps and Drawings of routes and installation of electrical supply lines showing:<ul style="list-style-type: none"><li>• Transmission lines and structures (over 50,000 Volts)</li><li>• Distribution lines and structures - differentiating underground and overhead lines (over 600 Volts to 50,000 Volts)</li><li>• Substations, roads and highways</li><li>• Plan and profile drawings of the transmission lines (and name and contact information of responsible professional engineer).</li></ul></li></ol></li></ol> <p>[Final Order on ASC, Siting Standard Condition 3]</p>
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**STANDARD: NOISE CONTROL REGULATION (NC) [OAR 345-035-0035]**

OPR-NC-01	<p>During operation of the facility, if required to meet the maximum allowable decibel threshold of 50 dBA, the certificate holder shall only operate the facility in the NRO mode that is identified prior to construction pursuant to Noise Control Condition 2. After beginning operation of the facility, the certificate holder shall include a certification in its annual Compliance Report that the NRO mode turbines identified in the preconstruction analysis required by Noise Control Condition 2 are operating at or below the identified dBA reduction level.</p> <p>[Final Order on ASC, Noise Control Condition 3]</p>
-----------	---

OPR-NC-02	<p>During operation, the certificate holder shall maintain a complaint response system to address noise complaints. The certificate holder shall notify the department within two working days of receiving a noise complaint related to the facility. The notification should include, but is not limited to, the date the certificate holder received the complaint, the nature of the complaint, the complainant's contact information, the location of the affected property, and any actions taken, or planned to be taken, by the certificate holder to address the complaint.</p> <p>[Final Order on ASC, Noise Control Condition 4]</p>
OPR-NC-03	<p>During operation, in response to a complaint from the owner of a noise sensitive property regarding noise levels from the facility, the Council may require the certificate holder to monitor and record the statistical noise levels to verify that the certificate holder is operating in compliance with the noise control regulations. The monitoring plan must be reviewed and approved by the department prior to implementation. The cost of such monitoring, if required, shall be borne by the certificate holder.</p> <p>[Final Order Noise Control Condition 5]</p>

#### 4.7 Retirement Conditions (RET)

Condition Number	Retirement (RET) Conditions
<b>STANDARD: RETIREMENT AND FINANCIAL ASSURANCE (RT) [OAR 345-022-0050]</b>	
RET-RF-01	<p>The certificate holder must retire the facility in accordance with a retirement plan approved by the Council if the certificate holder permanently ceases construction or operation of the facility. The retirement plan must describe the activities necessary to restore the site to a useful, nonhazardous condition, as described in OAR 345-027-0110(5). After Council approval of the plan, the certificate holder must obtain the necessary authorization from the appropriate regulatory agencies to proceed with restoration of the site.</p> <p>[Final Order Retirement and Financial Assurance Condition 2] [Mandatory Condition OAR 345-025-0006(9)]</p>
RET-RF-02	<p>If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council must notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the department within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the department to prepare a proposed final retirement plan for the Council's approval.</p> <p>Upon the Council's approval of the final retirement plan, the Council may draw on the bond or letter of credit described in section (8) to restore the site to a useful, nonhazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder must pay any additional cost necessary to restore the site to a useful, nonhazardous condition. After completion of site restoration, the Council must issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan.</p> <p>[Final Order Retirement and Financial Assurance Condition 3] [Mandatory Condition OAR 345-025-0006(16)]</p>

**STANDARD: LAND USE (LU) [OAR-022-0030]**

<b>RET-LU-01</b>	The certificate holder will retire the solar arrays and restore the site consistent with Condition RET-RF-01. Following site restoration, The certificate holder will file a request with the Morrow County Planning Department to amend the Morrow County Comprehensive Plan to remove the Goal 3 exception from the solar micro siting corridors. Morrow County will process the amendment request pursuant to ORS 469.401(3).
------------------	--

**5.0 Successors and Assigns**

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

**6.0 Severability and Construction**

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

**7.0 Execution**

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

**IN WITNESS THEREOF**, this site certificate has been executed by the State of Oregon, acting by and through the Energy Facility Siting Council, and by Wheatridge Wind Energy, LLC.

**ENERGY FACILITY SITING COUNCIL**

By: \_\_\_\_\_

Barry Beyeler, Chair

Oregon Energy Facility Siting Council

Date: \_\_\_\_\_

**WHEATRIDGE WIND ENERGY, LLC**

By: \_\_\_\_\_

John DiDonato, Vice President  
Development, NextEra Energy Resources,  
LLC on behalf of Wheatridge Wind Energy,  
LLC

Date: \_\_\_\_\_



## **Attachment 2. Division 21 Exhibits**

*(Provided as separate attachment)*

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**Attachment 3. Carla McLane, Morrow  
County Planning Director -  
Correspondence**

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## Childers, Rusty

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**From:** Carla McLane <cmclane@co.morrow.or.us>  
**Sent:** Tuesday, June 4, 2019 2:25 PM  
**To:** Solsby, Anneke  
**Subject:** RE: Wheatridge Site Certificate Condition - Potential Change

**⚠ CAUTION:** This email originated from an external sender. Verify the source before opening links or attachments. **⚠**

Anneke,  
Thanks for the call.

The requirement you reference below is not a part of the Morrow County Zoning Ordinance, nor is it a requirement that I would support. As I shared on the phone this seems to be much more an issue between the landowner and the project developer. I would be supportive of the change in Condition as you have presented it below.

Let me know if you need anything else from me.  
Have a great day!  
Carla

---

**From:** Solsby, Anneke [mailto:Anneke.Solsby@tetrattech.com]  
**Sent:** Tuesday, June 4, 2019 11:33 AM  
**To:** Carla McLane <cmclane@co.morrow.or.us>  
**Subject:** Wheatridge Site Certificate Condition - Potential Change  
**Importance:** High

Hello,

As you know, final design of the Wheatridge (west) facility is in full swing. In the site certificate, there is a condition requiring that private access roads have gates and signs. It is our understanding that the landowners in Morrow County are not expecting gates or signs to be installed. This is a requirement in Umatilla County per their development code but not Morrow County. We are proposing to amend the condition to identify it as such – see below condition and red proposed addition. We have heard that gates and signs can actually identify the roads as roads that aren't just farm roads and therefore more prone to trespassing. We wanted to check with you to confirm the condition isn't part of Morrow County code and to see if you have any concerns over the proposed edit to the condition.

*PRE-LU-08: Prior to facility construction, the certificate holder shall install gates and no trespassing signs at all private access roads established or improved for the purpose of facility construction and operation in Umatilla County.*  
*[Final Order on ASC, Land Use Condition 18]*

Please feel free to call me or respond to this email with your response. We are hoping to include this condition change request as part of another submittal going out in the next day or so.

Thank you,  
**Anneke Van der Mast Solsby** | Environmental Planner  
[Anneke.Solsby@tetrattech.com](mailto:Anneke.Solsby@tetrattech.com)

**Tetra Tech | Portland**  
1750 SW Harbor Way, Suite 400 | Portland, OR 97201  
Direct: 503.721.7217 | Fax: 503.227.1287 | Cell: 503.860.9076

PLEASE NOTE: This message, including any attachments, may include confidential and/or inside information. Any distribution or use of this communication by anyone other than the intended recipient is strictly prohibited and may be unlawful. If you are not the intended recipient, please notify the sender by replying to this message and then delete it from your system.



**Think Green - Not every email needs to be printed.**

# Exhibit A

## Information About Applicant

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**Wheatridge Wind Energy Facility  
June 2019**

**Prepared for**



**Prepared by**



**Tetra Tech, Inc.**

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## Acronyms and Abbreviations

Certificate Holder	Wheatridge Wind Energy, LLC
Council	Energy Facility Siting Council
Facility	Wheatridge Wind Energy Facility
NextEra	NextEra Energy Resources, LLC
OAR	Oregon Administrative Rule

## 1.0 Introduction

As part of Request for Amendment 4 to the Wheatridge Wind Energy Facility (Facility) Site Certificate, Wheatridge Wind Energy, LLC (Certificate Holder) is proposing to add photovoltaic solar energy generation to the Facility to provide an integrated, renewable energy facility with both wind and solar energy generation and energy storage (see Exhibit B for a detailed description). The Energy Facility Siting Council (Council) previously approved construction of a 500-megawatt wind energy facility to include up to 292 wind turbines and related or supporting facilities.

Exhibit A provides contact information for the Certificate Holder and other entities assisting in the permitting process, as required by Oregon Administrative Rule (OAR) 345-021-0010(1)(a). This exhibit provides evidence to support a demonstration of compliance with the Organizational Expertise standard of OAR 345-022-0010, which is addressed in detail in Exhibit D of this request for amendment.

## 2.0 Applicant Contact Information – OAR 345-021-0010(1)(a)(A)

*OAR 345-021-0010(1)(a) Information about the applicant and participating persons, including:*

*OAR 345-021-0010(1)(a)(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 application, and if there is a contact person other than the applicant, the name, title, mailing address, email address and telephone number of that person.*

### **Name and Address of Site Certificate Holder**

Jesse Marshall  
Wheatridge Wind Energy, LLC  
FEW/JB  
700 Universe Blvd.  
Juno Beach, FL 33408

### **Contact Persons other than Applicant:**

Matt Handel  
NextEra Energy Renewables, LLC  
FEW/JB

700 Universe Blvd.  
Juno Beach, FL 33408

Mike Pappalardo  
Environmental Manager  
NextEra Energy Resources, LLC  
3256 Wintercreek Drive  
Eugene, OR 97405  
[Mike.Pappalardo@nexteraenergy.com](mailto:Mike.Pappalardo@nexteraenergy.com)  
(541) 302-1345

Carrie Konkol  
Senior Project Manager  
Tetra Tech  
1750 SW Harbor Way, Suite 400  
Portland, OR 97201  
[Carrie.Konkol@tetratech.com](mailto:Carrie.Konkol@tetratech.com)  
(503) 721-7225

### **3.0 Other Participants – OAR 345-021-0010(1)(a)(B)**

*OAR 345-021-0010(1)(a)(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, if known, other persons upon whom the applicant will rely in meeting any facility standard adopted by the Council.*

No other participants are anticipated at this time, with the exception of potential third party permits that would be obtained by the construction firm selected to build the Facility. The Certificate Holder anticipates that these third-party permits may include permits for obtaining aggregate and other construction materials, transporting materials to the site, and other building-related permits that are typically obtained immediately prior to construction activities. The Certificate Holder anticipates that these permits would meet the facility standards adopted by the Council.

## **4.0 Limited Liability Company Information – OAR 345-021-0010(1)(a)(H)**

*OAR 345-021-0010(1)(a)(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 application;*
- (ii) The date and place of its formation;*
- (iii) A copy of its articles of organization and its authorization for submitting the application; 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.*

The Certificate Holder is a Delaware limited liability company, and was recently acquired by NextEra Energy Resources, LLC (NextEra) from Swaggart Wind Power, LLC. Swaggart Wind Power, LLC sold the Facility, including the ownership of all membership interests in Wheatridge Wind Energy, LLC, to Wheatridge Wind Holdings, LLC, an indirect subsidiary of NextEra. The sale closed on April 5, 2017, at which time the Certificate Holder became a wholly-owned, indirect subsidiary of NextEra.

The Certificate Holder's articles of organization are provided in Attachment A-1. Proof of registration to do business in Oregon is provided in Attachment A-2.

## **5.0 Other Affiliations – OAR 345-021-0010(1)(a)(C) through (G)**

The Certificate Holder is a wholly-owned, indirect subsidiary of NextEra. The full name and address of NextEra are provided in Section 2.0.

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# **Attachment A-1. Articles of Organizations**

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# 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 "WHEATRIDGE WIND HOLDINGS, LLC", FILED IN THIS OFFICE ON THE SEVENTH DAY OF MARCH, A.D. 2017, AT 12:41 O`CLOCK P.M.



  
Jeffrey W. Bullock, Secretary of State

6339411 8100  
SR# 20171635044

Authentication: 202154029  
Date: 03-07-17

You may verify this certificate online at [corp.delaware.gov/authver.shtml](http://corp.delaware.gov/authver.shtml)

State of Delaware  
Secretary of State  
Division of Corporations  
Delivered 12:41 PM 03/07/2017  
FILED 12:41 PM 03/07/2017  
SR 20171635044 - File Number 6339411

**STATE OF DELAWARE**  
**LIMITED LIABILITY COMPANY**  
**CERTIFICATE OF FORMATION**  
**OF**

**WHEATRIDGE WIND HOLDINGS, LLC**

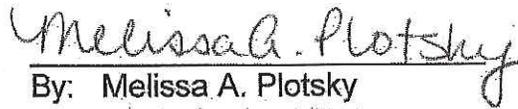
The undersigned, an authorized natural person, for the purpose of forming a limited liability company under the provisions and subject to the requirements of the laws of the State of Delaware (including Chapter 18, Title 6 of the Delaware Code and the acts amendatory thereof and supplemental thereto, and known, identified, and referred to as the "Delaware Limited Liability Company Act"), hereby certifies that:

**FIRST:** The name of the limited liability company (hereinafter called the "limited liability company") is **Wheatridge Wind Holdings, LLC**.

**SECOND:** The address of the registered office and the name and address of the registered agent of the limited liability company required to be maintained by Section 18-104 of the Delaware Limited Liability Company Act are:

NextEra Registered Agency, LLC  
501 Carr Road, Suite 100  
Wilmington, DE 19899

Executed on March 7, 2017.

  
By: Melissa A. Plotsky  
An Authorized Person

**STATE OF DELAWARE  
LIMITED LIABILITY COMPANY  
CERTIFICATE OF FORMATION  
OF**

**WHEATRIDGE WIND HOLDINGS, LLC**

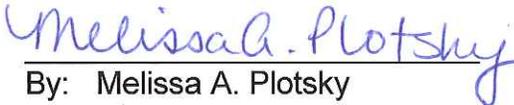
The undersigned, an authorized natural person, for the purpose of forming a limited liability company under the provisions and subject to the requirements of the laws of the State of Delaware (including Chapter 18, Title 6 of the Delaware Code and the acts amendatory thereof and supplemental thereto, and known, identified, and referred to as the "Delaware Limited Liability Company Act"), hereby certifies that:

**FIRST:** The name of the limited liability company (hereinafter called the "limited liability company") is **Wheatridge Wind Holdings, LLC**.

**SECOND:** The address of the registered office and the name and address of the registered agent of the limited liability company required to be maintained by Section 18-104 of the Delaware Limited Liability Company Act are:

NextEra Registered Agency, LLC  
501 Carr Road, Suite 100  
Wilmington, DE 19899

Executed on March 7, 2017.

  
By: Melissa A. Plotsky  
An Authorized Person

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# **Attachment A-2. Qualification to Conduct Business in Oregon**

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Corporation/Limited Liability Company - Information Change

Secretary of State - Corporation Division - 255 Capitol St. NE, Suite 151 - Salem, OR 97310-1327 - http://www.FilingInOregon.com - Phone: (503) 986-2200 Fax: (503) 378-4381

FILED

APR 11 2017

OREGON SECRETARY OF STATE

For Office use only

REGISTRY NUMBER: 60831394

ENTITY TYPE:  DOMESTIC  FOREIGN

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.

1. NAME OF CORPORATION OR LIMITED LIABILITY COMPANY:

Wheatridge Wind Energy, LLC

Complete only the sections that you are updating.

2. BUSINESS ACTIVITY

6. ADDRESS WHERE THE DIVISION MAY MAIL NOTICES:

700 Universe Blvd., Attn: Corp. Gov.

Juno Beach, FL 33408

3. PRINCIPAL PLACE OF BUSINESS: (Street Address)

700 Universe Blvd., Attn: Corp. Gov.

Juno Beach, FL 33408

4. THE REGISTERED AGENT HAS BEEN CHANGED TO:

Corporation Service Company

7. THE NEW REGISTERED AGENT HAS CONSENTED TO THIS APPOINTMENT.

8. THE STREET ADDRESS OF THE NEW REGISTERED OFFICE AND THE BUSINESS ADDRESS OF THE REGISTERED AGENT ARE IDENTICAL.

The entity has been notified in writing of this change.

5. REGISTERED AGENT'S PUBLICLY AVAILABLE ADDRESS:

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

1127 Broadway Street NE, Suite 310, Salem, OR 97301

9. NAME(S) AND ADDRESS(ES) OF CORPORATE OFFICERS OR LLC MEMBERS/MANAGERS

Corporations list the name and address of one President and one Secretary (ORS 60.787, ORS 65.787, ORS 62.455, ORS 554.315). Limited Liability Companies list the name and addresses of the managers for a manager-managed limited liability company or the name and address of at least one member for a member-managed limited liability company (ORS 63.787). Please attach a separate sheet of paper if needed. If making changes to this section, list all current names and addresses. This replaces what is currently on the record.

PRESIDENT OR OWNER(S) (MEMBERS): (Names and Addresses)

SECRETARY OR MANAGER(S): (Names and Addresses)

Wheatridge Wind Holdings, LLC

700 Universe Blvd., Attn: Corp. Gov.

Juno Beach, FL 33408

10. EXECUTION: By my signature, I declare as an authorized signer, 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:

[Handwritten Signature]

PRINTED NAME:

W. Scott Seeley

TITLE:

Asst. Secretary

CONTACT NAME: (To resolve questions with this filing)

Amy Lowe

PHONE NUMBER: (Include area code)

561-691-7259

FEES

No Processing Fee

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

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# Exhibit B

## Project Description and Schedule

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**Wheatridge Wind Energy Facility  
June 2019**

**Prepared for**



**Prepared by**



**Tetra Tech, Inc.**

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## Table of Contents

1.0	Introduction .....	1
2.0	Overview of Major Components and Systems – OAR 345-021-0010(b)(A)(i)(ii); (C).....	2
2.1	Photovoltaic Modules and Racking.....	3
2.2	Electrical Infrastructure .....	3
2.3	Facility Site Plan – OAR 345-021-0010(b)(A)(iii) .....	4
2.4	Facilities for Chemical Storage, Spill Containment Systems, and Fire Prevention and Control – OAR 345-021-0010(b)(A)(iv)(v).....	4
2.5	Thermal Power Plants – OAR 345-021-0010(b)(A)(vi).....	6
2.6	Surface Facilities Related to Underground Gas Storage – OAR 345-021-0010(b)(A)(vii) ....	7
2.7	Facilities Related to the Storage of Liquefied Natural Gas – OAR 345-021-0010(b)(A)(viii). .....	7
3.0	Description of Related or Supporting Facilities – OAR 345-021-0010(b)(B).....	7
4.0	Approximate Dimensions - OAR 345-021-0010(b)(C).....	8
5.0	Pipelines and Transmission Line Corridor Assessment – OAR 345-021-0010(b)(D) .....	9
6.0	Description of Pipelines and Transmission Lines – OAR 345-021-0010(b)(E).....	9
7.0	Facility Construction Schedule – OAR 345-021-0010(b)(F).....	9

## List of Attachments

Attachment B-1. NextEra Solar Energy Booklet

Attachment B-2. NextEra Energy Storage Booklet

## Acronyms and Abbreviations

AC	Alternating current
DC	Direct current
Certificate Holder	Wheatridge Wind Energy, LLC
Council	Energy Facility Siting Council
Facility	Wheatridge Wind Energy Facility
kV	Kilovolt
MW	Megawatts
OAR	Oregon Administrative Rule
ORS	Oregon Revised Statutes
RFA 4	Request for Amendment #4

## 1.0 Introduction

The Wheatridge Wind Energy Facility (Facility) is an approved, but not yet constructed, wind energy generation facility consisting of up to 292 turbines with a peak generating capacity of up to 500 megawatts (MW), to be located in an Approved Site Boundary of approximately 13,097 acres in Morrow and Umatilla counties, Oregon. As part of Request for Amendment 4 (RFA 4) to the Facility Site Certificate, Wheatridge Wind Energy, LLC (Certificate Holder) is proposing to add photovoltaic solar energy generation to the Facility to provide the opportunity for an integrated, renewable energy facility with both wind and solar energy generation and energy storage. In RFA 4, the Certificate Holder is proposing five changes to the approved Facility:

1. Amend the description of the Facility to include photovoltaic solar energy generation equipment to leverage the complementary nature of wind and solar generation to provide more reliable renewable energy generation.
2. Amend the Site Boundary to provide for solar micrositing corridors<sup>1</sup> for the photovoltaic solar energy system.
3. Increase the maximum peak generating capacity for the Facility by up to 150 MW of solar energy generation, for a total Facility maximum peak generating capacity of 650 MW.
4. Add distributed energy storage as a related or supporting facility for solar energy generation, along with new collector lines connecting the solar arrays, and an expansion of an approved substation.
5. Amend four existing site certificate conditions and increase the approved MW of the turbines by approximately 12 percent, from 2.5 MW to 2.8 MW.

Exhibit B provides the information required by Oregon Administrative Rules (OAR) 345-021-0010(1)(b) in support of RFA 4. Similar to the approved approach for wind turbines, the Certificate Holder is requesting to permit a range of photovoltaic technology in order to preserve permitting flexibility and will stipulate the precise details of solar energy generation and related or supporting facilities including distributed energy storage during final design and engineering prior to construction. Therefore, Exhibit B provides a representative description of components and accompanying analysis for the maximum footprint or buildable area (for the solar arrays) within the proposed Amended Site Boundary, also known as solar micrositing corridors, to address the greatest potential impact. The information summarized in this exhibit and described in RFA 4 demonstrates that the Facility, as proposed, can be designed, engineered, constructed, operated, and retired in a manner that satisfies the applicable Energy Facility Siting Council (Council) standards. The proposed changes in RFA 4 do not alter the Certificate Holder's ability to comply

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<sup>1</sup> Per OAR 345-001-0010(32) "Micrositing corridor" means a continuous area of land within which construction of facility components may occur, subject to site certificate conditions.

with the Council's earlier findings and approved conditions in the previously amended site certificate.

## **2.0 Overview of Major Components and Systems – OAR 345-021-0010(b)(A)(i)(ii); (C)**

*Information about the proposed facility, construction schedule and temporary disturbances of the site, including:*

*OAR 345-021-0010(b)(A) A description of the proposed energy facility, including as applicable:*

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

The Facility, as approved, has a nominal electric generating capacity of up to 500 MW and an average electric generating capacity of up to 167 MW. RFA 4 proposes to add solar energy generation to the Facility, consisting of up to 150 MW of nominal and average electric generating capacity. Therefore, the Facility, as proposed would have a nominal electric generating capacity of 650 MW, with wind energy generation up to 500 MW and solar energy up to 150 MW. As defined in Oregon Revised Statutes (ORS) 469.300, the average electric generating capacity of the Facility would be up to 317 MW.

*(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.*

The solar energy will be generated by using multiple arrays of photovoltaic 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 photovoltaic solar panels, known in the industry as modules, will be installed to form module blocks. Attachment B-1 provides a diagram of how a solar facility works and an example pictures of module blocks.

The solar arrays will be composed of a combination of solar modules, tracker systems, posts, and related electrical equipment. The Facility would consist of two areas of arrays: Solar Array 1 and Solar Array 2. As noted in the request document for RFA 4, because technology is changing rapidly, the Certificate Holder requests flexibility to use the most up-to-date technology at the time of the Facility's final design and procurement in order to maximize solar energy generation within the solar micrositing corridors. Thus, the final solar array configuration, solar modules, and associated equipment have not yet been determined. Therefore, the following description of major components is based on the best available design information at this time. The Certificate Holder is analyzing the full build-out potential in each solar micrositing corridor to analyze the greatest potential impact for each resource. The major components are anticipated to stay the same, but

their size, arrangement, and quantity of solar arrays will likely change. “Major components” are considered all components necessary in the solar micro-siting corridors for solar energy generation from the solar arrays (i.e., the equipment necessary to capture and then convert the energy for conveyance from the site).

## 2.1 Photovoltaic Modules and Racking

Each solar module will measure approximately 6 feet by 3 feet, and will be placed on a nonspecular, galvanized steel rack. Each set of approximately 70 racked modules will be mounted approximately 5 feet off the ground on a single-axis tracker that rotates 60 degrees to the east and west. Each tracker will be supported by steel posts; post depth will vary depending on soil conditions, but the posts are typically placed 8 feet below the surface. If soil conditions require it, concrete foundations will be used. Although it is unlikely that concrete foundations will be required, for purposes of this application, impact calculations assume the greatest impact scenario of using concrete foundations for all posts. Approximately 40,000 posts will be installed. Post locations will be determined by the ground coverage ratio. The planned ground coverage ratio is 30 percent, meaning that the area occupied by the panels (when tilted horizontally) will be 30 percent of the total area within the fence line of the solar array area. This will minimize the amount of shading from one module row onto the next. The maximum of height of the modules at full tilt will be approximately 16 feet.

## 2.2 Electrical Infrastructure

Other onsite equipment will include overhead and buried conduits, inverters, combiners, and transformers:

- **Combiner Boxes and Conduits** – The current produced by solar modules is in the form of direct current (DC). Within each module block, several DC electrical conduits (cables on the back of the modules) will aggregate electricity produced from each of the modules into a combiner box. Approximately 18 combiner boxes will be located throughout each module block for a total of approximately 740 combiner boxes. A larger DC cable will run between each combiner box and then to the module block inverter. This cable will hang underneath the modules.
- **Inverters** – The photovoltaic modules will be arranged into blocks, with each block connecting via collector lines to a modular inverter enclosure. In order to be sent to the electrical grid, the DC current must be converted into alternating current (AC) power, and inverters serve this function. The conversion is accomplished by rapidly switching the DC power supply; by varying the length of time that the switch is on, as well as the polarity, the inverter creates the positive and negative swells of an AC wave. This waveform is then smoothed with an output filter. Inverters employ several advanced control systems, switching algorithms, and ancillary services for both the input and output stages. For the input stage, the inverters can manipulate the DC voltage to ensure maximum power harvest of input, and on the output various sensors ensure that AC power production is in accordance with regulatory requirements. The Facility will use approximately 41 inverters.

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

- **Transformers** – The inverter AC output voltage (480 volts) will be stepped up to a higher-voltage (34.5 kilovolts [kV]) by pad-mounted transformers designed to integrate with the inverter. There will be approximately 41 transformers that are co-located with the inverters. The transformers are anticipated to be mounted on concrete pads. From the inverters, the AC electricity is aggregated via an underground 34.5-kV cables to the collector transmission lines, which will be either above or underground (see Section 3).

### **2.3 Facility Site Plan – OAR 345-021-0010(b)(A)(iii)**

*(iii) A site plan and general arrangement of buildings, equipment and structures.*

The site plan and general arrangement of the solar array is illustrated on Figure C-2 of Exhibit C.

### **2.4 Facilities for Chemical Storage, Spill Containment Systems, and Fire Prevention and Control – OAR 345-021-0010(b)(A)(iv)(v)**

*(iv) Fuel and chemical storage facilities, including structures and systems for spill containment*

A spill prevention control and countermeasure plan will be put in place prior to construction. As part of this plan, equipment containing oil or hazardous materials will be regularly monitored for leaks, and measures will be put in place if any are found to quickly control and remove spills. The generator step-up transformer will have a concrete catchment system sized at approximately 1.25 times the amount of oil inside the transformer.

The Certificate Holder proposes a distributed energy storage system (see Section 3), which will contain chemical electrolyte. Lithium-ion battery systems are modular systems that contain multiple smaller battery cells. The cells are the primary containment for the gel or liquid electrolyte materials. The module containing the cells is relatively small, generally about the size of a desktop computer processor, and serves as leak-proof secondary containment. Modules are placed in anchored racks within the steel containers. Although leaks from the modules are very unlikely because any leak would require failure of the individual cells as well as the sealed module, any material that might leak from the cell into the module and then to the floor of the container would easily be contained within the container.

*(v) Equipment and systems for fire prevention and control.*

The greatest risk of fire would occur during construction of the Project, when welding and metal cutting for foundation rebar frames would take place, and vehicles and construction equipment may be used in areas of tall, dry grass. In order to prevent fires from occurring, the construction contractor will implement a number of systems and procedures. These would include requirements to conduct welding or metal cutting only in areas cleared of vegetation, and to keep emergency firefighting equipment on-site when potentially hazardous operations are taking place.

Construction workers will be prohibited from parking vehicles in areas of tall, dry vegetation, to prevent fires caused by contact with hot mufflers or catalytic converters.

The Facility equipment will meet the standards of the National Electrical Code and the Institute of Electrical and Electronics Engineers, and will not pose a significant fire risk. Facility roads will be sufficiently sized for emergency vehicle access in accordance with the most updated Oregon Fire Code (Section 503 and Appendix D Fire Apparatus Access Roads), last updated in 2014 (or the most updated Fire Code at time of construction). Specifically, internal roads at the solar array sites will be all-weather, compacted gravel and approximately 20 feet wide, with an internal turning radius of 28 feet. These roads will also have less than a 10 percent grade, or a similar profile, depending on exact siting.

Where the ground is relatively level and grading is not required, the area where the solar array, roads and other site facilities will be left intact and mowed to a height no more than 3 inches. Grading will be done only in the areas where the elevation would need to be changed to accommodate the tracker/racking system tolerances, site drainage, roads, laydown areas and foundations. The minimal grading approach will help preserve the underground root structure, topsoil nutrients, seed base and pre-construction site hydrology. The organic matter that remains after mowing would remain within the construction area (except in trenches and under equipment foundations).

For roadways, access ways, and areas where concrete foundations are used for inverter equipment, substations, drainage facilities, and other structures, grading will be required. Grading will consist of the excavation and compaction of earth to meet the design requirements. Grading within the solar field will match existing grades as close as possible. Some existing contours will need to be smoothed out for access purposes, but the macro-level topography and storm water drainage would be similar to pre-construction conditions. To the extent practical, grading of an area will take place shortly before trenching and post installation are ready to begin in order to minimize the area of open, uncovered ground present at any one time during construction.

The site will be maintained to allow preexisting vegetation to continue growing to the extent such conditions would not interfere with any required post-construction operational requirements. The portions of the solar arrays that will be graded will be replanted with a low-growing mix of grasses. The site will be mowed as needed for fire safety requirements and to keep vegetation from interfering with operations and maintenance activities. The site will be treated for weeds using a combination of mechanical methods and herbicides.

The portions of the solar arrays that will be graded are expected to result in a balanced cut-and-fill quantity of earthwork to maintain the existing conditions to the extent practical for the protection of the equipment and facilities. Fill will be compacted as necessary, and appropriate dust abatement measures implemented. These measures may include restriction of vehicle speeds, watering of active areas, watering of stockpiles, watering on roadways, track-out control at site exits, and other measures. The Certificate Holder uses this approach on ground-mounted solar photovoltaic facilities throughout the U.S. and has not found it to increase fire risk.

The lithium-ion battery systems will be kept in a temperature-controlled container, with individual battery modules isolated to prevent the spread of fire if it were to occur. The energy storage systems will incorporate a gas pressured deluge fire suppression system, as designed by the battery manufacturer and in accordance with the guidelines outlined in NAFB 855 and/or other updated guidance applicable to energy storage at the time of construction to provide for safe operation and monitoring. In summary, the following measures will be implemented for lithium-ion systems to minimize fire and safety risks:

- The battery systems will be stored in completely contained, leak-proof modules.
- O&M staff will conduct frequent (monthly) inspections of the battery systems according to the manufacturer's recommendations (see Condition OPR-RF-01).
- Battery storage and fire protection systems will comply with applicable standards specified by Morrow County building departments through the permitting process, which will include the 2014 Oregon Structural Specialty Code et. seq., as documented through the facility's building permit application(s) (see Condition PRE-LU-01).
- An emergency management plan will also be developed with response procedures in the event of an emergency, such as a fire (see Conditions PRE-PS-05 and PRO-PS-02).

As noted above, the Certificate Holder will comply with Condition PRE-LU-01, which requires local building and zoning permits from Morrow County prior to construction. Through this process, Morrow County will apply the state building and fire code standards applicable at the time of building permit submittal. The Certificate Holder will either design the facility to comply with the applicable state building and fire code standards, or work with the reviewing jurisdiction or agency of authority on other measures or means necessary to obtain building permit approval, such as securing an exception or waiver.

## 2.5 Thermal Power Plants – OAR 345-021-0010(b)(A)(vi)

*(vi) 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) Process flow, including power cycle and steam cycle diagrams to describe the energy flows within the system.*

*(III) Equipment and systems for disposal of waste heat.*

*(IV) The fuel chargeable to power heat rate.*

The changes proposed in RFA 4 do not include the development of a thermal power plant. Therefore, this section is not applicable.

## 2.6 Surface Facilities Related to Underground Gas Storage – OAR 345-021-0010(b)(A)(vii)

*(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.*

The changes proposed in RFA 4 do not include the development of underground gas storage. Therefore, this section is not applicable.

## 2.7 Facilities Related to the Storage of Liquefied Natural Gas – OAR 345-021-0010(b)(A)(viii)

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

The changes proposed in RFA 4 do not include the development of storage of liquefied natural gas. Therefore, this section is not applicable.

## 3.0 Description of Related or Supporting Facilities – OAR 345-021-0010(b)(B)

*OAR 345-021-0010(b)(B) A description of major components, structures and systems of each related or supporting facility.*

The additional related or supporting facilities proposed in RFA 4 include: distributed energy storage integrated into the solar energy facility, 34.5-kV collector lines to convey the electricity to the substation, an expansion of an approved substation, and service roads and gates. Figure C-2 in Exhibit C shows the layout of these supporting facilities within the Amended Site Boundary. Related or supporting facilities previously approved as part of the wind energy generating facility, including a battery energy storage facility and the Wheatridge West substation, may also be used in support of solar energy generation. The additional related or supporting facilities are described below.

- **Collection System** – From the transformers, the AC electricity is aggregated via underground 34.5-kV cables to the 34.5-kV collector line outside of the solar micro-siting corridors, which will be either aboveground or underground, and will connect the electrical output of the Facility to the Facility substation. Underground AC electrical cables will be buried to a minimum of 3 feet. Overhead collector lines will be supported by a wooden or steel monopole structure. Each support pole will be buried approximately 6 feet in the ground, and will extend to a height of approximately 60 feet above ground. The support poles will be spaced 100 to 200 feet apart, depending on specific siting conditions. The Certificate holder would like the flexibility to use either or both collector corridors identified on Figure C-2 of Exhibit C.

- **Distributed Energy Storage** – Distributed energy storage will consist of up to 41 sites of lithium-ion batteries in concrete containers throughout the solar array areas. Each container will measure up to 12 feet wide, 36 feet long, and 10 feet tall. Lithium-ion battery systems are modular systems. Each module contains multiple smaller battery cells, each measuring up to 3.2 by 7 centimeters. The cells are the primary containment for the gel or liquid electrolyte materials. The module containing the cells is relatively small, generally about the size of a desktop computer processor, and serves as leak-proof secondary containment. Modules are placed in anchored racks within the concrete containers; typically, each rack houses 12 battery modules along with a switchgear assembly. Cooling units will be placed either on top of the concrete containers or along the side.
- **Collector Substation Expansion** – In order to accommodate the additional electrical equipment needed to handle the power generated by the proposed solar generating facility, one of the two collector substations approved in Wheatridge West (by Strawberry Lane) will occupy up to an additional 5 acres, for a maximum substation total footprint of 10 acres. The expanded substation area will provide the space, if needed, for an additional transformer and switches to increase the output voltage from the 34.5-kV lines from the solar arrays to the voltage of the transmission line (230 kV). The expanded substation area may also include protective relay and metering equipment.
- **Service Roads and Gates** – The Certificate Holder will construct additional 16-foot wide service roads within and around the perimeter of the solar arrays, and within the solar micro-siting corridors, to facilitate access for construction and maintenance purposes. The perimeter road along with additional cleared area will provide a 100-foot-wide cleared area around the solar arrays for fire safety. The perimeter service road will be bordered by a 7 or 8-foot-high chain-link security fence. The main purpose of the fence is to prevent unauthorized access to the site. There will be locked security entrance gates to allow vehicle and pedestrian access.

## 4.0 Approximate Dimensions - OAR 345-021-0010(b)(C)

*OAR 345-021-0010(b)(C) The approximate dimensions of major facility structures and visible features.*

Sections 2 and 3 provide a complete description of components proposed for development of the solar arrays and related or supporting facilities. Dimensions included in the descriptions are for representative purposes only. The vendor, size, number, and arrangement of the solar modules (as arrays) have not yet been determined. Ultimately, the solar modules will not be higher than 16 feet at full tilt and will at maximum occupy the full buildable area (solar array areas) of each of the two solar micro-siting corridors (see Exhibit C, Figure C-3). Attachment B-1 provides pictures of existing NextEra solar arrays to provide examples of how solar arrays generally appear in scope and size.

## **5.0 Pipelines and Transmission Line Corridor Assessment – OAR 345-021-0010(b)(D)**

*OAR 345-021-0010(b)(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, a corridor selection assessment explaining how the applicant selected the corridor(s) for analysis in the application. In the assessment, the applicant shall evaluate the corridor adjustments the Department has described in the project order, if any. The applicant may select any corridor for analysis in the application and may select more than one corridor. However, if the applicant selects a new corridor, then the applicant must explain why the applicant did not present the new corridor for comment at an informational meeting under OAR 345-015-0130. In the assessment, the applicant shall discuss the reasons for selecting the corridor(s), based upon evaluation of the following factors:*

The proposed changes in RFA 4 do not include a pipeline or a transmission line that, by itself, is an energy facility under the definition in ORS 469.300. Therefore, this section does not apply.

## **6.0 Description of Pipelines and Transmission Lines – OAR 345-021-0010(b)(E)**

*OAR 345-021-0010(b)(E) If the proposed energy facility is a pipeline or transmission line or has, as a related or supporting facility, a transmission line or pipeline of any size:*

The proposed changes in RFA 4 do not include a pipeline or a transmission line that, by itself, is an energy facility under the definition in ORS 469.300. Therefore, this section does not apply.

## **7.0 Facility Construction Schedule – OAR 345-021-0010(b)(F)**

*OAR 345-021-0010(b)(F) A construction schedule including the date by which the applicant proposes to begin construction and the date by which the applicant proposes to complete construction. Construction is defined in OAR 345-001-0010. The applicant shall describe in this exhibit all work on the site that the applicant intends to begin before the Council issues a site certificate. The applicant shall include an estimate of the cost of that work. For the purpose of this exhibit, “work on the site” means any work within a site or corridor, other than surveying, exploration or other activities to define or characterize the site or corridor, that the applicant anticipates or has performed as of the time of submitting the application.*

The Certificate Holder will begin construction of previously approved facilities by May 24, 2020, consistent with Site Certificate Condition GEN-GS-01. It is understood that ODOE will recommend new conditions for construction commencement and completion dates for the facilities added as

part of RFA 4. These dates and timeframes will follow the typical construction commencement and completion deadline based upon 3 years following the amended site certificate execution date and an additional 3 years following date of construction commencement. This timeframe would provide sufficient time for satisfying pre-construction condition requirements established in the amended site certificate, allow sufficient time to obtain required permits not governed by the site certificate, and would be consistent with past Council requirements.

The Certificate Holder does not anticipate beginning any work on the site, other than surveying, exploration, or other activities to define the character of the Amended Site Boundary, before Council approval of RFA 4.

# **Attachment B-1. NextEra Solar Energy Booklet**

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# Our **Solar Energy** Business



# Our Business Operations

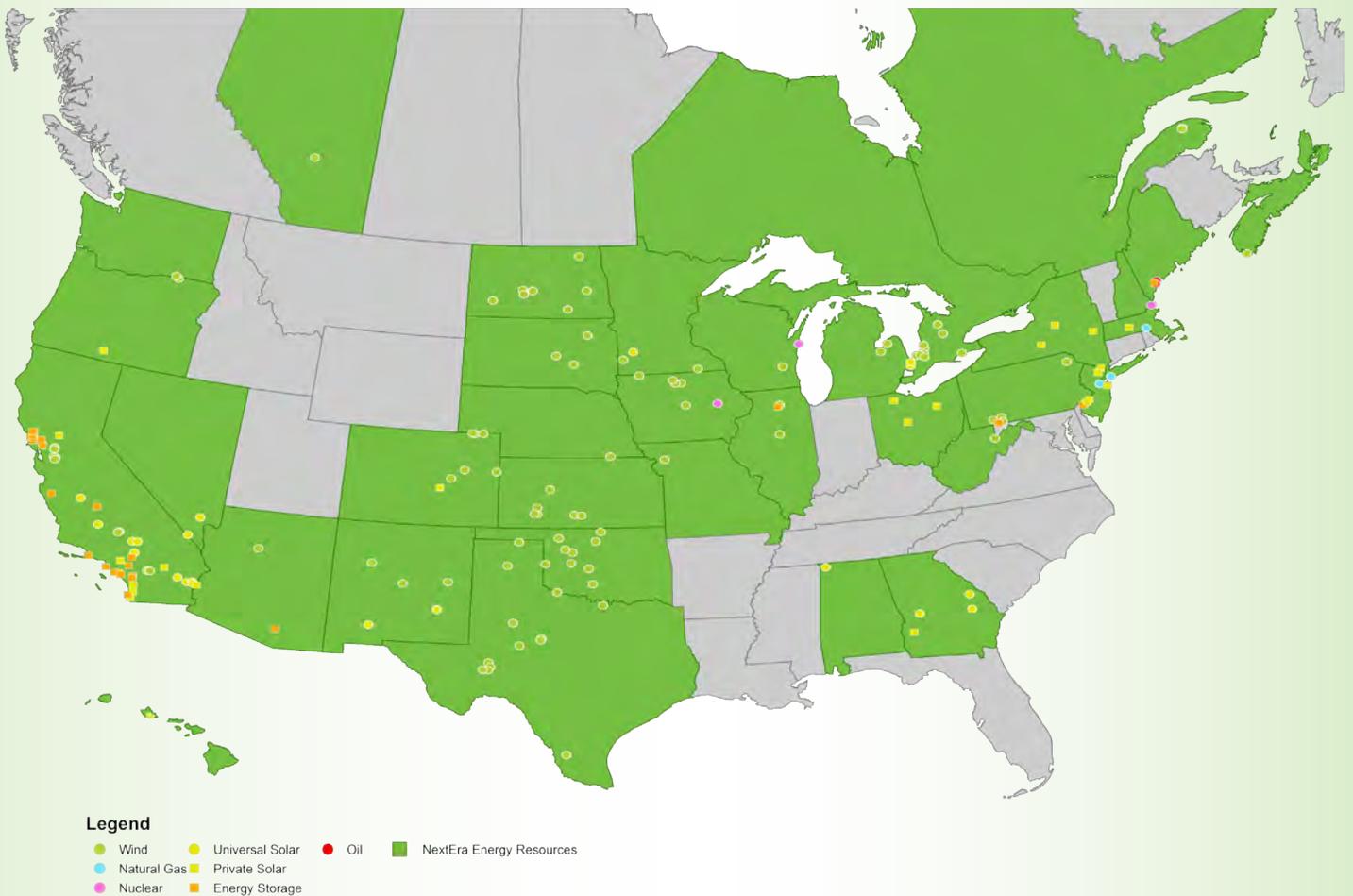
Based in Juno Beach, Florida, NextEra Energy Resources, LLC, is the competitive energy subsidiary of NextEra Energy, Inc., a Fortune 200 company and one of the nation's largest clean energy providers with consolidated revenues of approximately \$16.2 billion in 2016.

NextEra Energy Resources is primarily a wholesale power generator, operating power plants and selling the output to utilities, retail electricity providers, power cooperatives, municipal electric providers and large industrial companies.

Nationally recognized as a leading clean energy provider, NextEra Energy Resources has a portfolio of facilities, totaling more than 19,800 net megawatts (MW) of generating capacity in the United States and Canada. More than 95 percent of our electricity is derived from clean or renewable sources, including wind, solar, natural gas and nuclear energy.

NextEra Energy Resources' operations are diversified not only by fuel sources, but by geographic regions. This helps us manage our power generation business more efficiently and economically, especially in today's volatile energy markets.

## NextEra Energy Resources Generation Facilities in Operation (As of 3/1/17)



# Provider of Energy Services

NextEra Energy Resources has established a strong reputation based on outstanding performance at every level. We continue to solidify our position as one of the nation's leading energy providers by focusing on:

## Development, construction and operation

NextEra Energy Resources is a world leader in the development, construction and operation of wind energy centers. Standardized processes, best practices and superior execution have earned us the top position in the field.

We are also experienced in other areas of power generation, including solar, nuclear energy and fossil fuels. Given our experience in these areas, NextEra Energy Resources is uniquely suited to continue developing and acquiring power plants to meet the nation's growing energy needs.

## Transmission facilities

Power plants alone are only part of the energy equation. As additional power generation facilities become operational, we need to move this power from the generation sites to where it is needed. To do that, the electric transmission system must be improved, and NextEra Energy Resources is doing its part. Although we own various transmission lines across the country, we are pursuing additional large-scale opportunities to develop, build and operate new transmission facilities through an affiliate company, NextEra Energy Transmission.

## Renewable energy expertise at WindLogics

WindLogics, one of our subsidiaries based in St. Paul, Minnesota, provides renewable energy consulting services, using industry-leading scientific analysis for planning, siting and forecasting renewable energy projects. Besides being the lead wind and solar advisor to NextEra Energy Resources, WindLogics also serves the renewable energy and electric utility industries throughout North America and around the globe. The company employs meteorologists, computing experts and other industry specialists.

## Power marketing

NextEra Energy Marketing, LLC, a NextEra Energy Resources' subsidiary, is one of the top-ten marketers of power in the nation. NEM buys and sells wholesale energy commodities, such as natural gas, oil and electricity; manages all the fuel needs of the NextEra Energy Resources' power generation fleet; and markets the output to customers across the country.

## Renewable energy market

NEM markets the largest renewable energy portfolio in the country. NEM provides custom renewable energy solutions for customers with specific needs, from meeting regulatory mandates associated with a renewable portfolio standard to working with businesses to meet their goals on renewable energy generation or carbon emissions management.

## Distributed or private generation

Our Distributed Generation (DG) team tailors solar solutions that enable customers to generate clean, reliable energy from their rooftops, parking structures and open land. DG develops, builds, finances and operates the systems for commercial, institutional, utility and public power customers, helping them to control costs and make a meaningful impact on their renewable energy goals.

## Retail market

NextEra Energy Resources entered the retail market in 2005. NextEra Energy Services and Gexa Energy serve customers in numerous U.S. retail markets and manage the related billing, customer service, collections and remittance services to residential and commercial customers.

## Energy storage

Our team of specialists have spent years researching energy storage technologies. Today, we have approximately 90 MW of operational energy storage and a pipeline of development projects across the U.S. and Canada. With our best-in-class development skills, we are positioned to be a leader in the energy storage market.



# Investment in **Energy Infrastructure**



Long before clean energy became a popular choice in the United States, NextEra Energy Resources had been leading the way in using clean fuels to produce electricity that is environmentally friendly.

Our renewable or clean energy mix includes:

## **Wind**

NextEra Energy Resources remains the world's largest generator of U.S. wind generating facilities. We have more than 115 wind facilities in operation in North America capable of producing more than 13,800 MW of electricity.

NextEra Energy Resources' wind facilities have enabled our customers who have purchased the renewable attributes to reduce 2016 emissions that would have otherwise been released into the atmosphere from other sources of power generation, including:

- » More than 29.1 million tons of carbon dioxide
- » More than 27,300 tons of sulfur dioxide
- » More than 23,000 tons of nitrogen oxide

In the coming years, NextEra Energy Resources plans to continue the aggressive expansion of its wind business.

## **Solar**

NextEra Energy Resources is also the world's largest generator of solar energy. We generate solar energy at nine sites in California, as well as sites in Alabama, Georgia, Minnesota, New Jersey, New Mexico, Nevada and Canada. In all, the company operates approximately 2,200 MW of solar generation.

## **Natural gas**

We have incorporated the cleanest burning fossil fuel into our portfolio with natural gas-fired facilities in three states. We often install combined-cycle technology that uses waste heat to drive an additional power generator for increased energy efficiency and lower emissions than conventional fossil-fueled units. This type of plant is about 30 percent more efficient than a traditional steam plant.

## **Nuclear energy**

NextEra Energy Resources also incorporates clean nuclear energy into the fuel mix through Seabrook Station in New Hampshire, Duane Arnold Energy Center in Iowa and Point Beach Nuclear Plant in Wisconsin. Nuclear power plants produce virtually no air emissions during operation, representing a responsible energy choice for the future as global warming and climate change concerns intensify. All three NextEra Energy Resources' nuclear power plants have excellent safety records and are focused on reliable operation.

# Bringing Solar Energy to Market

## Solar energy benefits

While no energy source is perfect, we believe the benefits of solar energy far outweigh the negatives. For example, solar plants operate when energy consumption needs are at their highest, effectively matching energy supply and demand.

The other benefits of NextEra Energy Resources' photovoltaic (PV) solar portfolio are considerable, including:

- » creates no greenhouse gases or other air pollutants;
- » uses no water resources to generate electricity;
- » provides a renewable fuel supply;
- » creates no waste by-products for disposal;
- » results in no hazardous cleanup at the end of a project's productive life; and
- » is a completely silent operation.

## Our solar expertise

NextEra Energy Resources entered the solar generation business in 1989 through its interest in Solar Electric Generating System (SEGS), one of seven solar thermal projects sited in Kramer Junction and Harper Lake, Calif.

Since then, the company has significantly expanded its solar development to approximately 2,200 MW of operating assets with 1,100 MW of assets brought into service in 2016 alone.

## Vital landowner relationships

PV solar facilities require a large area for development. Our general rule of thumb is that each MW of power will require five to eight acres of land to support the solar equipment as well as easements for power line infrastructure. For example, a 20 MW facility will require about 100 to 160 acres.

We generally aim to site a project as close as possible to existing electrical transmission or distribution infrastructure. We try to avoid too much land variation, extreme terrain and trees when siting a project because such characteristics can cause shading, reducing the project's electrical production.

A solar PV project only requires water during construction for dust control as well as infrequent panel cleaning during operations.

If an area is promising after our initial assessment, NextEra Energy Resources will enter into a purchase or lease option agreement with landowners, which provides additional time for further evaluation of the property.

Landowners receive option payments based upon the final agreed dollar per acre value of the property. Throughout the option period, landowners are able to continue to conduct business as usual on their land. Landowners are not the only beneficiaries. Their decision to help develop a solar project in their community brings additional jobs to the area, increased tax revenue and our purchases of local goods and services.

## Siting a solar project

Siting a solar project is challenging work and includes finding the right combination of solar conditions, power transmission lines and land. In addition to working with landowners to familiarize them with the process and what to expect, our developers are busy on a wide range of issues related to developing a solar site, including:

- » meeting with and providing information to local officials on project progress;
- » conducting environmental assessments;
- » completing historical and archaeological reviews;
- » arranging to connect to the local power grid;
- » securing customers for the site's generated electricity;
- » attending public meetings to gain approval for construction;
- » permitting and land use zoning, as applicable; and
- » procuring equipment.

## Environmental stewardship

- » NextEra Energy Resources works closely with federal, state and local environmental organizations.
- » Environmental assessments determine suitability of prospective solar sites.
- » Land and wildlife are respected and protected during construction and operations.
- » Land is restored after construction.



Workers discuss the construction of the White Pine Solar Energy Center in Georgia.

# Crews are Experienced in Construction

## Construction is carefully planned

NextEra Energy Resources' construction team is experienced in building solar PV plants. When all approvals are in place and landowners have signed their contracts, construction can begin. Our construction managers and engineers oversee and are responsible for all work and all contractors at a construction site. They, and often their families, live in the community during construction.

Approximately 90 to 120 contractors can be involved in a typical solar construction project. Our goal is to hire as many workers from the area as possible, including heavy equipment operators, electricians, laborers, security and others.

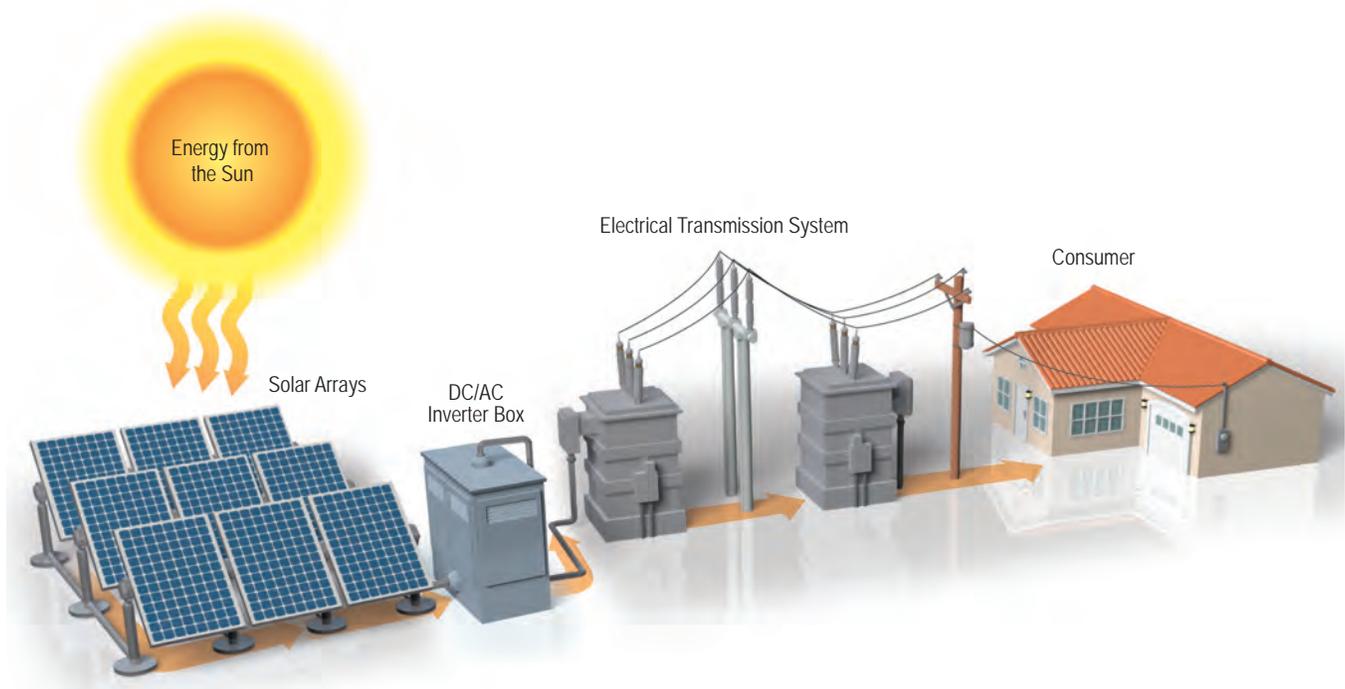
Construction typically takes between six and 12 months. Our construction manager and staff stay in close contact not only with landowners, but also with local government, to keep interested parties apprised of progress and to ensure adherence to all local building code requirements.

Some of the major steps involved include:

- » erecting a fence for safety;
- » laying high-quality gravel roads to accommodate heavy equipment;
- » constructing a substation and possibly an operations and maintenance building;
- » installing the solar arrays, which are typically about six to eight feet tall and are erected on steel posts driven into the ground; and
- » testing and commissioning the completed arrays.

When construction is complete and the plant has begun commercial operation, the site is turned over to our operations staff who operate and maintain the solar plant.

## How a photovoltaic solar plant works



As sunlight hits the solar panels, the photovoltaic energy is converted into direct current electricity (DC). The direct current flows from the panels through inverters and is converted into alternating current (AC). Finally, the electricity travels through transformers, and the voltage is boosted for delivery onto the transmission lines, so the local electric utility can distribute the electricity to homes and businesses.

# Generating **Home-Grown** Solar Energy



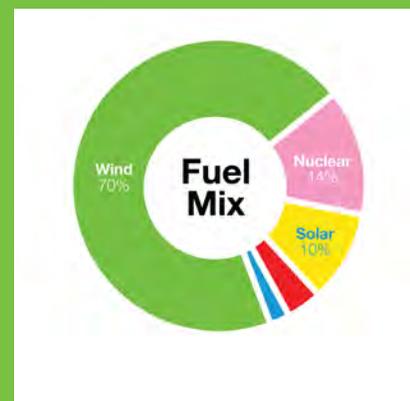
NextEra Energy Resources is the world's leader in generating solar energy. Lower solar panel costs have greatly improved the economics of solar power, and the benefits are significant. For local communities, it means clean, home-grown energy that also provides much-needed tax income to rural communities -- to schools, libraries and other public services, benefiting the entire community.

## Highlights of solar operations

- » We have 28 solar projects with approximately 2,200 MW of owned solar generation.
- » Thousands more megawatts are in the development pipeline for future construction and operation
- » Solar generation does not use water for power generation.
- » Solar power generation is emissions free.

## A Diversified Portfolio

Total Net Megawatts: 19,882  
Updated January 1, 2017



\*Includes megawatts associated with noncontrolling interests related to NextEra Energy Partners, LP



NextEra Energy Resources, LLC  
700 Universe Boulevard  
Juno Beach, Florida 33408

For more information, go to:  
[NextEraEnergy.com](http://NextEraEnergy.com)  
[NextEraEnergyResources.com](http://NextEraEnergyResources.com)



# **Attachment B-2. NextEra Energy Storage Booklet**

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# Our **Energy Storage** Business



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# A Promising Future For Energy Storage

## Technology offers flexibility, value in today's energy market

Meeting today's energy challenges is complicated. The power infrastructure must be able to balance supply and demand instantaneously while taking into account the impacts of intermittent renewable energy. Consumers are also looking for energy services and products that provide flexibility and value in the areas of renewable energy, grid reliability and peaking power.

NextEra Energy Resources is helping meet these needs through energy storage technology, which is providing a promising way to store electrical energy so it can be available to meet demand whenever needed. While there are many energy storage technologies, NextEra Energy Resources has focused on the use of batteries as costs have declined, but is continuing to evaluate other storage technologies.

**“We expect to be a leader in energy storage. We are applying our experience, talent and resources to further develop this technology for the benefit of our customers.”**

*Mike O'Sullivan, Senior Vice President of Development  
NextEra Energy Resources*

## Energy storage delivers advantages to the power grid and our customers

What makes energy storage attractive is that it allows energy to be delivered instantly, in the required amount, to either grid operators or direct consumers. By doing this, energy storage provides many advantages, such as improving the operation of the electrical grid, integrating renewable resources and helping investment decisions.

- » **Grid enhancement.** Energy storage can balance load on the power system grid by moving energy when demands are low to times when demands are high. The technology also allows for a seamless switch between power sources and protects equipment by controlling voltage and frequency.
- » **Renewable resources.** Energy storage fills in the gaps resulting from intermittent resources like wind and solar generation. That means operators can more easily bring on and off renewable energy, reducing the need for load balancing services and rapid generation ramping.
- » **Electrical system investments.** By reducing the load on congested transmission and distribution systems, energy storage may defer expensive upgrades. In some cases, storage may also reduce new investment in conventional resources, such as adding generating plants to meet systemwide peak load.



NextEra Energy Resources owns and operates the 20-megawatt (MW) Lee DeKalb Energy Storage Facility in Illinois. The facility helps balance the power grid frequency in a matter of seconds.



NextEra Energy Resources brought into service the 18-MW Meyersdale Energy Storage Facility in Pennsylvania in 2015. The company is developing additional energy storage facilities across North America.

## Projects require little land, provide many benefits

Energy storage projects do not require a large area for development, are scalable in size and can be located in many places. NextEra Energy Resources generally seeks to site a project as close as possible to existing electrical transmission or distribution infrastructure and often, close to an existing renewable project.

Other benefits of energy storage include no greenhouse gases or other air pollutants, no use of water to generate electricity, and a renewable supply of energy.

## Interest in energy storage is growing

The growing interest in energy storage is being driven by a number of factors, including:

- » Reductions in technology costs;
- » The rapid development of intermittent renewable energy resources;
- » The evaluation of new policy initiatives by states; and
- » Regulatory changes.

For example, the Federal Energy Regulatory Commission has mandated policy changes in the frequency regulation market that have helped spur the use of energy storage for this purpose. Certain markets are now requiring utilities to use energy storage to manage the intermittent energy that flows into the grid.

## Costs are expected to decline

While emerging technology costs tend to be higher and therefore less competitive during the early evolution phase, technological efficiencies, improved manufacturing productivity and economies of scale help lower cost over time. As batteries gain wider industry adoption, prices are expected to decrease further.

## Energy storage is safe, reliable

Safety is always a top priority in NextEra Energy Resources' operations, and energy storage systems are no exception.

Our battery storage systems are safe and reliable. Overall, energy storage has been a part of the U.S. electric system since the 1930s. Today, it makes up approximately two percent of the nation's generation capacity, according to the Energy Storage Association. The safety record of the industry is similar to or better than other forms of power generation or distribution.

## NextEra Energy Resources is experienced in energy storage

Our team of specialists has spent years researching energy storage technologies, applications and use cases, leading to two demonstration projects in 2012 and 2013.

Today, NextEra Energy Resources has more than 100 MW of operational energy storage, including the Lee DeKalb Energy Storage Facility in Illinois, and the Meyersdale and Green Mountain Energy Storage Facilities in Pennsylvania. These facilities are being used for frequency regulation. Traditionally, fossil and hydroelectric power plants have been used for frequency regulation. Now, batteries can also accomplish this task more efficiently.

In addition to the growth of operational facilities, the company has a robust pipeline of development projects across the U.S. and Canada.



Batteries are packed into removable racks similar to a computer server. There are also monitoring, control and power conversion systems as well as cooling and fire suppression systems.

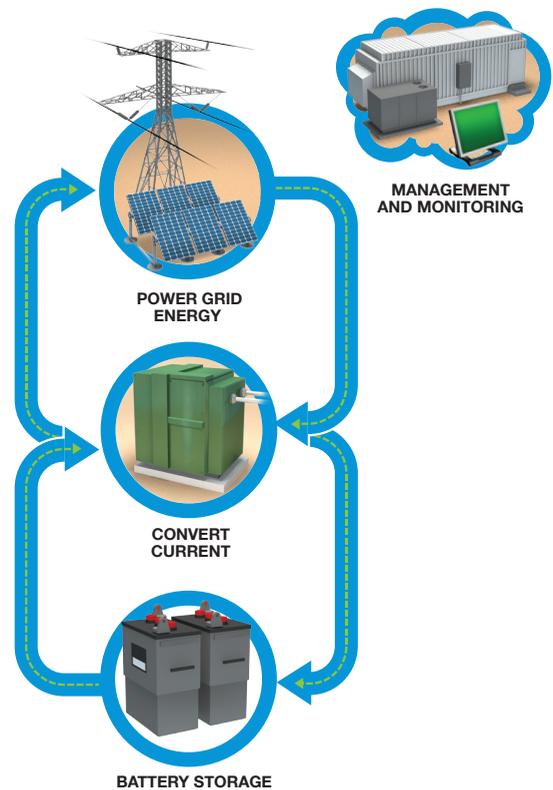
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About 3,000 batteries are housed in white containers on the Lee DeKalb wind site. Our battery storage systems are safe, reliable and efficient.

### How energy storage systems work

- » A battery management system monitors the individual cells and controls the voltage, temperature and current for safe, reliable transfer of energy. The system automatically shuts off if the batteries are operating outside of predefined parameters.
- » A computerized monitoring system provides up-to-date weather forecasts, power prices, historical electrical use, the amount of charge remaining in the batteries and when to use the energy storage system.
- » Energy from the power grid or from renewable energy sources is delivered via a bidirectional inverter, which converts the energy from alternating current (AC) into direct current (DC). Today's batteries can only store DC. This energy goes into an array of batteries that is typically housed within a battery container or a building structure.
- » When the energy is needed on the power system, the inverters are then used again, but this time to convert the DC from the batteries into AC. Once the power has been transformed, it is stepped up in voltage and subsequently sent to an on-site substation or directly to a distribution or transmission line.
- » The electricity is then distributed to homes, schools, businesses and other consumers.



## NextEra Energy Resources has a proven reputation for excellence

As the largest operator of wind and solar energy in the world, NextEra Energy Resources has earned a reputation for excellence. Our scale, size and scope of services allow us to offer innovative energy solutions to customers, and energy storage is a natural extension of our development business.

By working with NextEra Energy Resources, customers can realize the monetary benefits of energy storage while mitigating technology complexity and vendor risk. With our significant purchasing power, we can buy energy storage equipment at the lowest possible costs. With our best-in-class development skills, we can also build customized storage solutions to meet customers' unique requirements.

Energy storage has the potential to be a game changer for the energy industry, and NextEra Energy Resources is positioned to become a leader in the market.

[NextEraEnergyResources.com](http://NextEraEnergyResources.com)

NextEra Energy Resources, LLC | 700 Universe Boulevard | Juno Beach, FL 33408



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# Exhibit C

## Project Location and Maps

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**Wheatridge Wind Energy Facility  
June 2019**

**Prepared for**



**Prepared by**



**Tetra Tech, Inc.**

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## Table of Contents

1.0	Introduction .....	1
2.0	General Location – OAR 345-021-0010(1)(c)(A) .....	2
3.0	Specific Location of Major and Supporting Facilities – OAR 345-021-0010(1)(c)(B).....	3
3.1	Proposed Layout.....	4
3.2	Location of Micrositing Corridors .....	4
3.3	Land Area.....	4
3.4	Temporary and Permanent Disturbance Areas.....	5
4.0	Energy Generation Facilities – OAR 345-021-0010(1)(c)(C) .....	5
5.0	References.....	5

## List of Tables

Table C-1.	Facility Location by Township, Range, Section, County, and Tax Lot ID Number.....	2
Table C-2.	Estimated Temporary and Permanent Disturbance (in Acres).....	5

## List of Figures

Figure C-1.	Facility Overview
Figure C-2.	Facility Layout
Figure C-3.	Energy Facilities within 10 miles

**Acronyms and Abbreviations**

Certificate Holder	Wheatridge Wind Energy, LLC
Council	Energy Facility Siting Council
Facility	Wheatridge Wind Power Facility
kV	kilovolt
MW	Megawatts
OAR	Oregon Administrative Rules
RFA 4	Request for Amendment 4

## 1.0 Introduction

The Wheatridge Wind Energy Facility (Facility) is an approved, but not yet constructed, wind energy generation facility consisting of up to 292 turbines with a peak generating capacity of up to 500 megawatts (MW), to be located in an Approved Site Boundary of approximately 13,097 acres in Morrow and Umatilla counties, Oregon. In Request for Amendment 4 (RFA 4) to the Facility Site Certificate, Wheatridge Wind Energy, LLC (Certificate Holder) is proposing to add photovoltaic solar energy generation to the Facility to provide the opportunity for an integrated, renewable energy facility with both wind and solar energy generation and energy storage. In RFA 4, the Certificate Holder is proposing five changes to the approved Facility:

1. Amend the description of the Facility to include photovoltaic solar energy generation equipment to leverage the complementary nature of wind and solar generation to provide more reliable renewable energy generation.
2. Amend the Site Boundary to provide for solar micrositing corridors<sup>1</sup> for the photovoltaic solar energy system.
3. Increase the maximum peak generating capacity for the Facility by up to 150 MW of solar energy generation, for a total Facility maximum peak generating capacity of up to 650 MW.
4. Add distributed energy storage as a related or supporting facility for solar energy generation, along with new collector lines connecting the solar arrays, and an expansion of an approved substation.
5. Amend four existing site certificate conditions and increase the approved MW of the turbines by approximately 12 percent, from 2.5 MW to 2.8 MW.

The Energy Facility Siting Council (Council) previously found the Certificate Holder has demonstrated an ability to construct, operate, and retire the Facility in compliance with Council standards and conditions of the Site Certificate. This exhibit contains information about the location of the Amended Site Boundary (solar micrositing corridors) for the solar generation facility, within and adjacent to the Approved Site Boundary (wind micrositing corridors) under Oregon Administrative Rules (OAR) 345-021-0010(1)(c).

The information included in this exhibit demonstrates the following:

- RFA 4 proposes to add approximately 1,527 acres of land adjacent to the Approved Site Boundary (13,097 acres) in Wheatridge West for a total Site Boundary of 14,624 acres. The Amended Site Boundary, which consists of 2,294 acres, provides for designated solar micrositing corridors at two locations that overlap with the approved wind micrositing

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<sup>1</sup> Per OAR 345-001-0010(32) “micrositing corridor” means a continuous area of land within which construction of facility components may occur, subject to site certificate conditions.

corridors. Section 3.4 details the anticipated total permanent and temporary disturbance area, including the additional disturbance associated with RFA 4 (ODOE 2017).

- OAR 345-001-0010 defines the Site Boundary as “the perimeter of the site of a proposed energy facility, its related or supporting facilities, all temporary laydown and staging areas and all corridors and micro-siting corridors proposed by the applicant.” The proposed Amended Site Boundary, also known as the solar micro-siting corridors, consists of all areas where solar arrays, inverters, transformers, distributed storage, and related collection lines will be installed. The Approved Site Boundary and proposed Amended Site Boundary are shown on Figure C-1.

## 2.0 General Location – OAR 345-021-0010(1)(c)(A)

*OAR 345-021-0010(1)(c) Information about the location of the proposed facility, including:*

*(A) A map or maps showing 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, using a scale of 1 inch = 2000 feet or smaller when necessary to show detail.*

RFA 4 seeks to amend the Site Certificate to expand the Certificate Holder’s Approved Site Boundary for the Facility onto adjacent land, in Morrow County, Oregon (see Figure C-1). Figure C-2 provides a map at the scale of 1 inch = 2,000 feet, showing the solar micro-siting corridors, which contains the layout of Solar Array 1 and Solar Array 2, as well as the locations of all related or supporting facilities.

Table C-1 summarizes the general location of the Facility by the Public Land Survey System’s Township, Range, and Section, as well as by county and the Tax Lot Identification Number of parcels that are directly affected by permanent or temporary Facility impacts.

**Table C-1. Facility Location by Township, Range, Section, County, and Tax Lot ID Number**

Township	Range	Section	County	Tax Lot ID Number
001 N	026 E	19	Morrow County	3502
001 N	026 E	20	Morrow County	3500
001 N	026 E	19	Morrow County	3500
001 N	026 E	29	Morrow County	3500
001 N	026 E	30	Morrow County	3500
001 N	026 E	19	Morrow County	3400
001 N	026 E	19	Morrow County	3300
001 N	026 E	18	Morrow County	3201
001 N	026 E	18	Morrow County	3200

Township	Range	Section	County	Tax Lot ID Number
001 N	026 E	17	Morrow County	2900
001 N	026 E	8	Morrow County	2700
001 N	026 E	9	Morrow County	2700
001 N	026 E	17	Morrow County	2700
001 N	026 E	16	Morrow County	2700
001 N	026 E	18	Morrow County	3100
001 N	025 E	13	Morrow County	1600
001 N	026 E	18	Morrow County	1600
001 N	026 E	10	Morrow County	1500
001 N	026 E	9	Morrow County	1500
001 N	026 E	6	Morrow County	1102
001 N	026 E	7	Morrow County	1102
001 N	026 E	8	Morrow County	1300
001 N	026 E	9	Morrow County	1300
001 N	025 E	24	Morrow County	3100
001 N	026 E	19	Morrow County	3100
001 N	026 E	9	Morrow County	400
001 N	026 E	7	Morrow County	1200
001 N	026 E	18	Morrow County	1200
001 N	026 E	8	Morrow County	1301
001 N	026 E	6	Morrow County	1100

**3.0 Specific Location of Major and Supporting Facilities – OAR 345-021-0010(1)(c)(B)**

*OAR 345-021-0010(1)(c)(B) A description of the location of the proposed energy facility site, the proposed site of each related or supporting facility and areas of temporary disturbance, including the total land area (in acres) within the proposed site boundary, the total area of permanent disturbance, and the total area of temporary disturbance. If a proposed pipeline or transmission line is to follow an existing road, pipeline or transmission line, the applicant shall state to which side of the existing road, pipeline or transmission line the proposed facility will run, to the extent this is known.*

The Amended Site Boundary will accommodate the new development of the solar arrays and their related and supporting facilities. Combined with the previously approved wind facility, the Facility

will have a total generating capacity of up to 650 MW. The solar micrositing corridors overlaps with the 13,097-acre Approved Site Boundary, as shown on Figure C-2.

RFA 4 proposes the addition of two additional 34.5-kilovolt (kV) collector lines (Figure C-2). The first will connect Solar Array 1 to the substation located in Solar Array 2, which will be a total of 2.32 miles. The second line is a 0.66-mile collector line along Bombing Range Road, which will connect both solar arrays. The 34.5-kV collector lines are described in further detail in Exhibit B, and will be constructed in the same manner as previously described in the Final Order and approved in the Site Certificate (ODOE 2017). No new 230-kV transmission lines are proposed as part of RFA 4.

### **3.1 Proposed Layout**

The major components of the Facility include the previously approved wind turbines, which will be located within the Approved Site Boundary, and the solar arrays located within the solar micrositing corridors. Detailed views of the major components of the wind turbine facility and related or supporting facilities have not changed and are not repeated in RFA 4. Exhibit B provides a detailed description of the solar arrays. A detailed view of the major components of the solar arrays at a scale of 1 inch = 2,000 feet is shown in Figure C-2.

### **3.2 Location of Micrositing Corridors**

As previously approved in the Final Order on the Application for Site Certificate (ODOE 2017), the wind turbine micrositing corridors allow for flexibility in siting the final location of the components. The Certificate Holder requests similar micrositing flexibility for the solar arrays, such that components of the solar arrays may be constructed anywhere within the solar micrositing corridors. The solar arrays will be microsited during the final design to avoid or minimize both temporary and permanent impacts to high-quality habitat, and to retain habitat cover in the general landscape, to the extent practicable. The solar arrays will also be microsited to minimize impacts to current agricultural operations in the area. The wind and solar micrositing corridors overlap in some areas. In these areas, the solar arrays are being sited in consideration of turbine locations.

### **3.3 Land Area**

Table C-2 provides an estimate of permanent and temporary disturbances associated with the construction of the solar arrays by feature. Table C-2 presents the impact by disturbance type. However, some disturbance types overlap by the nature of their development. For example, access roads will be both within and outside of the fence line of the solar arrays. Therefore, the last row in the table provides the temporary and permanent disturbance area for the proposed changes in RFA 4 with any development overlap removed. For evaluation of the solar arrays, the Certificate Holder considered a layout that would permanently occupy up to 893.8 acres within the solar micrositing corridors. This layout represents the worst-case scenario for purposes of analyzing land use impacts (see further discussion in Exhibit K).

**3.4 Temporary and Permanent Disturbance Areas**

**Table C-2. Estimated Temporary and Permanent Disturbance (in Acres)**

<b>Disturbance Type</b>	<b>Temporary</b>	<b>Permanent</b>	<b>Total</b>
Fence Line (solar arrays)	-	887.1	887.1
Substation	-	5.0	5.0
Collector Line (overhead or underground)	8.7	0.8	9.5
Access Road	-	27.8	27.8
<b>Total</b>	<b>8.0</b>	<b>893.8</b>	<b>901.7</b>
Note that totals do not sum correctly because the total eliminates any overlap with other features, whereas the rest of the numbers include the overlap.			

**4.0 Energy Generation Facilities – OAR 345-021-0010(1)(c)(C)**

*OAR 345-021-0010(1)(c)(C) For energy generation facilities, a map showing 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.*

Figure C-3 shows the proposed location of the Facility in relation to other energy generation facilities within 10 miles.

**5.0 References**

ODOE (Oregon Department of Energy). 2017. Final Order in the Matter of the Application for a Site Certificate for the Wheatridge Wind Energy Facility. April 2017.

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# Figures

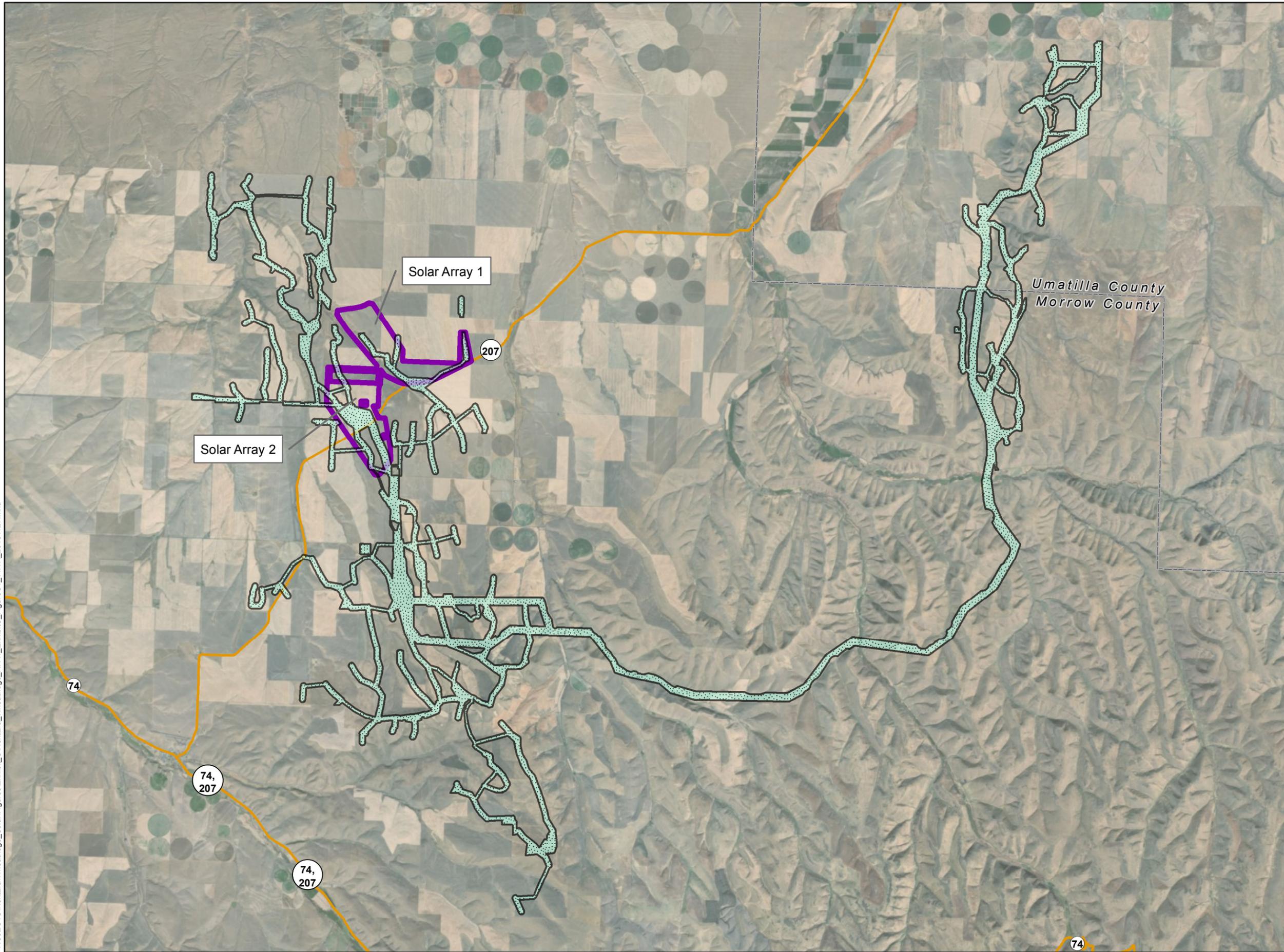
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# Wheatridge Wind Energy Facility Request for Amendment 4

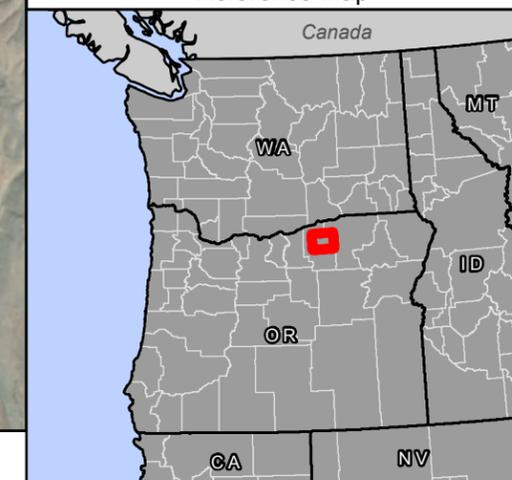
## Figure C-1 Facility Overview

MORROW AND UMATILLA COUNTIES, OR

- Approved Site Boundary  
(Approved Wind Micrositing Corridors)
- Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
- State Highway
- County Boundary



### Reference Map



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1:130,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

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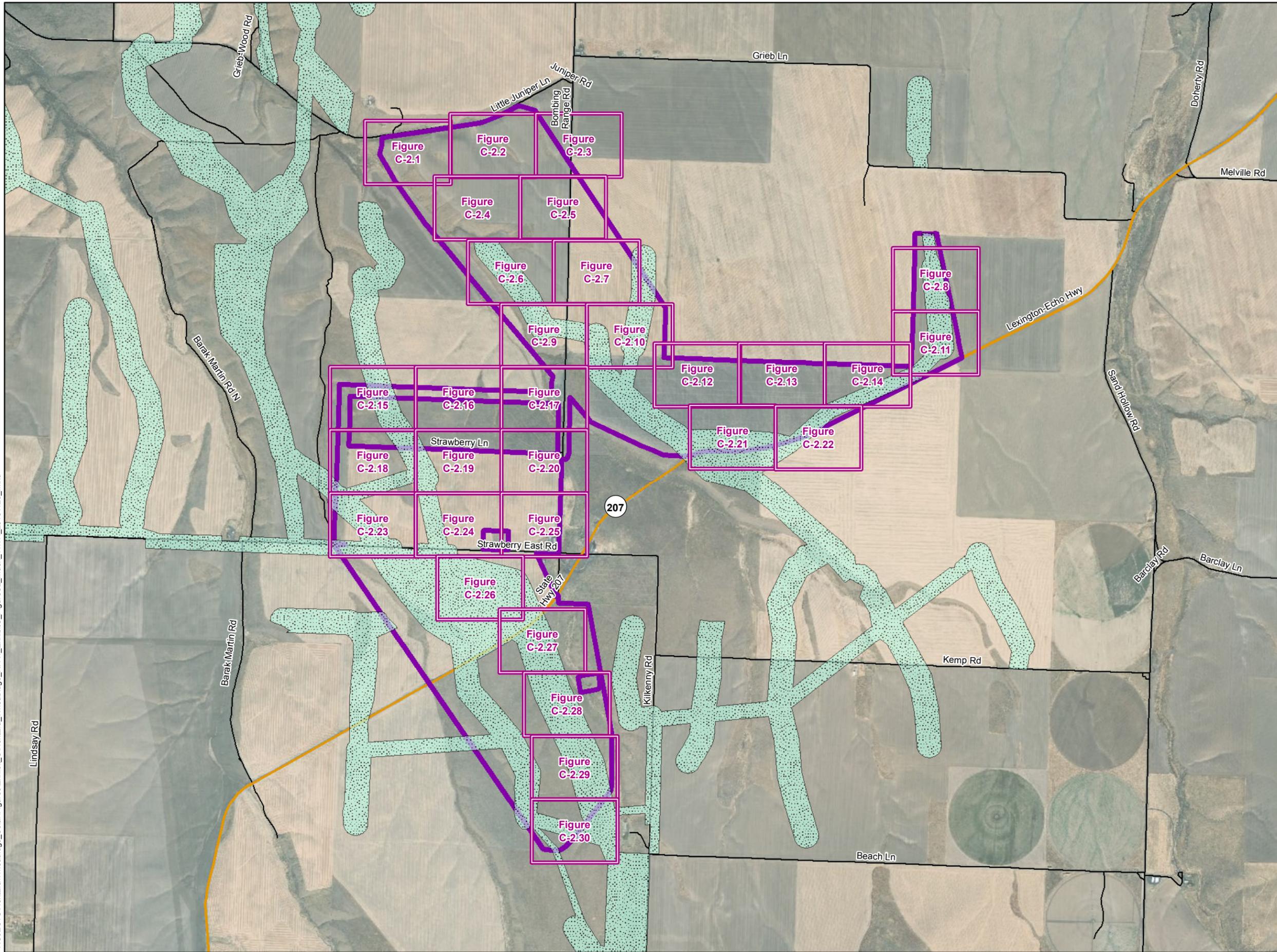
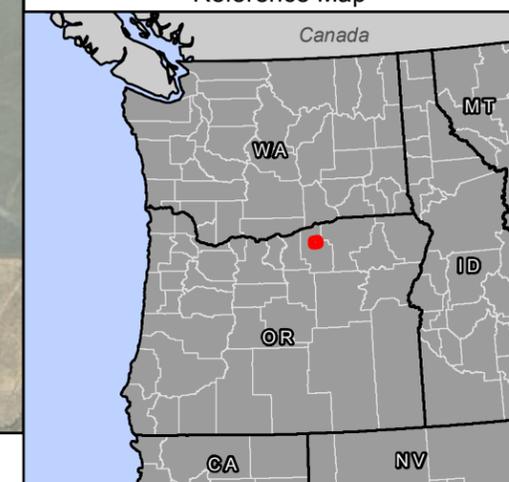
**Figure C-2  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  Map Grid
-  State Highway
-  Local Road



Reference Map



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# Wheatridge Wind Energy Facility Request for Amendment 4

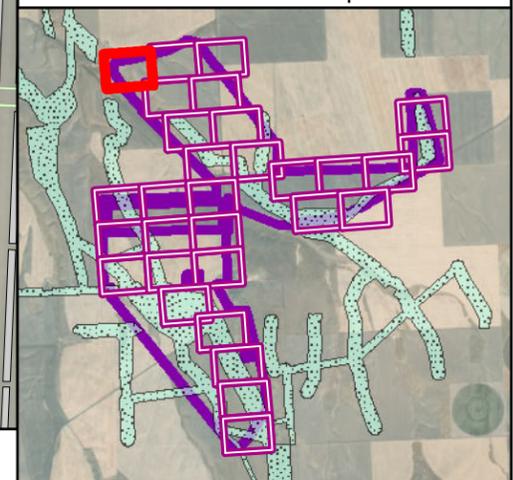
## Figure C-2.1 Facility Layout

MORROW COUNTY, OR

- Approved Site Boundary (Approved Wind Micrositing Corridors)
- Amended Site Boundary (Proposed Solar Micrositing Corridors)
- State Highway
- Local Road
- Facility Layout
  - Solar Access Roads
  - Proposed Collector Line
  - Proposed Substation
  - Approved Substation
  - Fenceline
  - Solar Tracker
  - Inverter Skid
  - Distributed Energy Storage



### Reference Map

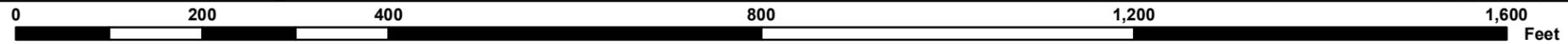


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1:2,000

WGS 1984 UTM Zone 11N



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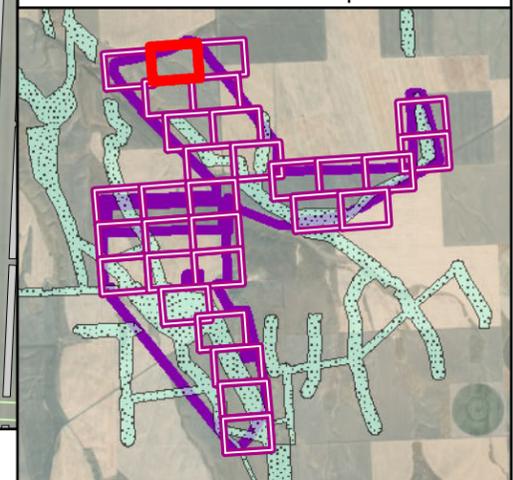
## Figure C-2.2 Facility Layout

MORROW COUNTY, OR

- Approved Site Boundary (Approved Wind Micrositing Corridors)
- Amended Site Boundary (Proposed Solar Micrositing Corridors)
- State Highway
- Local Road
- Facility Layout
  - Solar Access Roads
  - Proposed Collector Line
  - Proposed Substation
  - Approved Substation
  - Fenceline
  - Solar Tracker
  - Inverter Skid
  - Distributed Energy Storage



### Reference Map



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# Wheatridge Wind Energy Facility Request for Amendment 4

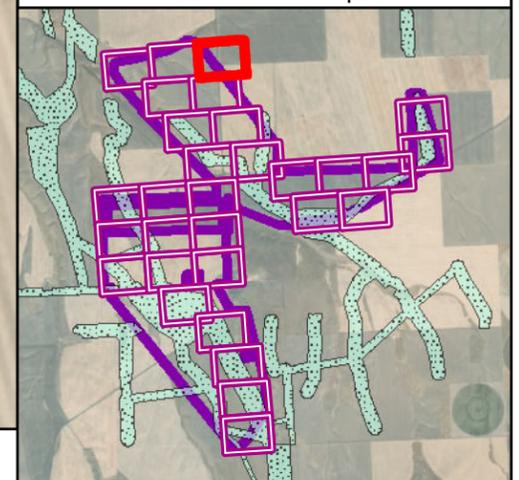
## Figure C-2.3 Facility Layout

MORROW COUNTY, OR

- Approved Site Boundary (Approved Wind Micrositing Corridors)
- Amended Site Boundary (Proposed Solar Micrositing Corridors)
- State Highway
- Local Road
- Facility Layout
  - Solar Access Roads
  - Proposed Collector Line
  - Proposed Substation
  - Approved Substation
  - Fenceline
  - Solar Tracker
  - Inverter Skid
  - Distributed Energy Storage



### Reference Map



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1:2,000 WGS 1984 UTM Zone 11N 0 200 400 800 1,200 1,600 Feet

# Wheatridge Wind Energy Facility Request for Amendment 4

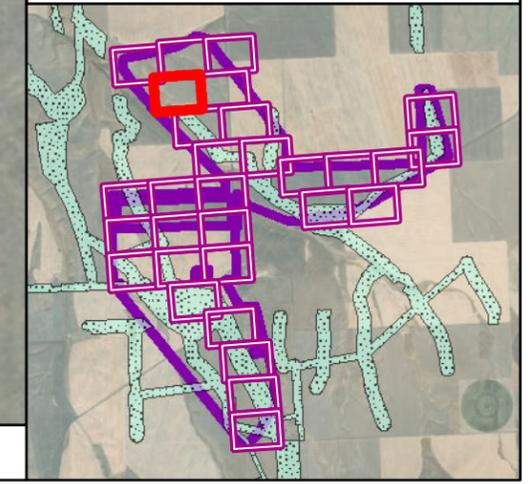
## Figure C-2.4 Facility Layout

MORROW COUNTY, OR

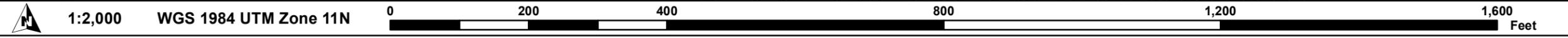
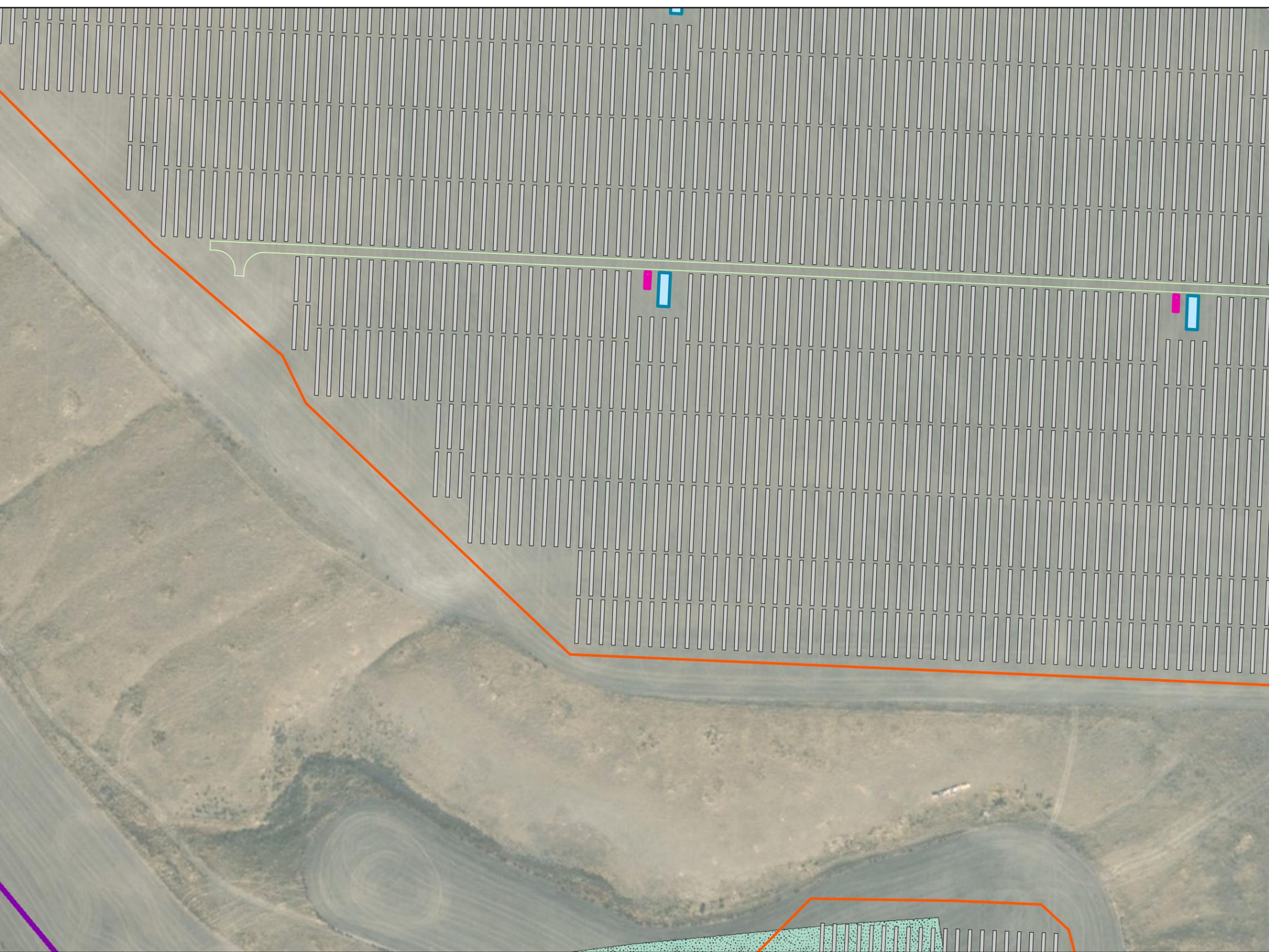
- Approved Site Boundary (Approved Wind Micrositing Corridors)
- Amended Site Boundary (Proposed Solar Micrositing Corridors)
- State Highway
- Local Road
- Facility Layout
  - Solar Access Roads
  - Proposed Collector Line
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  - Approved Substation
  - Fenceline
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  - Inverter Skid
  - Distributed Energy Storage



### Reference Map



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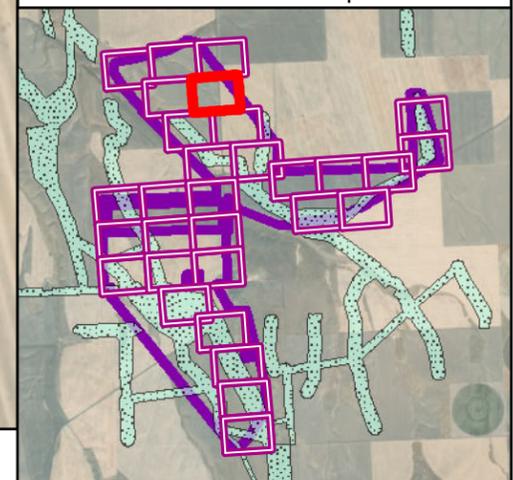
**Figure C-2.5  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



Bombing Range Rd

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**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

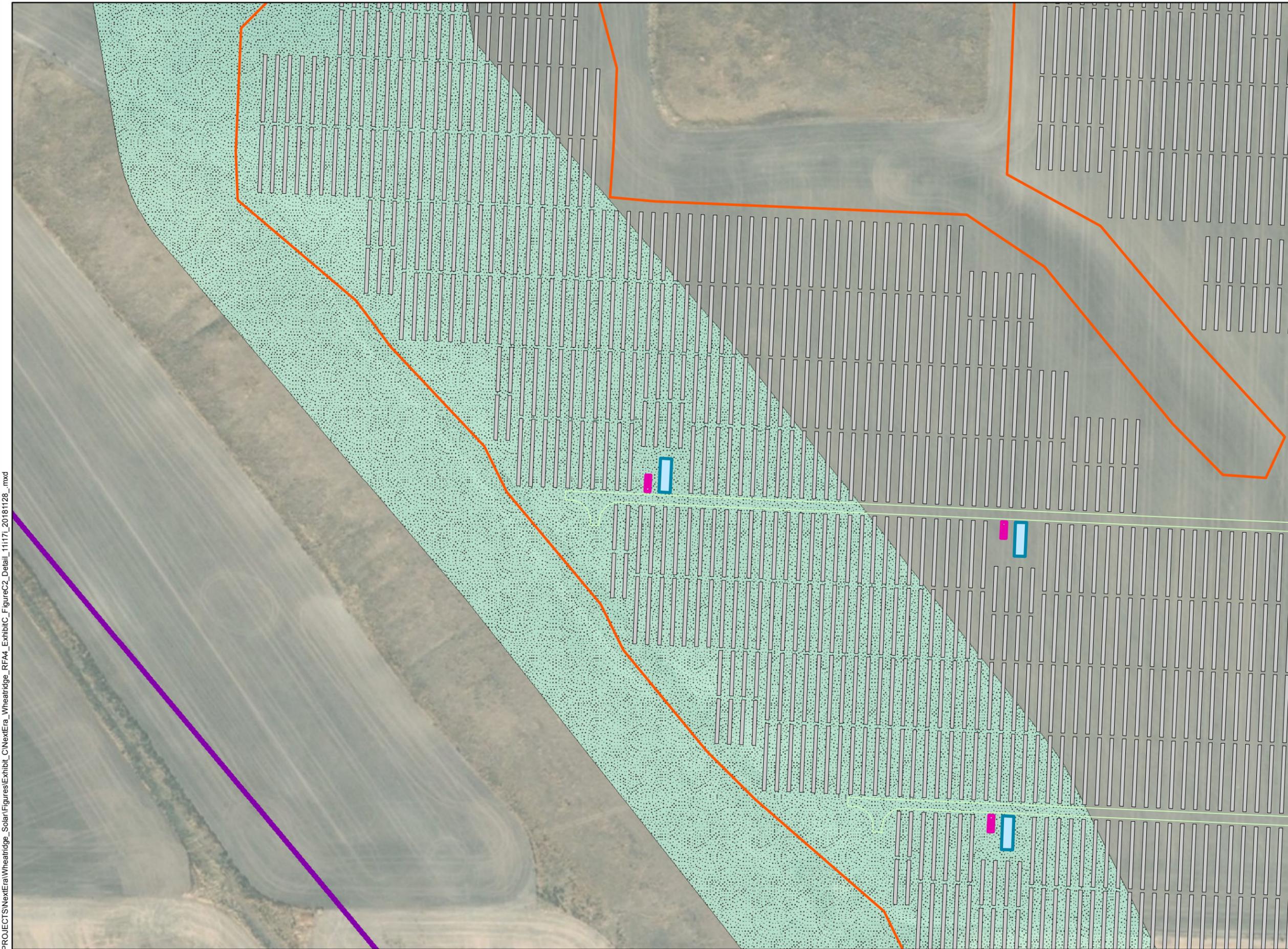
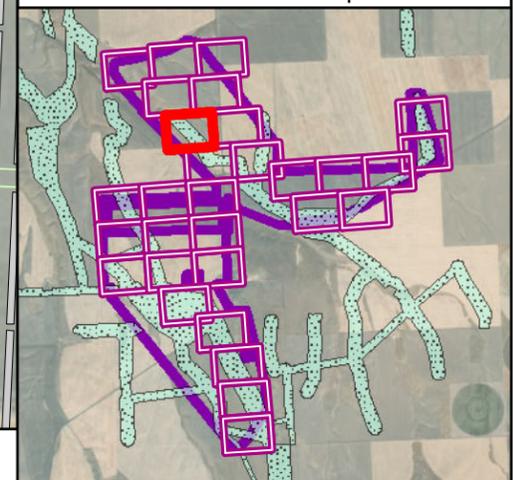
**Figure C-2.6  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



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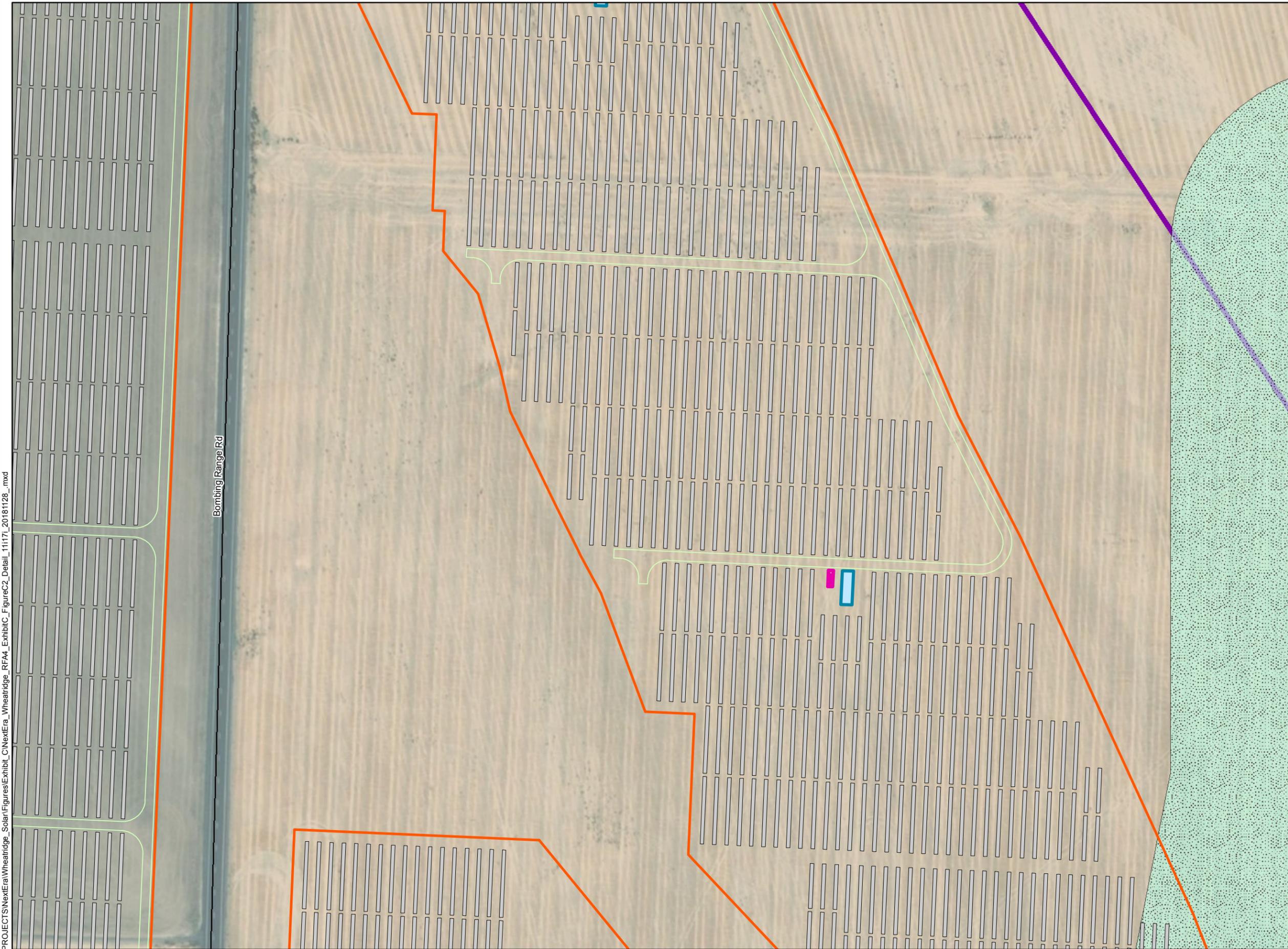
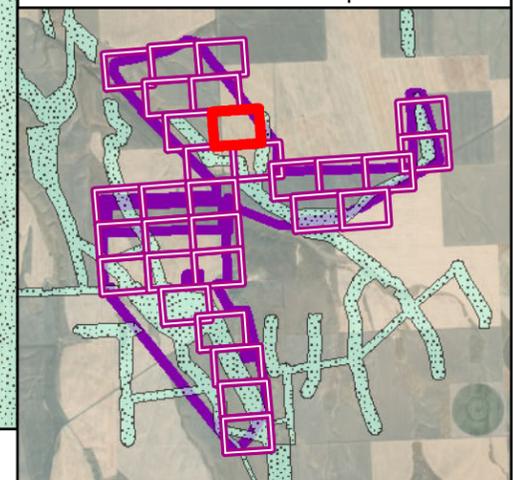
## Figure C-2.7 Facility Layout

MORROW COUNTY, OR

- Approved Site Boundary (Approved Wind Micrositing Corridors)
- Amended Site Boundary (Proposed Solar Micrositing Corridors)
- State Highway
- Local Road
- Facility Layout
  - Solar Access Roads
  - Proposed Collector Line
  - Proposed Substation
  - Approved Substation
  - Fenceline
  - Solar Tracker
  - Inverter Skid
  - Distributed Energy Storage



### Reference Map



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**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

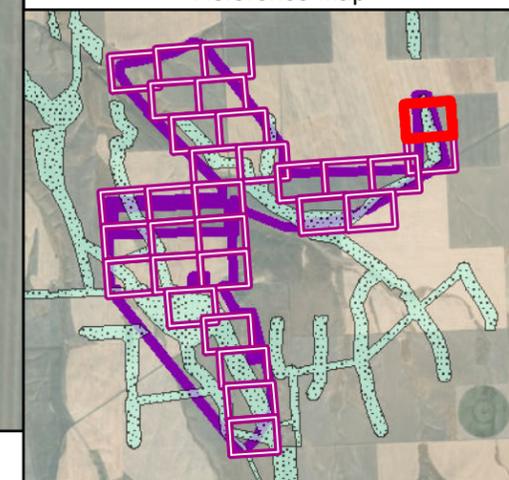
**Figure C-2.8  
Facility Layout**

MORROW COUNTY, OR

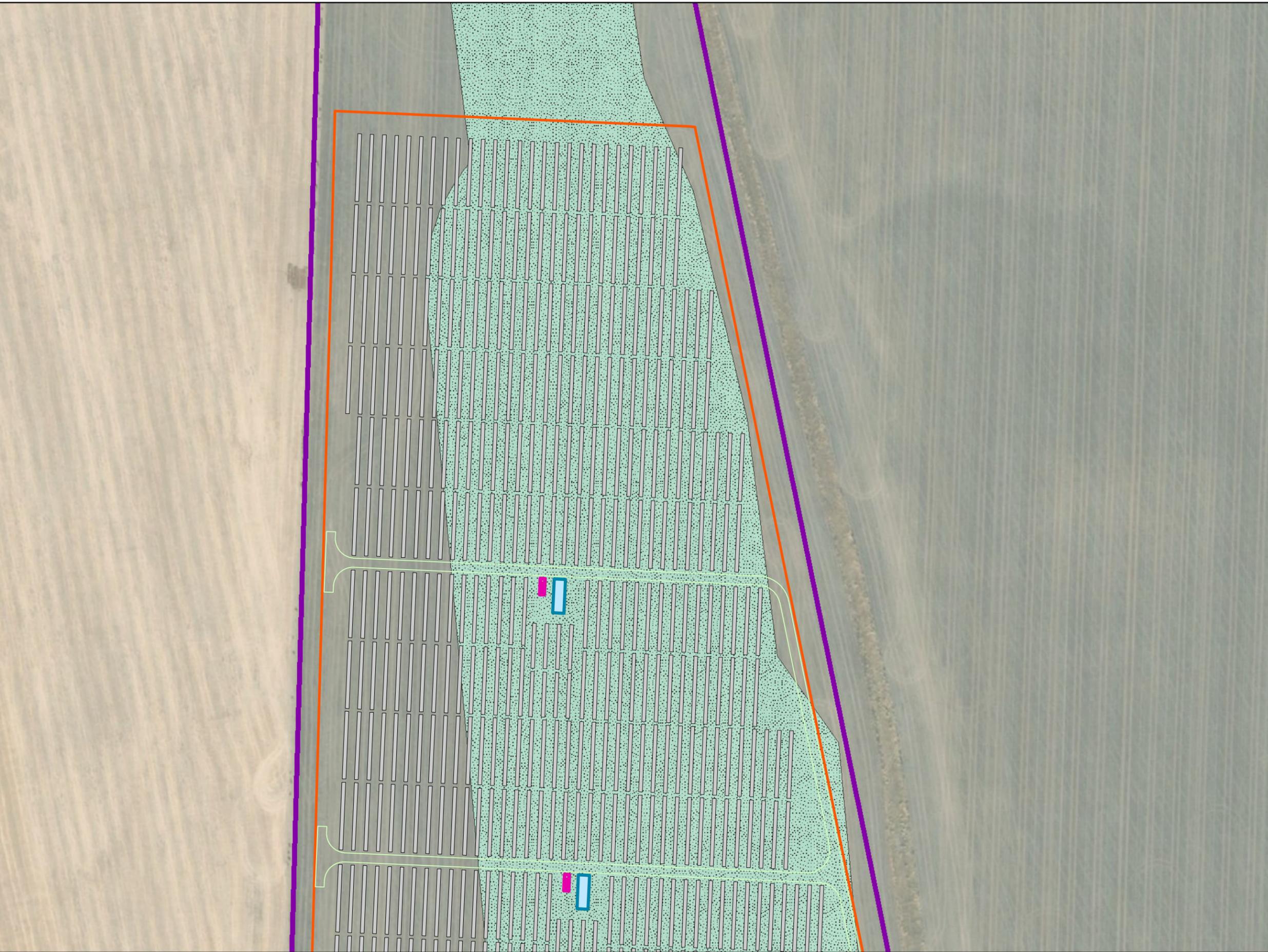
-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



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**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

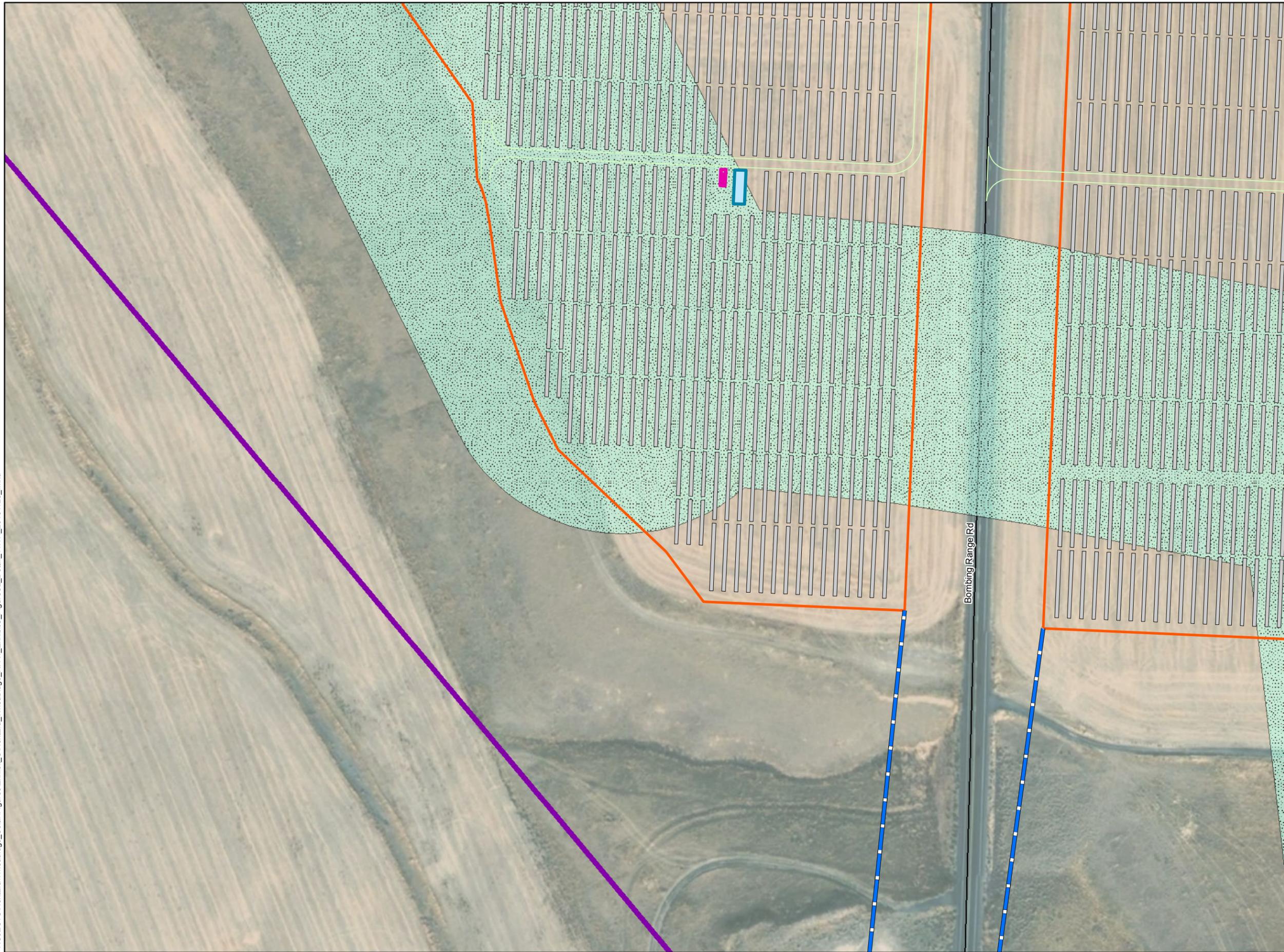
**Figure C-2.9  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



Bombing Range Rd

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# Wheatridge Wind Energy Facility Request for Amendment 4

## Figure C-2.10 Facility Layout

MORROW COUNTY, OR

- Approved Site Boundary (Approved Wind Micrositing Corridors)
- Amended Site Boundary (Proposed Solar Micrositing Corridors)
- State Highway
- Local Road
- Facility Layout
  - Solar Access Roads
  - Proposed Collector Line
  - Proposed Substation
  - Approved Substation
  - Fenceline
  - Solar Tracker
  - Inverter Skid
  - Distributed Energy Storage



### Reference Map



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# Wheatridge Wind Energy Facility Request for Amendment 4

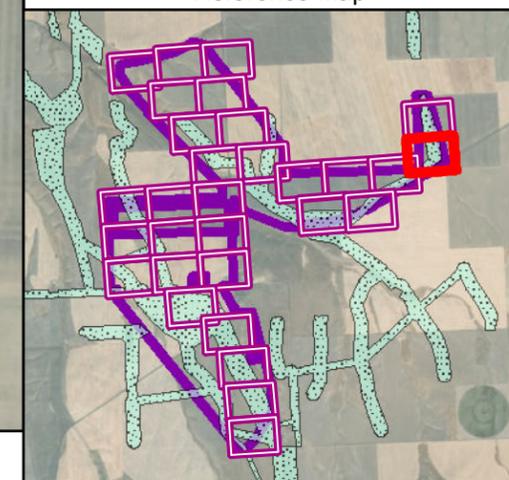
## Figure C-2.11 Facility Layout

MORROW COUNTY, OR

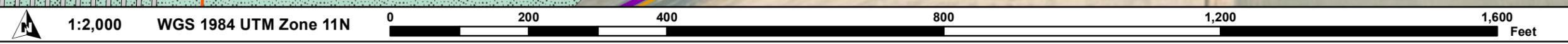
- Approved Site Boundary (Approved Wind Micrositing Corridors)
- Amended Site Boundary (Proposed Solar Micrositing Corridors)
- State Highway
- Local Road
- Facility Layout
  - Solar Access Roads
  - Proposed Collector Line
  - Proposed Substation
  - Approved Substation
  - Fenceline
  - Solar Tracker
  - Inverter Skid
  - Distributed Energy Storage



### Reference Map



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**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

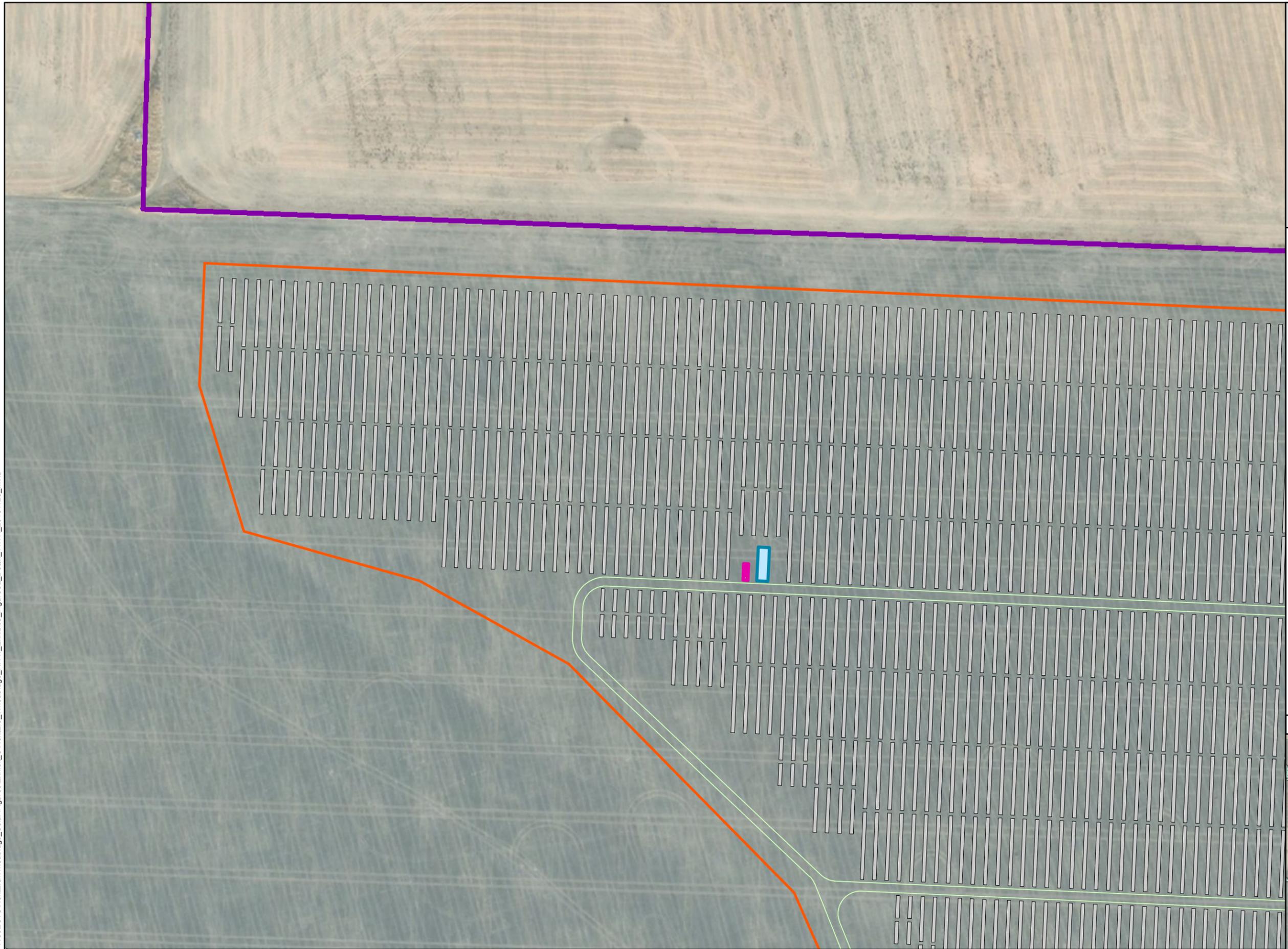
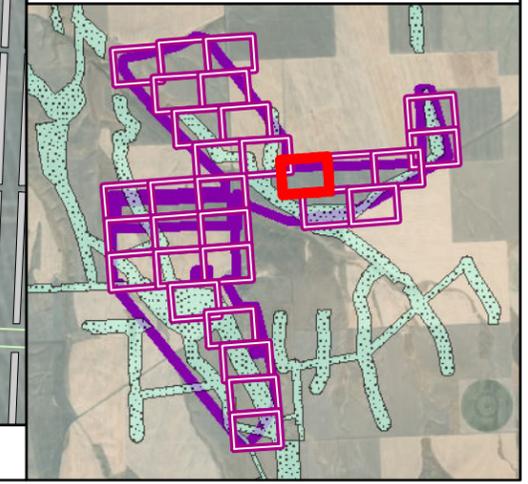
**Figure C-2.12  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



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# Wheatridge Wind Energy Facility Request for Amendment 4

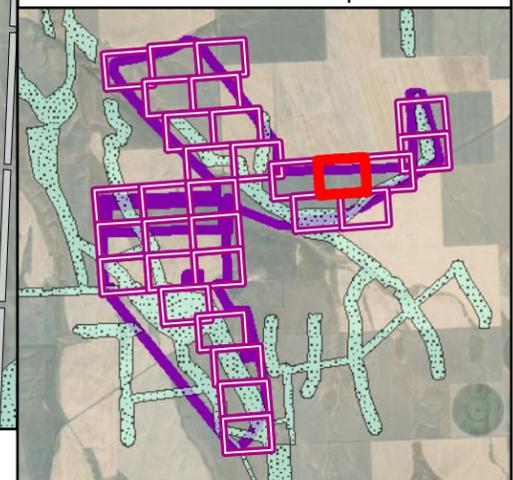
## Figure C-2.13 Facility Layout

MORROW COUNTY, OR

- Approved Site Boundary (Approved Wind Micrositing Corridors)
- Amended Site Boundary (Proposed Solar Micrositing Corridors)
- State Highway
- Local Road
- Facility Layout
  - Solar Access Roads
  - Proposed Collector Line
  - Proposed Substation
  - Approved Substation
  - Fenceline
  - Solar Tracker
  - Inverter Skid
  - Distributed Energy Storage



Reference Map



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1:2,000 WGS 1984 UTM Zone 11N 0 200 400 800 1,200 1,600 Feet

**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

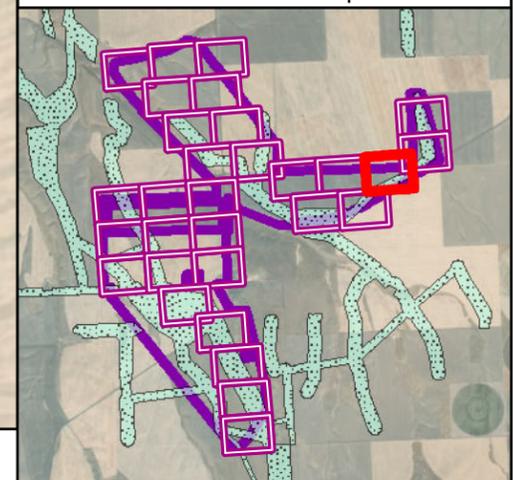
**Figure C-2.14  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



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# Wheatridge Wind Energy Facility Request for Amendment 4

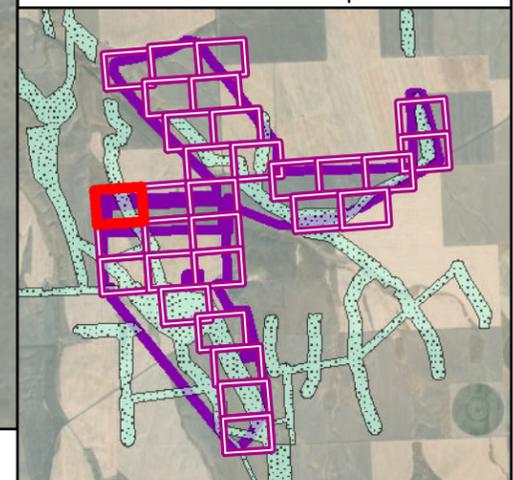
## Figure C-2.15 Facility Layout

MORROW COUNTY, OR

- Approved Site Boundary (Approved Wind Micrositing Corridors)
- Amended Site Boundary (Proposed Solar Micrositing Corridors)
- State Highway
- Local Road
- Facility Layout
  - Solar Access Roads
  - Proposed Collector Line
  - Proposed Substation
  - Approved Substation
  - Fenceline
  - Solar Tracker
  - Inverter Skid
  - Distributed Energy Storage



### Reference Map

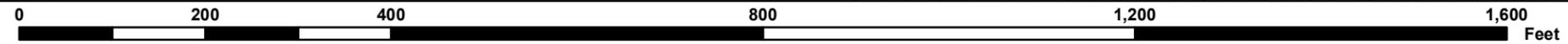


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1:2,000

WGS 1984 UTM Zone 11N



# Wheatridge Wind Energy Facility Request for Amendment 4

## Figure C-2.16 Facility Layout

MORROW COUNTY, OR

- Approved Site Boundary (Approved Wind Micrositing Corridors)
- Amended Site Boundary (Proposed Solar Micrositing Corridors)
- State Highway
- Local Road
- Facility Layout
  - Solar Access Roads
  - Proposed Collector Line
  - Proposed Substation
  - Approved Substation
  - Fenceline
  - Solar Tracker
  - Inverter Skid
  - Distributed Energy Storage



### Reference Map



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**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

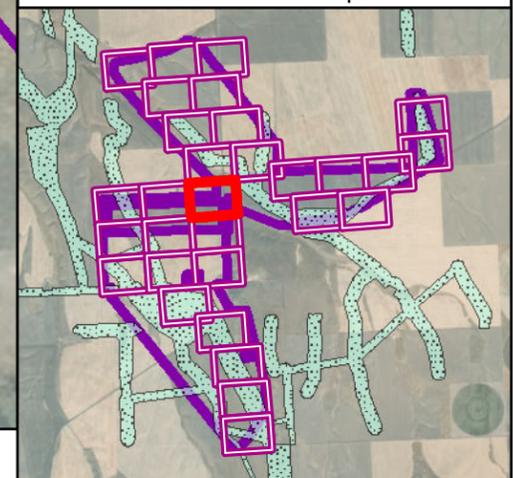
**Figure C-2.17  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



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# Wheatridge Wind Energy Facility Request for Amendment 4

## Figure C-2.18 Facility Layout

MORROW COUNTY, OR

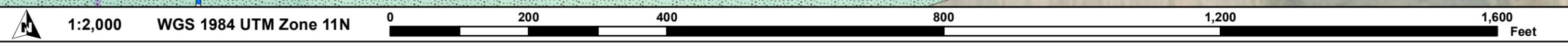
- Approved Site Boundary (Approved Wind Micrositing Corridors)
- Amended Site Boundary (Proposed Solar Micrositing Corridors)
- State Highway
- Local Road
- Facility Layout**
- Solar Access Roads
- Proposed Collector Line
- Proposed Substation
- Approved Substation
- Fenceline
- Solar Tracker
- Inverter Skid
- Distributed Energy Storage



### Reference Map



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**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

**Figure C-2.19  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



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# Wheatridge Wind Energy Facility Request for Amendment 4

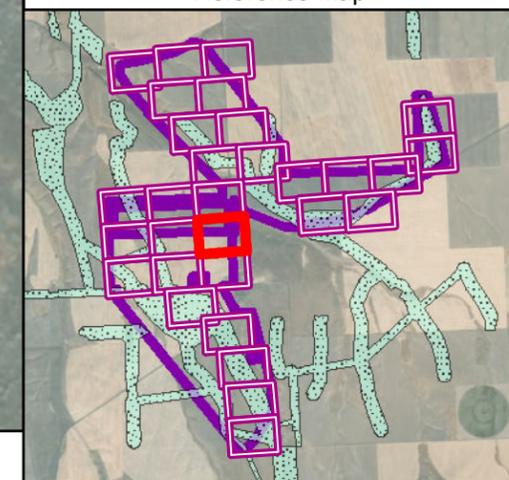
## Figure C-2.20 Facility Layout

MORROW COUNTY, OR

- Approved Site Boundary (Approved Wind Micrositing Corridors)
- Amended Site Boundary (Proposed Solar Micrositing Corridors)
- State Highway
- Local Road
- Facility Layout
  - Solar Access Roads
  - Proposed Collector Line
  - Proposed Substation
  - Approved Substation
  - Fenceline
  - Solar Tracker
  - Inverter Skid
  - Distributed Energy Storage



### Reference Map



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**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

**Figure C-2.21  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



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**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

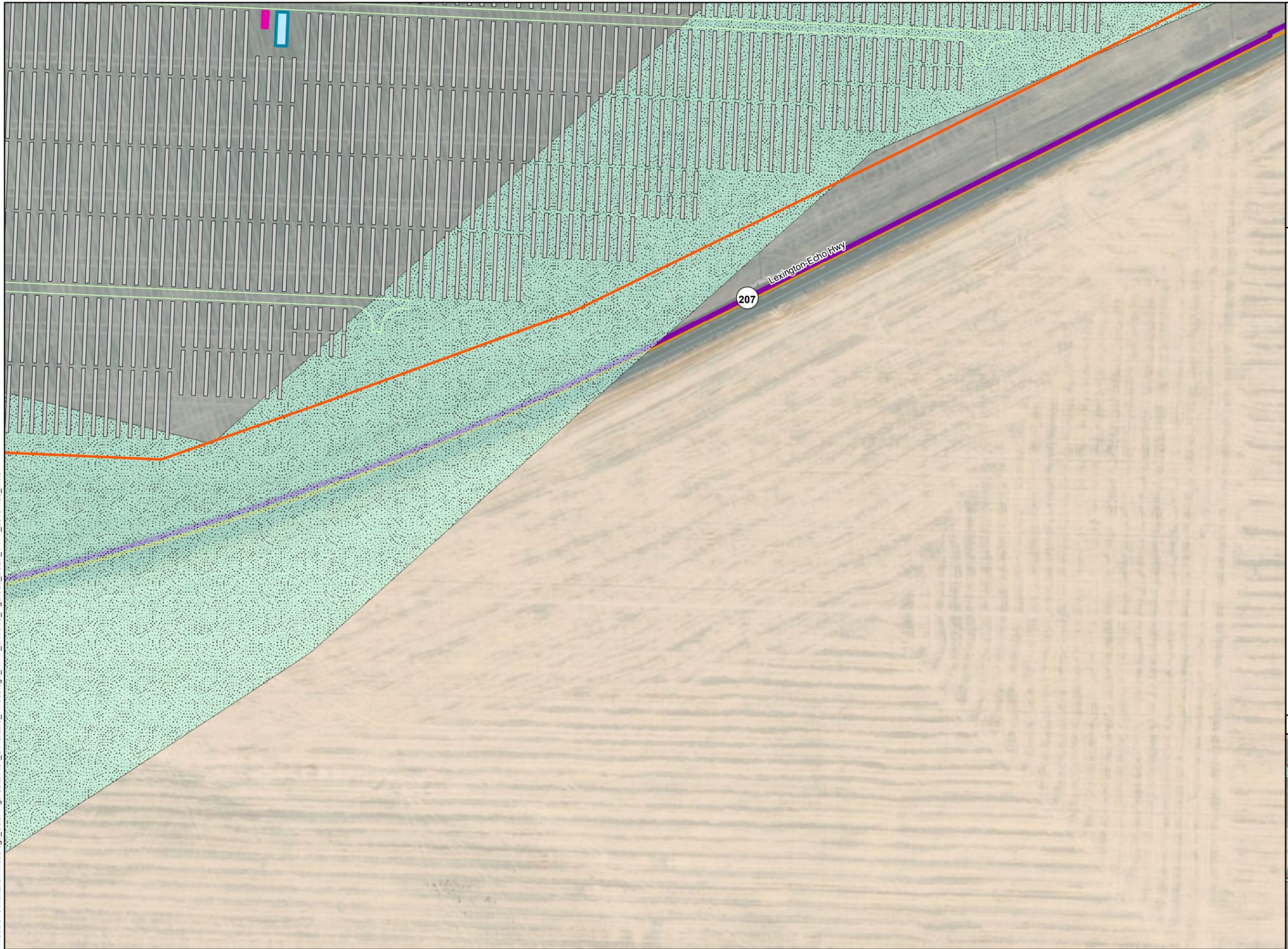
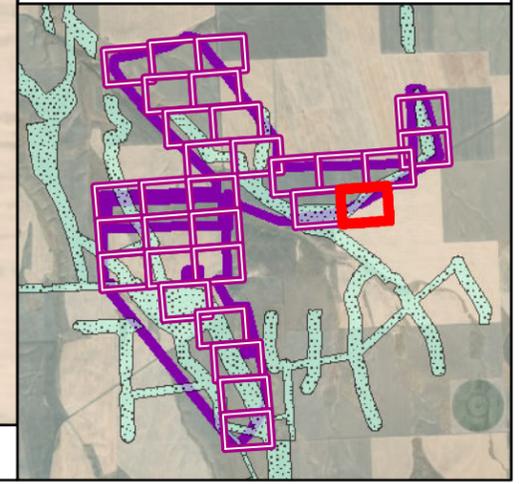
**Figure C-2.22  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



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**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

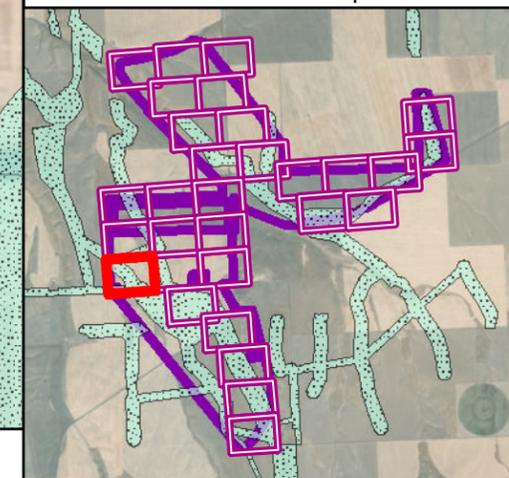
**Figure C-2.23  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



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**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

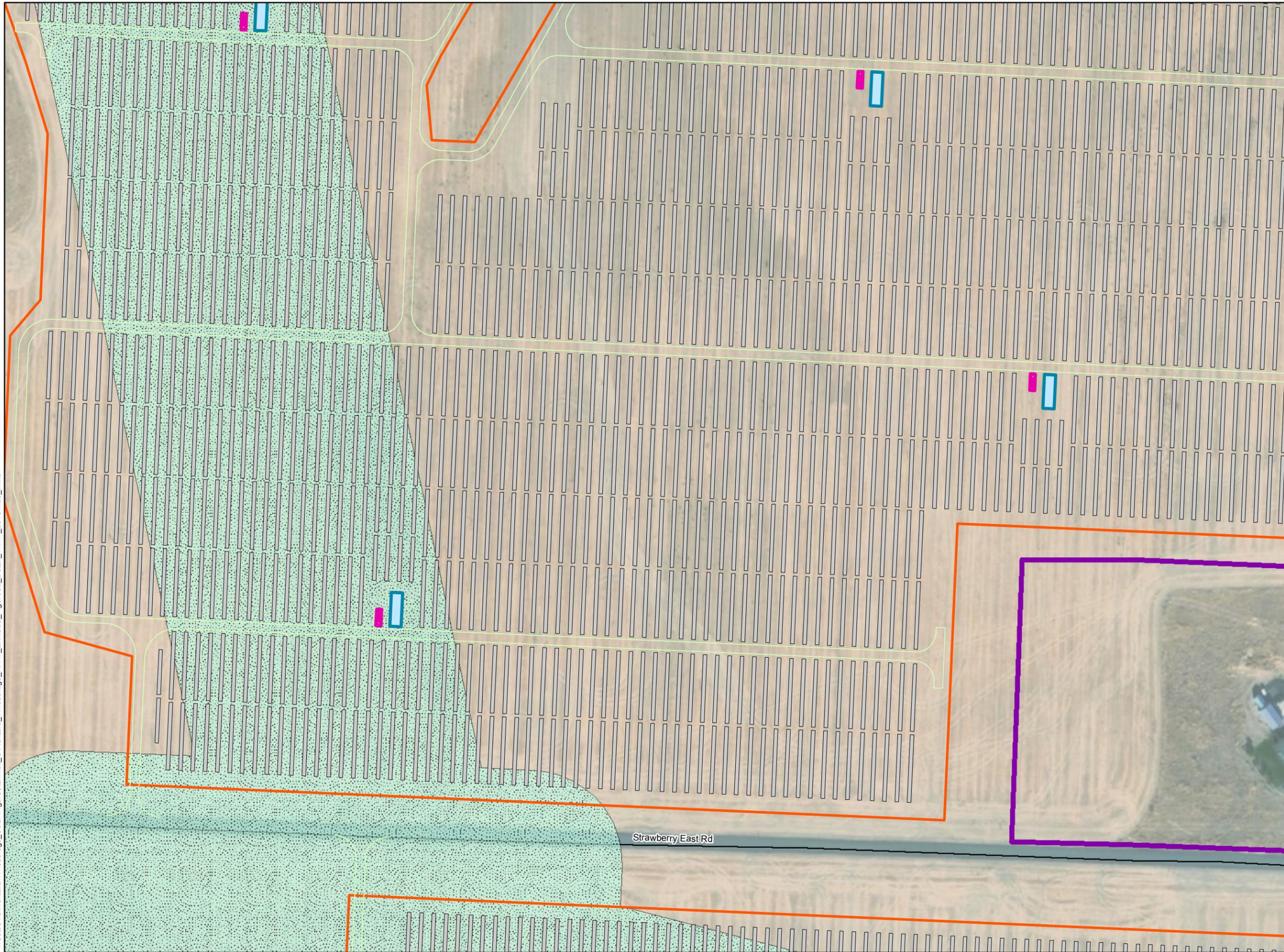
**Figure C-2.24  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



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**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

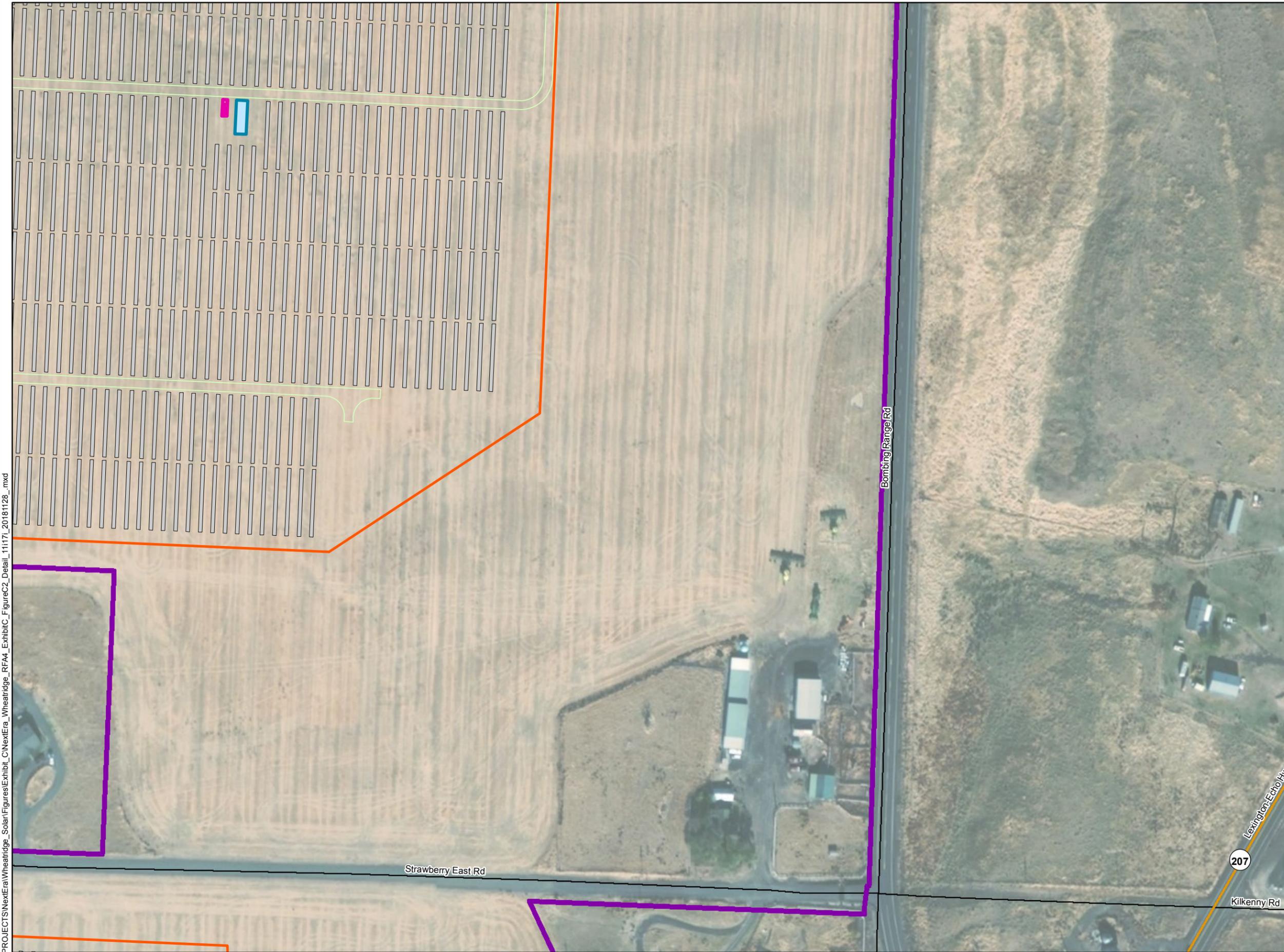
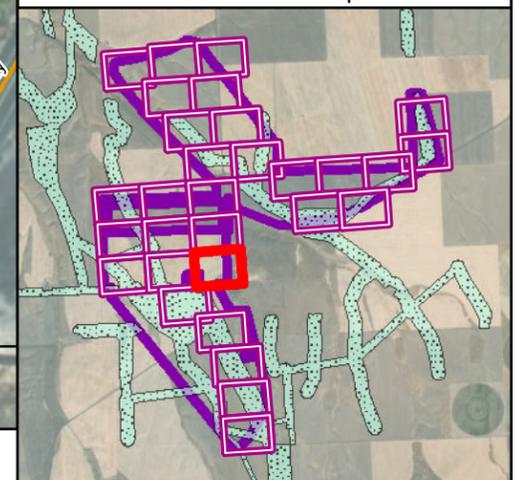
**Figure C-2.25  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



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**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

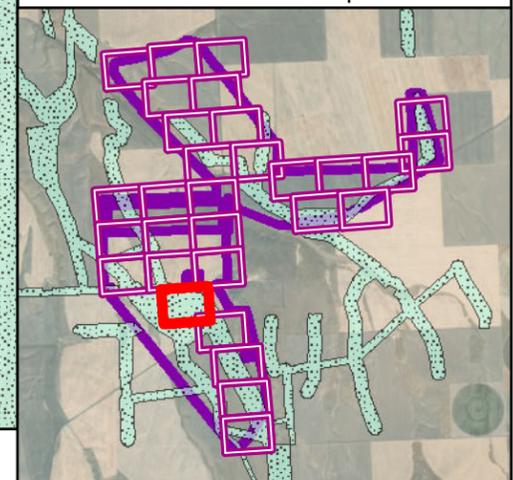
**Figure C-2.26  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



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# Wheatridge Wind Energy Facility Request for Amendment 4

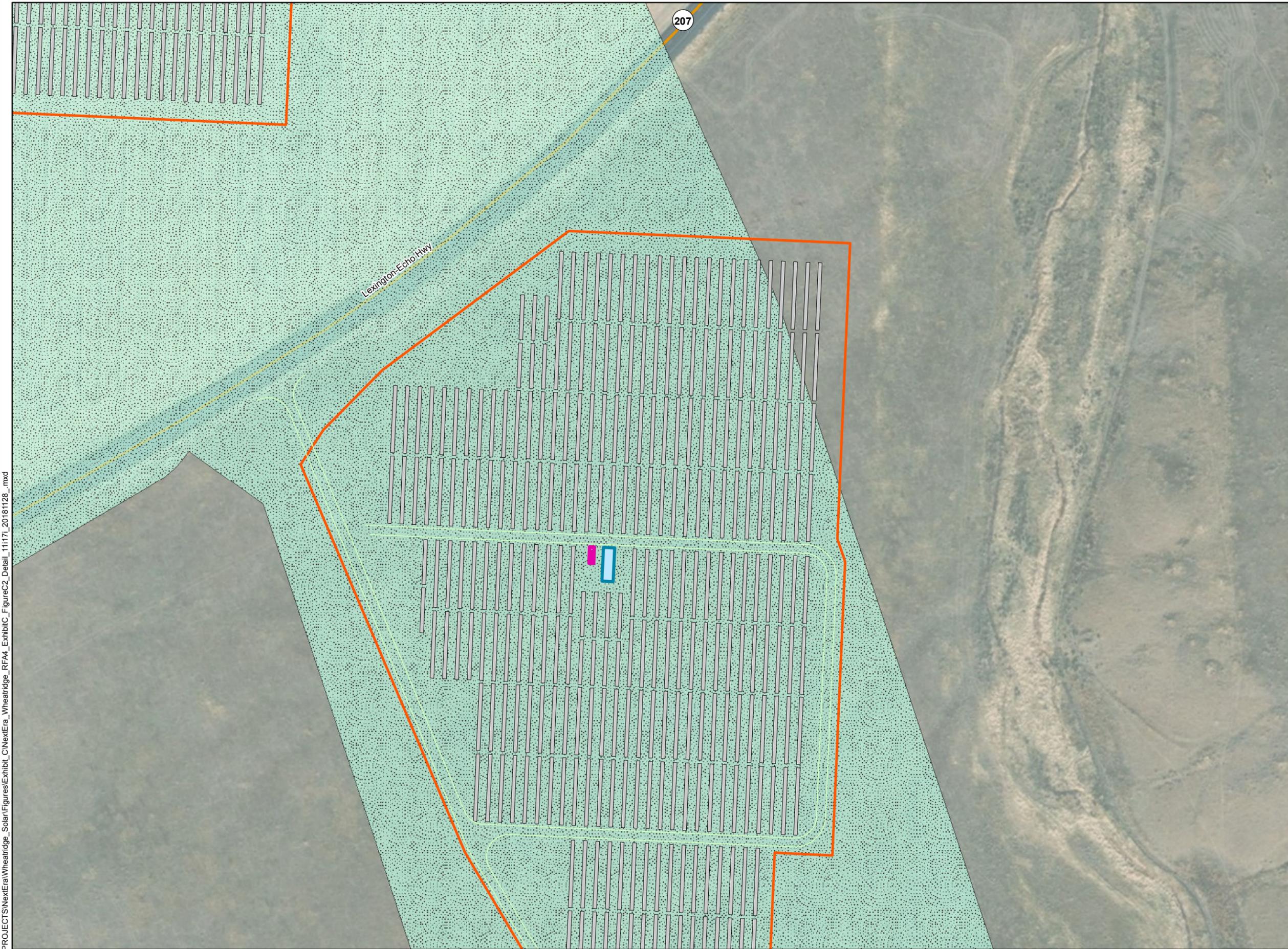
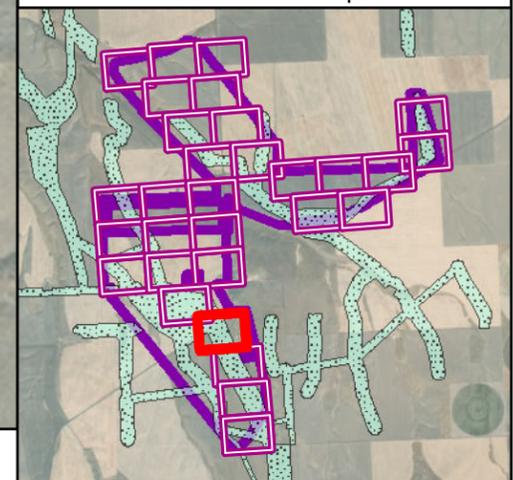
## Figure C-2.27 Facility Layout

MORROW COUNTY, OR

- Approved Site Boundary (Approved Wind Micrositing Corridors)
- Amended Site Boundary (Proposed Solar Micrositing Corridors)
- State Highway
- Local Road
- Facility Layout
  - Solar Access Roads
  - Proposed Collector Line
  - Proposed Substation
  - Approved Substation
  - Fenceline
  - Solar Tracker
  - Inverter Skid
  - Distributed Energy Storage



### Reference Map



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**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

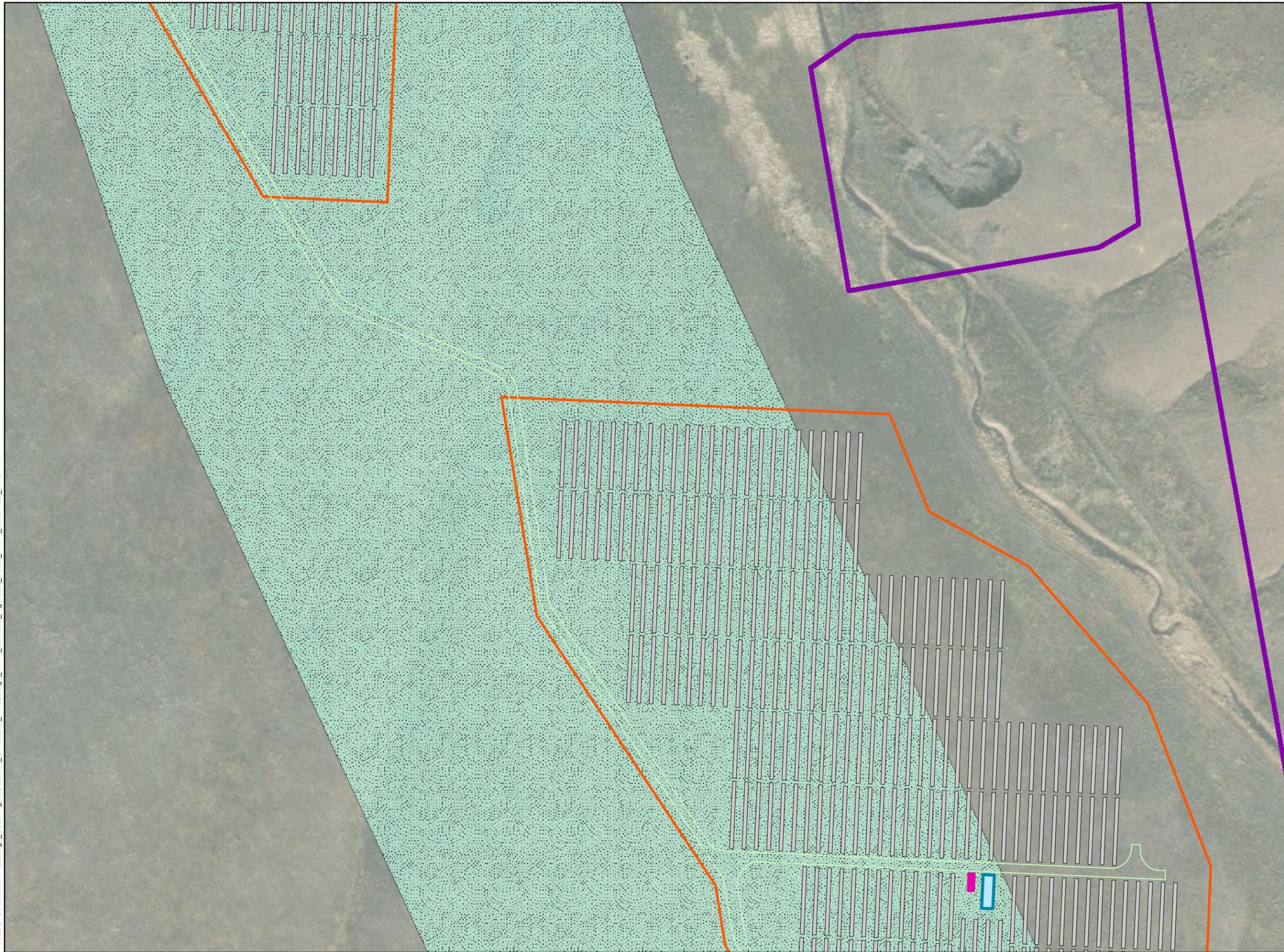
**Figure C-2.28  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



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# Wheatridge Wind Energy Facility Request for Amendment 4

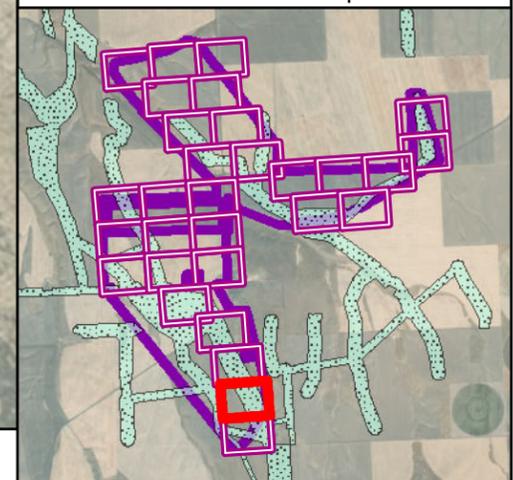
## Figure C-2.29 Facility Layout

MORROW COUNTY, OR

- Approved Site Boundary (Approved Wind Micrositing Corridors)
- Amended Site Boundary (Proposed Solar Micrositing Corridors)
- State Highway
- Local Road
- Facility Layout
  - Solar Access Roads
  - Proposed Collector Line
  - Proposed Substation
  - Approved Substation
  - Fenceline
  - Solar Tracker
  - Inverter Skid
  - Distributed Energy Storage



### Reference Map



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1:2,000 WGS 1984 UTM Zone 11N 0 200 400 800 1,200 1,600 Feet

**Wheatridge  
Wind Energy Facility  
Request for Amendment 4**

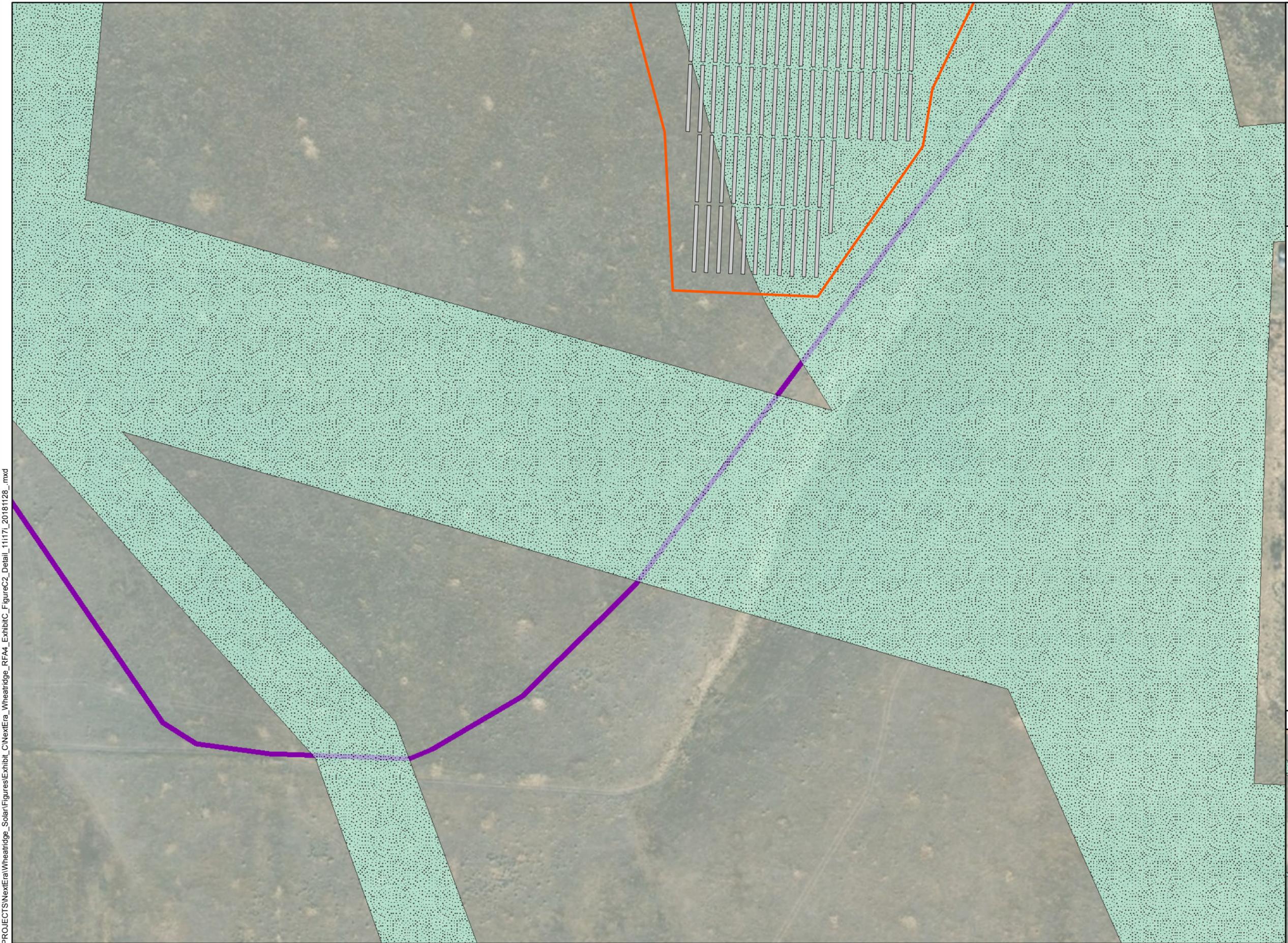
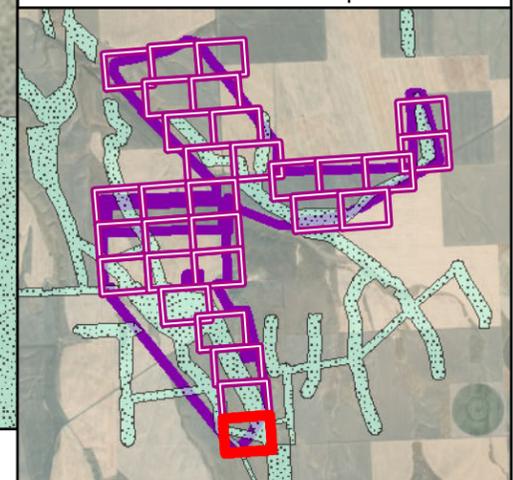
**Figure C-2.30  
Facility Layout**

MORROW COUNTY, OR

-  Approved Site Boundary  
(Approved Wind Micrositing Corridors)
-  Amended Site Boundary  
(Proposed Solar Micrositing Corridors)
-  State Highway
-  Local Road
- Facility Layout**
-  Solar Access Roads
-  Proposed Collector Line
-  Proposed Substation
-  Approved Substation
-  Fenceline
-  Solar Tracker
-  Inverter Skid
-  Distributed Energy Storage



Reference Map



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# Wheatridge Wind Energy Facility Request for Amendment 4

## Figure C-3 Energy Facilities Within 10 Miles

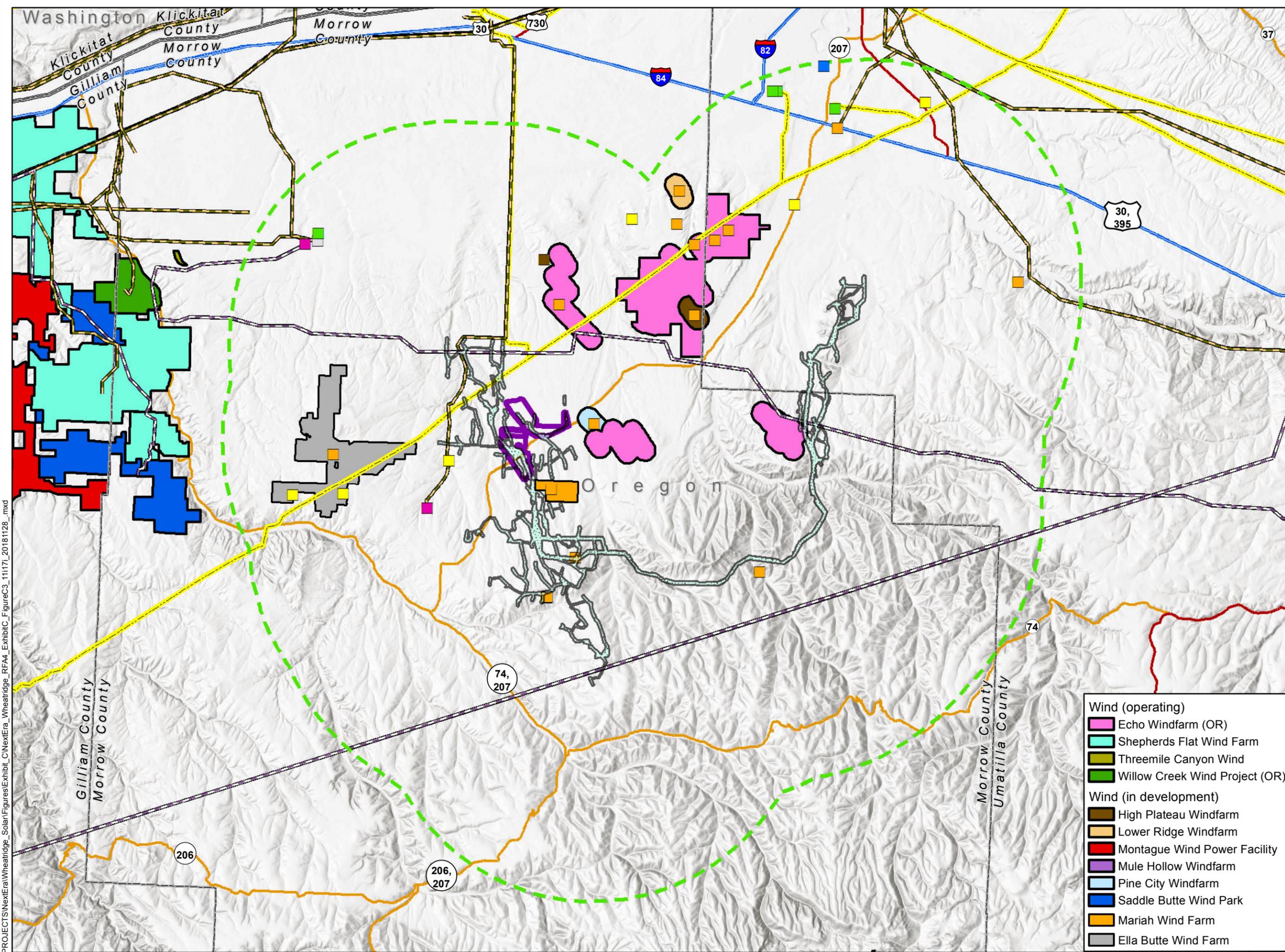
MORROW AND UMATILLA COUNTIES, OR

- Approved Site Boundary (Approved Wind Micrositing Corridors)
  - Amended Site Boundary (Proposed Solar Micrositing Corridors)
  - Analysis Area (10-mile Buffer)
  - Interstate Highway
  - US Highway
  - State Highway
  - County Highway
  - State Boundary
  - County Boundary
- Electrical Generating Plant**
- Bio Gas
  - Coal
  - Natural Gas
  - Solar
  - Hydro
  - Wind
  - Substation
- Transmission Line In Service
  - Transmission Line Proposed
  - Pipeline

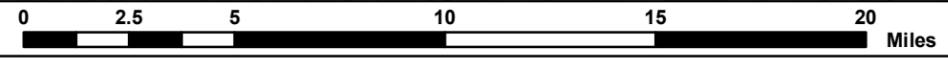


- Wind (operating)**
- Echo Windfarm (OR)
  - Shepherds Flat Wind Farm
  - Threemile Canyon Wind
  - Willow Creek Wind Project (OR)
- Wind (in development)**
- High Plateau Windfarm
  - Lower Ridge Windfarm
  - Montague Wind Power Facility
  - Mule Hollow Windfarm
  - Pine City Windfarm
  - Saddle Butte Wind Park
  - Mariah Wind Farm
  - Ella Butte Wind Farm

### Reference Map



1:275,000 WGS 1984 UTM Zone 11N



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# Exhibit D

## Applicant's Organizational Expertise

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**Wheatridge Wind Energy Facility  
June 2019**

**Prepared for**



**Prepared by**



**Tetra Tech, Inc.**

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**Table of Contents**

1.0 Introduction ..... 1

2.0 Applicant’s Previous Experience – OAR 345-021-0010(1)(d)(A) ..... 2

3.0 Qualifications of Applicant’s Personnel - OAR 345-021-0010(1)(d)(B)..... 3

4.0 Qualifications of Known Contractors - OAR 345-021-0010(1)(d)(C)..... 5

5.0 Applicant’s Past Performance - OAR 345-021-0010(1)(d)(D) ..... 6

    5.1 Construction and Operation ..... 6

    5.2 Regulatory Compliance..... 6

6.0 Warranty to Secure Necessary Expertise - OAR 345-021-0010(1)(d)(E)..... 6

7.0 ISO Certified Program – OAR 345-021-0010(1)(d)(F)..... 7

8.0 Mitigation – OAR 345-021-0010(1)(d)(G) ..... 7

**List of Attachments**

Attachment D-1. Wheatridge Habitat Mitigation Area Option Recording Memo with Umatilla County

## Acronyms and Abbreviations

Certificate Holder	Wheatridge Wind Energy, LLC
Council	Energy Facility Siting Council
Facility	Wheatridge Wind Energy Facility
ISO	International Organization for Standardization
MW	Megawatts
NextEra	NextEra Energy Resources, LLC
NWC	Northwest Wildlife Consultants, Inc.
OAR	Oregon Administrative Rule

## 1.0 Introduction

The Wheatridge Wind Energy Facility (Facility) is an approved, but not yet constructed, wind energy generation facility consisting of up to 292 turbines with a peak generating capacity of up to 500 megawatts (MW), to be located in an Approved Site Boundary of approximately 13,097 acres in Morrow and Umatilla counties, Oregon. As part of Request for Amendment 4 to the Facility Site Certificate, Wheatridge Wind Energy, LLC (Certificate Holder) is proposing to add photovoltaic solar energy generation to the Facility to provide the opportunity for an integrated, renewable energy facility with both wind and solar energy generation and energy storage. As part of this request, the Certificate Holder is proposing five changes to the approved Facility:

1. Amend the description of the Facility to include photovoltaic solar energy generation equipment to leverage the complementary nature of wind and solar generation to provide more reliable renewable energy generation.
2. Amend the Site Boundary to provide for solar micro-siting corridors<sup>1</sup> for the photovoltaic solar energy system.
3. Increase the maximum peak generating capacity for the Facility by up to 150 MW of solar energy generation, for a total Facility maximum peak generating capacity of 650 MW.
4. Add distributed energy storage as a related or supporting facility for solar energy generation, along with new collector lines connecting the solar arrays, and an expansion of an approved substation.
5. Amend four existing site certificate conditions and increase the approved MW of the turbines by approximately 12 percent, from 2.5 MW to 2.8 MW.

The Energy Facility Siting Council (Council) previously found the Certificate Holder has demonstrated an ability to construct, operate, and retire the Facility in compliance with Council standards and conditions of the Site Certificate. This exhibit, Exhibit D, describes the sources and organizational, managerial and technical expertise extent of the Certificate Holder as required to meet the submittal requirements of Oregon Administrative Rule (OAR) 345-021-0010 (1)(d), paragraphs (A) through (G) in consideration of the proposed changes. Attachments B-1 and B-2 in Exhibit B provide additional information on the Certificate Holder's experience with solar generation and energy storage facilities. As detailed in the following sections, although the proposed changes provide for a new source of energy generation for the Facility and a larger Site Boundary, the Certificate Holder can still comply with all Site Certificate conditions previously adopted by the Council for compliance with the respect to the Organizational Expertise standard OAR 345-022-0010. Therefore, the Council may rely on its previous conclusion that the Facility complies with the Organizational Expertise standard (OAR 345-022-0010):

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<sup>1</sup> Per OAR 345-001-0010(32) "Micro-siting corridor" means a continuous area of land within which construction of facility components may occur, subject to site certificate conditions.

*OAR 345-022-0010 Organizational Expertise*

*(1) To issue a site certificate, the Council must find that the applicant has the organizational expertise to construct, operate and retire the proposed facility in compliance with Council standards and conditions of the site certificate. To conclude that the applicant has this expertise, the Council must find that the applicant has demonstrated the ability to design, construct and operate the proposed facility in compliance with site certificate conditions and in a manner that protects public health and safety and has demonstrated the ability to restore the site to a useful, non-hazardous condition. The Council may consider the applicant's experience, the applicant's access to technical expertise and the applicant's past performance in constructing, operating and retiring other facilities, including, but not limited to, the number and severity of regulatory citations issued to the applicant.*

*(2) The Council may base its findings under section (1) on a rebuttable presumption that an applicant has organizational, managerial and technical expertise, if the applicant has an ISO 9000 or ISO 14000 certified program and proposes to design, construct and operate the facility according to that program.*

*(3) If the applicant does not itself obtain a state or local government permit or approval for which the Council would ordinarily determine compliance but instead relies on a permit or approval issued to a third party, the Council, to issue a site certificate, must find that the third party has, or has a reasonable likelihood of obtaining, the necessary permit or approval, and that the applicant has, or has a reasonable likelihood of entering into, a contractual or other arrangement with the third party for access to the resource or service secured by that permit or approval.*

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

## **2.0 Applicant's Previous Experience – OAR 345-021-0010(1)(d)(A)**

*OAR 345-021-0010(1)(d) Information about the organizational expertise of the applicant to construct and operate the proposed facility, providing evidence to support a finding by the Council as required by OAR 345-022-0010, including:*

*(A) The applicant's previous experience, if any, in constructing and operating similar facilities.*

The Certificate Holder is a wholly-owned indirect subsidiary of NextEra Energy Resources, LLC (NextEra). NextEra, headquartered in Juno Beach, Florida, is the world's largest generator of renewable energy from the wind and sun. NextEra is a regionally diversified company with approximately 5,000 employees, dedicated to the production of approximately 19,882 MW from 175 facilities in 29 states and Canada. With more than 9,365 wind turbines in its fleet, NextEra's wind generation capacity totals more than 13,851 MW. NextEra is also capable of generating more than 420 net MW of electricity from natural gas facilities, operates three nuclear power plants with a capacity of more than 2,700 MW, and operates more than 2,100 MW of solar energy (see Exhibit B, Attachments B-1 and B-2). It is estimated that nearly 95 percent of the electricity produced by NextEra comes from clean or renewable sources.

Along with its rate-regulated sister company, Florida Power and Light, NextEra is a wholly owned subsidiary of NextEra Energy, Inc., a Fortune 150 Company with a market capitalization of approximately 66 billion dollars. The financial strength of NextEra and its parent company provides the company with the financial capital to self-finance and build up to 4 billion dollars of projects per year on its own balance sheet.

Within Oregon, NextEra subsidiaries—FPL Vansycle, LLC and FPL Energy Stateline II—constructed, own, and operate 186 turbines, with a total peak generating capacity of 123 MW at the Stateline 1 and 2 wind energy facilities, and 43 turbines with a total peak generating capacity of 99 MW at the Stateline 3 Wind Energy Facility. These projects were permitted through the Oregon Energy Facility Siting Council (Council) process and were issued a Site Certificate (with amendments) under the name "Stateline Wind Project."

### **3.0 Qualifications of Applicant's Personnel - OAR 345-021-0010(1)(d)(B)**

*OAR 345-021-0010(1)(d)(B) The qualifications of the applicant's personnel who will be responsible for constructing and operating the facility, to the extent that the identities of such personnel are known when the application is submitted.*

The development activities for the Facility in Morrow and Umatilla counties undertaken by the Certificate Holder were originally conducted as part of a partnership between MAP Royalty, Inc. and an experienced team of development professionals based in Oregon, who have a long history of regional wind project development. The Certificate Holder will continue to benefit from an experienced team of professionals based in Oregon, as well as other locations throughout the continental United States.

The original Stateline Site Certificate was issued in 2001. Since then, the initial Site Certificate was amended several times to, among other reasons, accommodate new and expanded facilities. Members of the Facility's development and permitting team were directly involved in the initial permitting of the Stateline facilities, as well as the subsequent amendments to the original site certificate. As a result, through its parent company, the Certificate Holder and its management team

have a direct lineage to the some of the oldest, continuously owned and operated wind energy facilities in Oregon. Through this relationship, the Facility's management team and the NextEra family of companies have deep regional expertise, derived over years of successfully permitting and operating hundreds of MW of wind energy projects in the Oregon. NextEra employees have deep local ties to the communities we operate in, and a solid history of understanding local economic development, permitting, environmental concerns, and compliance with the various conditions stipulated within a Council site certificate.

### **Wheatridge Management Team Biographies**

**Jesse Marshall** - Jesse has worked at NextEra for approximately 10 years. During Jesse's first 3 years at NextEra, he played a critical role in growing NextEra's development pipeline by identifying, evaluating, and acquiring land for new solar and wind energy projects throughout the United States. Jesse has spent the following 7 years developing and originating solar, wind, and energy storage projects across the country. Mr. Marshall has a Bachelor's of Arts in Geography from the University of California, Santa Barbara.

**Matt Handel** – Matt Handel is a Vice President of Development for NextEra, with responsibility for utility-scale solar, distributed generation and energy storage development. He has been with NextEra for 14 years. From 2001 through 2006, he served as Vice President of Structured Transactions within NextEra's wholesale trading group working on long-dated customized power deals. From 2006 through 2009, he served as Vice President of Northeast Generation, where he had commercial responsibility for a 3-gigawatt portfolio of merchant generating assets, including nuclear, hydro, combined cycle, and natural gas peaking plants in NEPOOL, PJM and the NYISO. In 2009, he was named Vice President of Solar Development with responsibility for growing the utility-scale solar business. In 2012, the solar effort was expanded to include a distributed generation division focused on non-residential solar projects. In 2013, an energy storage business was added, which focuses on both grid connected projects and behind-the-meter storage applications. By the end of 2016, NextEra will have developed and constructed over 2 gigawatts of solar and storage projects throughout the U.S. and Canada representing over \$6 billion in capital deployed across nine states and Ontario. Prior to joining NextEra, Mr. Handel was a lawyer in New York and then a brewery owner in Colorado. He is a graduate of Stanford University and Columbia Law School.

**Mike Pappalardo** – Mr. Pappalardo is an Environmental Services Manager for NextEra's Environmental Services Department. His responsibilities include permitting NextEra projects in the western United States, primarily in the Pacific Northwest, California, and Wyoming. Mr. Pappalardo joined the Company in 2008 and is based in Eugene, Oregon. Mr. Pappalardo has 28 years of experience in environmental permitting and the development of natural resource related projects in the continental United States, Alaska, Hawaii, and South America. He began working in renewable energy in 2001 on the Stateline Wind Project, and since then, he has worked on renewable energy projects throughout the United States. His work at NextEra includes managing environmental permitting efforts, including the Stateline/Vansycle wind projects in Oregon and the 160 MW North

Sky River Wind Energy Facility in California. Recently Mr. Pappalardo obtained permits for the 48 MW Golden Hills North Wind Energy Center in California. This effort began in 2009, and represents the third and final phase of NextEra's efforts to remove nearly three thousand "old technology" turbines and "repower" all of the company's assets with 102 modern turbines, generating approximately 210 MW. The successful repowering effort represents roughly 60 percent of the energy output at the Altamont Pass Wind Resource Area in California. Previously, Mr. Pappalardo was a Project Manager for CH2M Hill in Corvallis, Oregon, where he was the project manager responsible for obtaining amendments to the Stateline Site Certificate, as well as obtaining the Site Certificate for the 450 MW Biglow Wind Project in Sherman County, Oregon. Mr. Pappalardo also supported the permitting for the Klondike and Leaning Juniper wind projects in Oregon, and led the effort to permit the 100.8 MW Kittitas Valley and 273 MW Wildhorse wind projects in Washington. Before joining CH2M Hill, Mr. Pappalardo worked for Stoel Rives LLP, where he served as in-house technical consultant to the law firm's environmental practice group, and prior to that, he worked as a geologist and hydrogeologist throughout the western United States, Alaska, and Argentina. Mr. Pappalardo earned a Bachelor's of Science degree in Geology from the University of Oregon, and is a Registered Geologist in Oregon and a Licensed Geologist in Washington.

#### **4.0 Qualifications of Known Contractors - OAR 345-021-0010(1)(d)(C)**

*OAR 345-021-0010(1)(d)(C) The qualifications of any architect, engineer, major component vendor, or prime contractor upon whom the applicant will rely in constructing and operating the facility, to the extent that the identities of such persons are known when the application is submitted.*

At this point in time, the Certificate Holder has not selected a solar manufacturer for the Facility's solar panels, or a specific contractor to construct the Facility. This said, based on its team's vast experience and the parent company's portfolio as the largest provider of renewable energy in the world, the Certificate Holder will select qualified contractors, engineers, and manufacturers with experience in the solar industry.

NextEra has extensive relationships with all the major solar panel manufacturers, as well as with the chief building-of-plant contractors in the United States. NextEra has also relied on the input of external consultants with decades of relevant experience developing successful energy facilities in the Pacific Northwest.

## **5.0 Applicant's Past Performance - OAR 345-021-0010(1)(d)(D)**

*OAR 345-021-0010(1)(d)(D) The past performance of the applicant, including but not limited to the number and severity of any regulatory citations in constructing or operating a facility, type of equipment, or process similar to the proposed facility.*

### **5.1 Construction and Operation**

The Certificate Holder's management team have substantial experience in managing all aspects of development, preconstruction, and operational activities at multiple solar energy projects across the United States and Canada. NextEra entered the solar generation business in 1989 through its interest in Solar Electric Generating System, one of seven solar thermal projects sited in Kramer Junction and Harper Lake, California. The Certificate Holder's team can rely on a deep bench of corporate professionals who manage more than 90 solar projects (with ownership interest) with a total net generating capacity of more than 2,000 MW of owned solar generation energy facilities across the United States and Canada. NextEra also includes more than 5,000 professionals working in various departments, including operations and maintenance, development, land services, environmental services, construction and engineering, and in-house corporate legal services. Additionally, the Facility's team can rely on WindLogics an indirect, wholly owned subsidiary of NextEra and one of the wind industry's premier meteorological firms, with core competencies in meteorology, applied mathematics, and data analytics.

### **5.2 Regulatory Compliance**

In previous pre-construction, construction and operation activities, neither the Certificate Holder, nor its managers, have been in violation of any rules or regulations.

## **6.0 Warranty to Secure Necessary Expertise - OAR 345-021-0010(1)(d)(E)**

*OAR 345-021-0010(1)(d)(E) If the applicant has no previous experience in constructing or operating similar facilities and has not identified a prime contractor for construction or operation of the proposed facility, other evidence that the applicant can successfully construct and operate the proposed facility. The applicant may include, as evidence, a warranty that it will, through contracts, secure the necessary expertise.*

Not applicable.

## 7.0 ISO Certified Program – OAR 345-021-0010(1)(d)(F)

*If the applicant has an ISO 9000 or ISO 14000 certified program and proposes to design, construct and operate the facility according to that program, a description of the program.*

The Certificate Holder does not propose to design, construct, or operate the Facility according to an International Organization for Standardization (ISO) 9000 or ISO 14000 certified program.

## 8.0 Mitigation – OAR 345-021-0010(1)(d)(G)

*OAR 345-021-0010(1)(d)(G) If the applicant relies on mitigation to demonstrate compliance with any standards of Division 22 or 24 of this chapter, evidence that the applicant can successfully complete such proposed mitigation, including past experience with other projects and the qualifications and experience of personnel upon whom the applicant will rely, to the extent that the identities of such persons are known at the date of submittal.*

The Certificate Holder relies on mitigation to demonstrate compliance with several approval standards, most importantly with the Oregon Department of Fish and Wildlife fish and wildlife habitat goals and standards, addressed in Exhibit P of this request. The Certificate Holder's managers have substantial experience in designing habitat mitigation projects. The Certificate Holder will rely on the experience and expertise of Mr. Mike Pappalardo and Northwest Wildlife Consultants, Inc. (NWC) to successfully complete the mitigation required for the Facility. Additionally, the Certificate Holder has acquired a conservation easement in Gilliam County for 200 acres, within a 320-acre parcel, and with the ability to expand the mitigation parcel if needed (Attachment D-1).

As noted above in Section 3.0, Mr. Pappalardo has approximately 28 years of experience in environmental management, including more than 16 years of experience permitting wind energy projects and more than 10 years of experience permitting solar energy projects. He has successfully obtained or amended Site Certificates and county Conditional Use Permits with mitigation requirements for the Biglow Canyon and Stateline I, II, and III wind projects in Oregon, as well as for the Vasco, Golden Hills, Golden Hills North, North Sky River and Palm Springs Repower wind projects in California, and McCoy and Genesis solar projects in California.

The Certificate Holder is working with Tetra Tech, Inc. to determine impacts and related mitigation requirements. Tetra Tech personnel have extensive experience in determining mitigation needs at numerous energy facilities in Oregon and throughout the Country.

The Certificate Holder is working with NWC to implement habitat mitigation. NWC and its personnel (Karen Kronner, Bob Gritski, and others) have demonstrated success at all aspects of such a mitigation process as required for the Facility, including the drafting of initial concepts, contacting owners of potentially suitable mitigation areas, assessing (in concert with appropriate agency personnel) the suitability of such lands, implementation of protection and enhancement

measures, monitoring of effectiveness, and validation of successful completion. NWC has completed some or all of these mitigation components on a number of wind energy projects in Oregon and Washington, including both those associated with county Conditional Use Permits and Council projects; some of these are: Stateline 2, Stateline 3, Klondike III, Leaning Juniper I, Leaning Juniper II, Pebble Springs, Willow, Star Point, Rattlesnake Road, and Wheat Field.

**Attachment D-1. Wheatridge Habitat  
Mitigation Area Option Recording Memo  
with Umatilla County**

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After Recording this Memorandum Return to:  
Wheatridge Wind Energy, LLC  
3000 El Camino Real  
5 Palo Alto Square, Suite 700  
Palo Alto, CA 94306  
Attn: Aleathia M. Hoster

MEMORANDUM OF OPTION FOR CONSERVATION EASEMENT

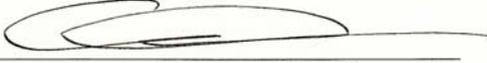
On the 28 day of November, 2014, Robert Gritski and Karen Kronner, as Owners, granted to Wheatridge Wind Energy, LLC, a Delaware limited liability company, as Optionee, an option to acquire one or more Conservation Easements to no more than 200 acres of the following described Gilliam County, Oregon real property, to which reference is made for all statements, matters, and things therein contained:

See Exhibit A which is attached hereto and by this reference incorporated herein.

The term of the option shall expire no later than eight years after the date of this memorandum first set forth above. Reference should be made to the option agreement for further particulars.

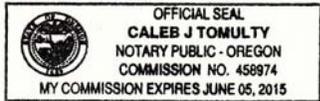
DATED this 28 day of November, 2014.

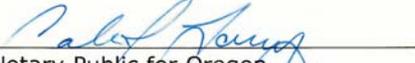
Optionee: Wheatridge Wind Energy, LLC

By:   
Andrew O'Connell  
President

STATE OF OREGON            )  
  ) ss.  
County of MULTNOMAH        )

Before me on this 28 day of November, 2014, personally appeared the above named Andrew O'Connell, President of Wheatridge Wind Energy, LLC and acknowledged on its behalf the foregoing instrument to be his voluntary act and deed.



  
Notary Public for Oregon  
My Commission Expires: 6/5/15

Owners:

By: Robert Gritski  
Name: Robert Gritski

By: Karen Kronner  
Name: Karen Kronner

STATE OF OREGON )  
 ) ss.  
County of Umatilla )

Before me on this 19 day of December, 2014,  
personally appeared the above named of Robert Gritski and Karen Kronner,  
and acknowledged the foregoing instrument to be their voluntary act and  
deed.

Paula M. Hancock  
Notary Public for Oregon  
My Commission Expires: May 19, 2016

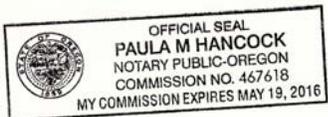


EXHIBIT A

A portion of that certain real property situated in Gilliam County, Oregon with Assessor's Parcel Number 1S21E 2901, described as follows:

Section 14: NW¼, EXCEPT: Deed Book W, page 346, beginning at a point 4 chains West and 1.93 chains South of the Northeast corner of the NW¼ at a stone 8x8x15 inches marked with "X" on top, running thence South 76° 28' East, 2 chains to iron pin in ground; thence South 73° East, 1 chain to iron pin, thence South 57° East 50 links to iron pin, thence South 47° East 40 links to Rock Creek; thence South 47° East 3.40 chains to Rock Creek Bluff to rock marked "C" (which rock is witnessed by rock in bluff marked "X" 18.5 links below); thence in a Southeasterly direction along Rock Creek Bluff to where said bluff intersects the North and South center line of Section 14; thence North on said line to intersection of county road; thence West along South line of said county road a distance of 4 chains from the Northeast corner of NW¼; thence South to the place of beginning.

ALSO, that part of the S½ lying South of a line described as follows and that part of the N½SW¼ lying North of a line described as follows:

Starting at a point which is the Northwest corner of the S½NW¼SW¼ of Section 14; thence 90° East 2200 feet excluding the North tip of a plowed field (approximately 1½ acres), thence 160° South 1300 feet; thence 135° Southeast approximately 2800 feet to a point which is the Southwest corner of the N½NW¼NW¼, Section 24, same township and range; thence East along the S½NW¼NW¼, Section 24, to the property line.

Section 23: All of the N½, EXCEPT the parcel in the NE¼NE¼ which is North and East of the line which begins at the Northwest corner of S½NW¼SW¼ and proceeds Southeasterly as described in the second paragraph of the description in Section 14, ALSO, the NE¼SW¼; SE¼.

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# Exhibit E

## Permits for Construction and Operation

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Wheatridge Wind Energy Facility  
June 2019

Prepared for



Prepared by



Tetra Tech, Inc.

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## Table of Contents

1.0	Introduction .....	1
2.0	Identification and Description of Required Permits – OAR 345-021-0010(1)(e)(A)(B) .....	2
2.1	Federal Permits .....	2
2.2	State Permits Not Federally Delegated .....	3
2.3	State Permits Federally Delegated .....	7
2.4	Local Permits .....	8
3.0	Permit Applications Not Federally Delegated – OAR 345-021-0010(1)(e)(C)(i)(ii) .....	12
4.0	Permit Applications Federally Delegated – OAR 345-021-0010(1)(e)(D) .....	13
5.0	Third Party State or Local Permits – OAR 345-021-0010(1)(e)(E) .....	13
6.0	Third Party Federal Permits – OAR 345-021-0010(1)(e)(F) .....	15
7.0	Third-Party Entities .....	16
8.0	Monitoring – OAR 345-021-0010(1)(e)(G) .....	18

## Acronyms and Abbreviations

ACDP	Air Contaminant Discharge Permit
ASC	Application for Site Certificate
Certificate Holder	Wheatridge Wind Energy, LLC
Council	Oregon Energy Facility Siting Council
Facility	Wheatridge Wind Energy Facility
MCZO	Morrow County Zoning Ordinance
MW	Megawatt
NPDES	National Pollutant Discharge Elimination System
O&M	Operations and maintenance
OAR	Oregon Administrative Rule
ORS	Oregon Revised Statutes
RFA 4	Request for Amendment 4

## 1.0 Introduction

The Wheatridge Wind Energy Facility (Facility) is an approved, but not yet constructed, wind energy generation facility consisting of up to 292 turbines with a peak generating capacity of up to 500 megawatts (MW), to be located in an Approved Site Boundary of approximately 13,097 acres in Morrow and Umatilla counties, Oregon. As part of Request for Amendment 4 (RFA 4) to the Facility's Site Certificate, Wheatridge Wind Energy, LLC (Certificate Holder) is proposing to add photovoltaic solar energy generation to the Facility to provide the opportunity for an integrated, renewable energy facility with both wind and solar energy generation and energy storage. In RFA 4, the Certificate Holder is proposing five changes to the approved Facility:

1. Amend the description of the Facility to include photovoltaic solar energy generation equipment to leverage the complementary nature of wind and solar generation to provide more reliable renewable energy generation.
2. Amend the Site Boundary to provide for solar micro-siting corridors<sup>1</sup> for the photovoltaic solar energy system.
3. Increase the maximum peak generating capacity for the Facility by up to 150 MW of solar energy generation, for a total Facility maximum peak generating capacity of 650 MW.
4. Add distributed energy storage as a related or supporting facility for solar energy generation, along with new collector lines connecting the solar arrays, and an expansion of an approved substation.
5. Amend four existing site certificate conditions and increase the approved MW of the turbines by approximately 12 percent, from 2.5 MW to 2.8 MW.

The Energy Facility Siting Council (Council) previously found the Certificate Holder has demonstrated an ability to construct, operate, and retire the Facility in compliance with Council standards and all other laws and incorporated conditions of the Site Certificate. This exhibit, Exhibit E, provides information about permits that may be needed for construction and operation of the proposed changes in RFA 4, to meet the submittal requirements of Oregon Administrative Rule (OAR) 345-021-0010(1)(e) paragraphs (A) through (G). While OAR 345 Division 22 does not provide an approval standard specific to Exhibit E, permits identified in this exhibit are identified in each applicable exhibit and incorporated into the Site Certificate Conditions, as necessary, to meet Council standards and other laws governed by the Site Certificate.

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<sup>1</sup> Per OAR 345-001-0010(32) "micro-siting corridor" means a continuous area of land within which construction of facility components may occur, subject to site certificate conditions.

## 2.0 Identification and Description of Required Permits – OAR 345-021-0010(1)(e)(A)(B)

*OAR 345-021-0010(1)(e) Information about permits needed for construction and operation of the facility, including:*

*(A) 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, mailing address, email address and telephone number of the agency or office responsible for each permit.*

*(B) A description of each permit, the reasons the permit is needed for construction or operation of the facility and the applicant's analysis of whether the permit should or should not be included in and governed by the site certificate.*

Where relevant, each of the permits below references the appropriate exhibit in RFA 4.

### 2.1 Federal Permits

<b>Responsible Agency:</b> Federal Aviation Administration
<b>Permit:</b> Notice of Proposed Construction or Alteration (Form 7460-1)
<b>Authority:</b> Federal Aviation Act of 1958 (14 U.S.C. Section 44718); 14 CFR Section 77
<b>Contact Information:</b> Dan Shoemaker Airspace Specialist Seattle Obstruction Evaluation Group Dan.Shoemaker@faa.gov (425) 227-2791
<b>Description:</b> Applicant is proposing construction or alterations that may affect navigable airspace must file a Notice of Proposed Construction or Alteration with the Federal Aviation Administration. Because of potential glare from the solar arrays and the proximity to the Boardman Bombing Range, these notices will be filed (See Site Certificate Condition PRE-PS-04).
<b>Relevant Exhibit:</b> Exhibit K

<b>Responsible Agency:</b> Federal Aviation Administration
<b>Permit:</b> Supplemental Notice of Actual Construction or Alteration (Form 7460-2)
<b>Authority:</b> Federal Aviation Act of 1958 (14 U.S.C. Section 44718); 14 CFR Section 77
<b>Contact Information:</b> Dan Shoemaker Airspace Specialist Seattle Obstruction Evaluation Group Dan.Shoemaker@faa.gov (425) 227-2791
<b>Description:</b> 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 (See Site Certificate Condition PRE-PS-04). This federal process is not within the Council’s jurisdiction and therefore should not be governed by the site certificate.
<b>Relevant Exhibit:</b> Exhibit K

## 2.2 State Permits Not Federally Delegated

<b>Responsible Agency:</b> Oregon Department of Environmental Quality
<b>Permit:</b> General Water Pollution Control Facilities Permit, WPCF-1700-B, Wash Water Discharge from Equipment Cleaning; WPCF-1000, Gravel Mining and Batch Plant
<b>Authority:</b> Oregon Revised Statutes (ORS) 468B; OAR Chapter 340, Division 45
<b>Contact Information:</b> Oregon Department of Environmental Quality, Eastern Region 700 SE Emigrant, Suite 330 Pendleton, OR 97801 (541) 276-4063
<b>Description:</b> The WPCF 1700-B permit covers equipment-cleaning activities that discharge wash water by means of evaporation, seepage, or irrigation. If needed for the periodic washing of panels, the permit would be secured by Applicant’s third-party contract who will conduct the washing activities. Therefore, this permit should not be included in and governed by the site certificate. The WPCF-1000 permit authorizes operation of a wastewater collection, treatment, control, and disposal system for nonmetallic mineral quarrying and mining operations, including asphalt-mix batch plants and concrete batch plants. If a temporary batch plant is required for Facility construction, the Facility’s third-party contractor will obtain a WPCF-1000 permit from the Oregon Department of Environmental Quality, which would therefore not be included in and governed by the site certificate.

<b>Responsible Agency:</b> Oregon Department of Energy; Energy Facility Siting Council
<b>Permit:</b> Amendment to Energy Facility Site Certificate
<b>Authority:</b> ORS 469.300 et seq.; OAR Chapter 345, Divisions 1, 21-24, 27
<b>Contact Information:</b> Andrea Goodwin Energy Facility Analyst Oregon Department of Energy 550 Capitol Street NE, 1 <sup>st</sup> Floor Salem, OR 97301 (503) 302 8834 andrea.goodwin@odoe.state.or.us
<b>Description:</b> The Site Certificate is the subject of this amendment request.

<b>Responsible Agency:</b> Oregon Parks and Recreation Department – State Historic Preservation Office
<b>Permit:</b> Archaeological Excavation Permit
<b>Authority:</b> ORS 97.745 (Indian Graves and Protected Objects); ORS 358.920 (Archaeological Objects and Sites); ORS 390.010 (Outdoor Recreation); ORS 390.235 (Archaeological Sites and Historical Material); and OAR Chapter 736, Division 51 (Archaeological Permits).
<b>Contact Information:</b> Dr. Dennis Griffin State Archaeologist Oregon Department of Parks and Recreation 725 Summer Street, NE, Suite C Salem, OR 97301 (503) 986-0674 dennis.griffin@state.or.us
<b>Description:</b> Ground-disturbing activity that may affect a known or unknown archaeological resource on public or private lands requires a permit issued by the Oregon Parks and Recreation Department. Because the Facility has been designed to avoid all known archaeological resources, this permit would be needed only in the event that a previously unknown archaeological resource is discovered during construction, and is located such that it cannot be avoided. If there is an inadvertent discovery during construction, the Certificate Holder and the construction contractor will coordinate directly with State Historic Preservation Office regarding appropriate treatment and will determine at that time whether this permit would be necessary. This permit should not be included in or governed by the Site Certificate.
<b>Relevant Exhibit:</b> Exhibit S

<b>Responsible Agency:</b> Oregon Water Resources Department
<b>Permit:</b> Water Right Limited Use License
<b>Authority:</b> ORS Chapters 536 through 540 (Water Resources/Water Rights); and OAR Chapter 690 (Water Resources Department), Divisions 1 through 410.
<b>Contact Information:</b> Tim Wallin Water Rights Manager Oregon Water Resources Department Division of Water Rights 725 Summer Street NE, Suite A Salem, OR 97301 (503) 986-0801 timothy.wallin@state.or.us
<b>Description:</b> If water for construction is not available from existing permitted sources, the Certificate Holder could seek temporary authorization for water use. However, the Certificate Holder does not anticipate that a Limited Use License would be needed because water for construction will be obtained from municipal suppliers with sufficient existing water rights. Information regarding the municipal water providers that would supply water for Facility construction is provided in Exhibit O. In the event such an authorization is needed, the Certificate Holder would request an amendment, the Applicant or third-party contractor would work directly with the Oregon Water Resources Department, and therefore the authorization would be included in and governed by the site certificate.
<b>Relevant Exhibit:</b> Exhibit O

<b>Responsible Agency:</b> Oregon Department of Transportation
<b>Permit:</b> Oversize Load Movement Permit/Load Registration
<b>Authority:</b> ORS 818.030, OAR 734 Division 82
<b>Contact Information:</b> Christy Jordan Over-Dimensional Permit Unit and Freight Mobility Manager Oregon Department of Transportation, Motor Carrier Transportation Division 550 Capitol Street Salem, OR 97301-2530 (503) 378-6192 Christy.A.Jordan@odot.state.or.us
<b>Description:</b> This permit will be required to transport loads that exceed standard size and/or weight limits on state and federal highways. Movement of construction cranes and other equipment and materials such as substation equipment is likely to require this permit. This permit will be obtained by the construction contractor or designated transportation company(ies) prior to the movement of each oversize/overweight load and should not be included in or governed by the Site Certificate.
<b>Relevant Exhibit:</b> Exhibit U

<b>Responsible Agency:</b> Oregon Department of Transportation
<b>Permit:</b> Permit to Occupy or Perform Operations Upon a State Highway
<b>Authority:</b> OAR Chapter 734, Division 55 (Pole Lines, Buried Cables, and Miscellaneous Facilities and Operations)
<p><b>Contact Information:</b></p> <p>Tina Juel  Oregon Department of Transportation Utility and Miscellaneous Permit Specialist  Oregon Department of Transportation Office of Maintenance and Operations  800 Airport Road SE  Salem, OR 97301  (503) 986-3031  Tina.Juel@odot.state.or.us</p>
<p><b>Description:</b> This permit would be required to install utilities within or across the right-of-way of a state highway. This permit will be required because of the crossing of OR-207 by the 34.5-kV collection line(s). This permit will be obtained by the construction contractor prior to stringing the collection line(s) across the state highway and should not be included in or governed by the Site Certificate.</p>
<b>Relevant Exhibit:</b> Exhibit U

<b>Responsible Agency:</b> Oregon Department of Transportation
<b>Permit:</b> Access Management Permit
<b>Authority:</b> OAR 734 Division 51
<p><b>Contact Information:</b></p> <p>Marcus Berlin  Access Management Planner  Oregon Department of Transportation – Access Management Unit  4040 Fairview Industrial Drive SE, MS 1  Salem, OR 97301-1142  (503) 986-3914  marcus.a.berlin@odot.state.or.us</p>
<p><b>Description:</b> A state access permit would be required for construction of a Facility access road that would intersect with a state highway, or if improvements to an existing public road would substantially alter an intersection with a state highway. The access permit would be issued by the local Oregon Department of Transportation District Offices. Based on the current Facility layout a state access permit will be required. This permit would be obtained by the Certificate Holder or its designated construction contractor prior to constructing or improving a state highway access; it should not be included in or governed by the Site Certificate.</p>
<b>Relevant Exhibit:</b> Exhibit U

<b>Responsible Agency:</b> Oregon Department Consumer & Business Services, Building Codes Division
<b>Permit:</b> State Electrical Permit
<b>Authority:</b> OAR 918 Division 309
<b>Contact Information:</b> BCD Pendleton Office 800 SE Emigrant Avenue, Suite 360 Pendleton, OR 97801 Phone: 541-276-7814
<b>Description:</b> A state electrical permit is required prior to the installation of electric, phone or cable service to the operations and maintenance (O&M) buildings or the Facility substations. Electrical permits may be obtained in person at the Building Codes Division Pendleton office, or online through the state's e-permitting system (available at: <a href="http://www.oregon-epermitting.info/">http://www.oregon-epermitting.info/</a> ). Electrical permits for facilities in Morrow County may also be obtained through the City of Boardman Building Department (see below under Local Permits). A state electrical permit will be obtained by the construction contractor prior to construction of each component for which electrical, phone or cable service would be required and should not be included in or governed by the Site Certificate.
<b>Relevant Exhibit:</b> Exhibit E

### 2.3 State Permits Federally Delegated

<b>Responsible Agency:</b> Oregon Department of Environmental Quality
<b>Permit:</b> National Pollutant Discharge Elimination System (NPDES) Permit
<b>Authority:</b> Clean Water Act, Section 402 (33 U.S.C. Section 122); 40 CFR Section 122; ORS 468 and 468B; OAR Chapter 340, Divisions 14, 41, 45, 52, and 55
<b>Contact Information:</b> Jackie Ray Oregon Department of Environmental Quality 700 SE Emigrant, Suite 330 Pendleton, OR 97801 (541) 278-4605 Ray.jackie@deq.state.or.us
<b>Description:</b> The US Environmental Protection Agency has delegated authority to the Oregon Department of Environmental Quality to issue NPDES Storm Water Discharge permits for construction and operation activities. This permit is required for construction activity that would disturb more than 0.5 acres of land. The Applicant submitted an NPDES permit as Attachment I-2 to Exhibit I of the ASC. The Certificate Holder will obtain a final permit based on final design, consistent with Site Certificate Condition PRE-SP-01, directly from the Oregon Department of Environmental Quality and should not be included in or governed by the Site Certificate.
<b>Relevant Exhibit:</b> Exhibit I, Exhibit J

## 2.4 Local Permits

The Certificate Holder intends to satisfy the Council’s land use standard by seeking a Council determination of compliance with the land use standards under ORS 469.504(1)(b). The Certificate Holder will provide information necessary to demonstrate compliance with the applicable substantive criteria.

<b>Responsible Agency:</b> Morrow County Planning
<b>Permit:</b> Conditional Use Permit
<b>Authority:</b> Morrow County Zoning Ordinance (MCZO) Section 3.010(D), Exclusive Farm Use Zone; MCZO Article 6, Conditional Uses
<b>Contact Information:</b> Carla McLane Planning Director Morrow County – Planning Department 205 NE Third Street Irrigon, OR 97844 (541) 922-4624 cmclane@co.morrow.or.us
<b>Description:</b> Construction of the Facility in Morrow County would require a Conditional Use Permit. Under ORS 469.401(3), following issuance of the Site Certificate, the County, upon the applicant’s submission of the proper application and fee, shall issue the permits addressed in the Site Certificate, subject only to the conditions set forth in the Site Certificate and without hearings or other proceedings. This permit should be included in and governed by the Site Certificate.
<b>Relevant Exhibit:</b> Exhibit K

<b>Responsible Agency:</b> Morrow County Planning/ City of Boardman Building Department
<b>Permit:</b> Building Permit for Facility construction
<b>Authority:</b> OAR 734 Division 51
<b>Contact Information:</b> Brett Cook Building Official City of Boardman Building Department 200 City Center Circle PO Box 229 Boardman, OR 97818 (541) 481-9252 brettc@cityofboardman.com

<p><b>Description:</b> Building permits are required prior to beginning construction of structures including solar panel and substation foundations and the O&amp;M buildings. Morrow County does not have its own building department, so relies on the City of Boardman Building Department for review and approval of all building permits in the county. A building permit will be obtained by the construction contractor prior to construction of each component for which a building permit would be required; this permit should not be included in or governed by the Site Certificate.</p>
<p><b>Relevant Exhibit:</b> Exhibit K</p>

<p><b>Responsible Agency:</b> Morrow County Public Works</p>
<p><b>Permit:</b> Utility Crossing Permit</p>
<p><b>Authority:</b> ORS 374.305</p>
<p><b>Contact Information:</b>                  Matt Scrivner                  Public Works Director                  Morrow County Public Works                  PO Box 428                  Lexington, OR 97839                  (541) 989-9500                  mscrivner@co.morrow.or.us</p>
<p><b>Description:</b> A Utility Crossing permit is required any time a utility is constructed within or across a County road right-of-way, and will be required for locations where Facility electrical collection lines or the transmission lines would cross county roads. This permit will be obtained by the construction contractor prior to construction of each crossing of a county road by electrical collector lines or the transmission lines. This permit should not be included in or governed by the Site Certificate.</p>
<p><b>Relevant Exhibit:</b> Exhibit K</p>

<p><b>Responsible Agency:</b> Morrow County Public Works</p>
<p><b>Permit:</b> Access Approach Site Permit</p>
<p><b>Authority:</b> ORS 374.305, Morrow County Zoning Ordinance Section 4.010(B)</p>
<p><b>Contact Information:</b>                  Matt Scrivner                  Public Works Director                  Morrow County Public Works                  PO Box 428                  Lexington, OR 97839                  (541) 989-9500                  mscrivner@co.morrow.or.us</p>

**Description:** An Approach Site Approval will be required for each location where Facility access roads intersect with county roads, or if necessary upgrades to existing access roads affect a county road. This permit will be obtained by the construction contractor prior to construction of each access road intersection with a county road. This permit should not be included in or governed by the Site Certificate.

**Relevant Exhibit:** Exhibit K, Exhibit U

**Responsible Agency:** Morrow County Planning Department

**Permit:** Zoning Permit

**Authority:** MCZO Section 1.050, Zoning Permit; MCZO Article 1, Introductory Provisions

**Contact Information:**

Carla McLane  
 Planning Director  
 Morrow County – Planning Department  
 205 NE Third Street  
 Irrigon, OR 97844  
 (541) 922-4624  
 cmclane@co.morrow.or.us

**Description:** This permit is required prior to the construction, reconstruction, alteration, or change of use of any structure larger than 100 square feet. Compliance with the standards contained in Article 1 of the MCZO, as well as other substantive criteria applicable to the proposed Facility will be in Exhibit K of RFA 4. The Certificate Holder has elected to obtain a Council determination under ORS Chapter 469.504(1)(b). This permit will be issued after the site certificate for RFA 4 has been issued and should be included in and governed by the Site Certificate (see Site Certificate Conditions PRE-LU-01 and PRE-LU-02).

**Relevant Exhibit:** Exhibit K

**Responsible Agency:** City of Boardman (for Morrow County)

**Permit:** Building and Utility Permit

**Authority:** ORS Chapter 455 Building Code

**Contact Information:**

Brett Cook  
 Building Official  
 City of Boardman Building Department  
 200 City Center Circle  
 PO Box 229  
 Boardman, OR 97818  
 (541) 481-9252  
 brettc@cityofboardman.com

<p><b>Description:</b> This permit is applicable to aboveground Facility structures. Morrow County does not have its own building department, so relies on the City of Boardman Building Department for review and approval of all building permits in the county. A building permit will be obtained by the construction contractor prior to construction of each component for which a building permit would be required; this permit should not be included in or governed by the Site Certificate.</p>
<p><b>Relevant Exhibit:</b> Exhibit K</p>

<p><b>Responsible Agency:</b> Morrow County Public Works</p>
<p><b>Permit:</b> Construction Permit to Build on Right-of-Way</p>
<p><b>Authority:</b> Morrow County Zoning Ordinance Section 4.010(B)</p>
<p><b>Contact Information:</b>                  Matt Scrivner                  Public Works Director                  Morrow County Public Works                  PO Box 428                  Lexington, OR 97839                  (541) 989-9500                  mscrivner@co.morrow.or.us</p>
<p><b>Description:</b> A construction permit is required to make improvements to access roads that intersect with county road rights-of-way or to make improvements to existing public roads. This permit will be obtained by the construction contractor prior to construction of each access road intersection with a county road. This permit should not be included in or governed by the Site Certificate.</p>
<p><b>Relevant Exhibit:</b> Exhibit K</p>

<b>Responsible Agency:</b> Morrow County Public Works
<b>Permit:</b> Oversize Load Movement Permit
<b>Authority:</b> Morrow County Zoning Ordinance Section 4.010(B)
<b>Contact Information:</b> Matt Scrivner Public Works Director Morrow County Public Works PO Box 428 Lexington, OR 97839 (541) 989-9500 mscrivner@co.morrow.or.us
<b>Description:</b> This permit will be required to transport loads that exceed standard size and/or weight limits on county roads. Movement of construction cranes and other equipment and materials such as substation equipment is likely to require this permit. This permit will be obtained by the construction contractor or designated transportation company(ies) prior to the movement of each oversize/overweight load and should not be included in or governed by the Site Certificate.
<b>Relevant Exhibit:</b> Exhibit K, Exhibit U

### 3.0 Permit Applications Not Federally Delegated – OAR 345-021-0010(1)(e)(C)(i)(ii)

*OAR 345-021-0010(1)(e)(C) For any state or local government agency permits, licenses or certificates that are proposed to be included in and governed by the site certificate, evidence to support findings by the Council that construction and operation of the proposed facility will comply with the statutes, rules and standards applicable to the permit. The applicant may show this evidence:*

*(i) In Exhibit J for permits related to wetlands.*

Exhibit J provides evidence that no wetlands permits are required.

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

Exhibit O contains a discussion of potential authorizations related to water rights.

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

*OAR 345-021-0010(1)(e)(D) For federally-delegated permit applications, evidence that the responsible agency has received a permit application and the estimated date when the responsible agency will complete its review and issue a permit decision.*

The Certificate Holder submitted an NPDES permit as Attachment I-2 to Exhibit I of the ASC. The Certificate Holder will obtain a final permit based on final design, consistent with Site Certificate Condition PRE-SP-01, directly from the Oregon Department of Environmental Quality.

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

*OAR 345-021-0010(1)(e)(E) If the applicant relies on a state or local government permit or approval issued to a third party, identification of any such third-party permit and for each:*

- (i) Evidence that the applicant has, or has a reasonable likelihood of entering into, a contract or other agreement with the third party for access to the resource or service to be secured by that permit.*
- (ii) Evidence that the third party has, or has a reasonable likelihood of obtaining, the necessary permit.*
- (iii) An assessment of the impact of the proposed facility on any permits that a third party has obtained and on which the applicant relies to comply with any applicable Council standard.*

The Certificate Holder may rely on its construction contractors to obtain some required permits, as discussed above. Additional permits that may be obtained, either by the construction contractor or by a third party, are those permits related to the use of concrete batch plants. Per the Site Certificate, the Certificate Holder may utilize one or more temporary concrete batch plant areas, located within the construction yard area. The temporary concrete batch plants are permitted and operated by the selected contractor. The Certificate Holder understands that mobile concrete batch plant sites may be covered by the Facility's NPDES 1200-C permit, and that an NPDES 1200-A permit would be required for each mobile batch plant if the plants were to discharge stormwater from a point source to surface water or to a conveyance system that discharges to surface water. Additionally, each mobile batch plant would carry its own associated Air Contaminant Discharge Permit.

<b>Responsible Agency:</b> Morrow County Planning Department
<b>Permit:</b> Conditional Use Permit for use of temporary concrete batch plant
<b>Authority:</b> Morrow County Zoning Sections 3.010, 3.070
<b>Contact Information:</b> Carla McLane Planning Director Morrow County – Planning Department 205 NE Third Street Irrigon, OR 97844 (541) 922-4624 cmclane@co.morrow.or.us
<b>Description:</b> A Conditional Use Permit is required in order to site and use a mobile concrete batch plant in Morrow County. If the use of mobile concrete batch plants is determined to be necessary, a Conditional Use Permit would be required to establish and use temporary concrete batch plants to support construction of the Facility. The construction contractor selected to supply and operate mobile concrete batch plants during Facility construction would obtain and maintain any necessary permits required by Morrow County. This permit should not be included in or governed by the Site Certificate.
<b>Relevant Exhibit:</b> Exhibit K

<b>Responsible Agency:</b> Umatilla Electric Cooperative or Umatilla Electric Cooperative in partnership with Columbia Basin Electric Cooperative
<b>Permit:</b> Crossing Permit
<b>Authority:</b>
<b>Contact Information:</b> Robert Echenrode, General Manager & CEO Umatilla Electric Cooperative 745 West Elm Avenue PO Box 1148 Hermiston, OR 97838
<b>Description:</b> The Certificate Holder anticipates that the Facility’s collection system, an overhead or underground 34.5kV line, will potentially cross a proposed Umatilla Electric Cooperative transmission line. There is no formal permit application and the design information, once finalized, will need to be submitted to the engineering team at Umatilla Electric Cooperative for review.
<b>Relevant Exhibit:</b> Exhibit B

## 6.0 Third Party Federal Permits – OAR 345-021-0010(1)(e)(F)

*OAR 345-021-0010(1)(e)(F) If the applicant relies on a federally-delegated permit issued to a third party, identification of any such third-party permit and for each:*

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

*(ii) Evidence that the responsible agency has received a permit application.*

*(iii) The estimated the date when the responsible agency will complete its review and issue a permit decision.*

<b>Responsible Agency:</b> Oregon Department of Environmental Quality
<b>Permit:</b> Air Contaminant Discharge Permit (ACDP)
<b>Authority:</b> OAR Chapter 340, Division 216
<b>Contact Information:</b> Jackie Ray Oregon Department of Environmental Quality 800 SE Emigrant, Suite 330 Pendleton, OR 97801 (541) 278-4605 Ray.jackie@deq.state.or.us
<b>Description:</b> If mobile concrete batch plants are used, each mobile concrete batch plant used will require an associated ACDP. Depending on the anticipated volume of concrete to be made by each plant, either a Basic or General ACDP would be required. This permit would be associated with the mobile concrete batch plant and moves with it rather than being associated with a particular location. The contractor selected to supply and operate batch plants will obtain and maintain the necessary permit prior to construction. This permit should not be included in or governed by the Site Certificate.
<b>Relevant Exhibit:</b> Exhibit V

<b>Responsible Agency:</b> Oregon Department of Environmental Quality
<b>Permit:</b> NPDES Permit
<b>Authority:</b> OAR Chapter 340, Division 45
<b>Contact Information:</b> Jackie Ray Oregon Department of Environmental Quality 700 SE Emigrant, Suite 330 Pendleton, OR 97801 (541) 278-4605

Ray.jackie@deq.state.or.us
<b>Description:</b> Operating a mobile concrete batch plant requires an NPDES permit for each location where it is set up. If mobile concrete batch plants are used for construction of the Facility, they will be located within the construction staging yards and will be covered by the overall Facility’s NPDES permit instead of having an independent permit. The Certificate Holder prepared an NPDES 1200-C permit application for the Facility included as Attachment I-2 to Exhibit I of the ASC.
<b>Relevant Exhibit:</b> Exhibit V

## 7.0 Third-Party Entities

The entities and organization listed below do not require a permit as required by OAR 345-021-0010(1)(e). These entities are included in this exhibit as they are referenced in multiple exhibits in the ASC. These listed entities are examples, provided in this exhibit at the request of the Oregon Department of Energy, and should not be considered a definitive list of entities with whom the Certificate Holder may choose to utilize at the time of construction of the Facility.

<b>Responsible Agency:</b> Hermiston Department of Public Works
<b>Permit:</b> None
<b>Authority:</b> Water Right Certificate Number: G6831
<b>Contact Information:</b> Roy Bicknell Water Superintendent City of Hermiston Department of Public Works 180 NE 2 <sup>nd</sup> Avenue Hermiston, OR 97838 541-567-5521 water@hermiston.or.us
<b>Description:</b> Provider of water for use in construction and dust control. There is no permit associated with this entity as they are licensed to supply water for industrial use under their existing water right certificates. Attachment O-2 in Exhibit O of the ASC is a record of correspondence with the Water Superintendent at the City of Hermiston confirming they will be able to provide service to the Facility.
<b>Relevant Exhibit:</b> Exhibit O

<b>Responsible Agency:</b> Stanfield Department of Public Works
<b>Permit:</b> None
<b>Authority:</b> Water Right Certificate Numbers: 12224 and 66058
<b>Contact Information:</b>

<p>Scott Morris                  Public Works Director                  City of Stanfield City Hall                  160 S Main Street                  Stanfield, OR 97875                  541-449-3831                  smorris@cityofstanfield.com</p>
<p><b>Description:</b> Provider of water for use in construction and dust control. There is no permit associated with this entity as they are licensed to supply water for industrial use under their existing water right certificates.</p>
<p><b>Relevant Exhibit:</b> Exhibit O</p>

<p><b>Responsible Agency:</b> Boardman Department of Public Works</p>
<p><b>Permit:</b> None</p>
<p><b>Authority:</b> Water Right Certificate Numbers: 40336 and 2624</p>
<p><b>Contact Information:</b>                  Dave Winters                  Public Works Director                  200 City Center Circle                  PO Box 229                  Boardman, OR 97818                  541-481-9252                  publicworks@cityofboardman.com</p>
<p><b>Description:</b> Provider of water for use in construction and dust control. There is no permit associated with this entity as they are licensed to supply water for industrial use under their existing water right certificates.</p>
<p><b>Relevant Exhibit:</b> Exhibit O</p>

<p><b>Responsible Agency:</b> Port of Morrow</p>
<p><b>Permit:</b> None</p>
<p><b>Authority:</b> Water Right Certificate Number: G7158, G8263, G5332, G10975, G12729, G13283, G10312, G4626, G10312, G4626, G12370</p>
<p><b>Contact Information:</b>                  Gary Neal                  General Manager                  2 Marine Drive                  PO Box 200</p>

Boardman, OR 97818 541-481-2679 garyn@portofmorrow.com
<b>Description:</b> Provider of water for use in construction and dust control. There is no permit associated with this entity as they are licensed to supply water for industrial use under their existing water right certificates.
<b>Relevant Exhibit:</b> Exhibit O

<b>Responsible Agency:</b> W.I. Construction Inc.
<b>Permit:</b> None
<b>Authority:</b>
<b>Contact Information:</b> Jack Ingram President W.I. Construction, Inc. 18122 Hulden Road Arlington, OR 97821 541-454-2244
<b>Description:</b> Provider of aggregate and concrete for Facility construction. There is no permit associated with this entity as they are licensed to supply aggregate and any permits associated with on-site concrete batch plants would be acquired and maintained by the construction contractor through either Morrow or Umatilla counties.
<b>Relevant Exhibit:</b> Exhibits G and U

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

*OAR 345-021-0010(1)(e)(G) The applicant's proposed monitoring program, if any, for compliance with permit conditions.*

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