

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

In the Matter of Request for Amendment 3 for the  
Wheatridge Wind Energy Facility

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)  
) FINAL ORDER ON  
) REQUEST FOR AMENDMENT 3 TO  
) THE SITE CERTIFICATE

November 16, 2018

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1 **I. INTRODUCTION**  
2

3 The Energy Facility Siting Council (Council or EFSC) issues this final order, in accordance with  
4 Oregon Revised Statute (ORS) 469.405(1) and OAR 345-027-0071, based on its review of  
5 Request for Amendment 3 (amendment request or RFA3) to the Wheatridge Wind Energy  
6 Facility site certificate, as well as comments and recommendations received by specific state  
7 agencies and local governments. The certificate holder is Wheatridge Wind Energy, LLC,  
8 (hereinafter referred to as “Wheatridge” or certificate holder) which is a wholly owned  
9 subsidiary of NextEra Energy Resources, LLC.

10  
11 The certificate holder requests that EFSC approve changes to the site certificate to allow:  
12

- 13 • Changes the maximum and minimum wind turbine dimension specifications as follows:
  - 14 ○ Increase maximum blade tip height from 476 to 499.7 feet (145 to 152.3  
15 meters);
  - 16 ○ Increase maximum blade length from 197 to 204.1 feet (60 to 62.2 meters);
  - 17 ○ Increase maximum hub height from 278 to 291.3 feet (85 meters to 88.6  
18 meters);
  - 19 ○ Increase rotor diameter from 393 to 416.7 feet (120 to 152.3 meters);
  - 20 ○ Reduce minimum aboveground blade tip clearance from 83 to 70.5 feet (25  
21 meters to 21.5 meters)<sup>1</sup>
- 22 • Amend Noise Control Condition 2 (PRE-NC-01) and remove Noise Control Condition 3  
23 (OPR-NC-01) to eliminate references to a Noise Reduced Operational (NRO) mode that  
24 applies to the previously approved wind turbines and facility layout  
25

26 Based upon review of this amendment request, in conjunction with comments received by  
27 members of the public and recommendations received by state agencies and local government  
28 entities during the draft proposed order comment period, the Council approves and grants an  
29 amendment to the Wheatridge Wind Energy Facility site certificate subject to the existing and  
30 amended conditions set forth in this final order.  
31

32 **I.A. Name and Address of Certificate Holder**

33 Wheatridge Wind Energy, LLC  
34 700 Universe Boulevard  
35 Juno Beach, Florida 33408  
36  
37  
38

---

<sup>1</sup> WRWAMD3Doc11. Request for Amendment 3. 2018-09-17.

1 **Parent Company of the Certificate Holder**

2 NextEra Energy Resources, LLC  
3 FEW/JB  
4 700 Universe Boulevard  
5 Juno Beach, Florida 33408  
6

7 **Certificate Holder Contact**

8 Jesse Marshall  
9 Wheatridge Wind Energy, LLC  
10 700 Universe Boulevard  
11 Juno Beach, Florida 33408  
12

13 **I.B. Description of the Approved Facility**

14  
15 The Wheatridge Wind Energy Facility (facility) site certificate, effective May 24, 2017,  
16 authorizes construction and operation of a 500 megawatt (MW) wind energy generation  
17 facility, to be located within both Morrow and Umatilla counties. The facility has not yet been  
18 constructed but, as approved, would include up to 292 wind turbines. The wind turbines could  
19 include a range of technologies with varying dimensions. Wind turbine dimensions may not  
20 exceed 476 feet in maximum blade tip height (tower hub height plus blade length); 197 feet in  
21 maximum blade length; 278 feet in maximum hub height; and 393 feet in rotor diameter. The  
22 individual wind turbine generating capacity may not exceed 2.5 MW.<sup>2</sup>  
23

24 Related or supporting facilities to the energy facility, as approved, would include up to 32 miles  
25 of up to two parallel overhead 230 kilovolt (kV) intraconnection transmission lines that would  
26 traverse one of four approved routing options, described below. Related or supporting facilities,  
27 as approved, would also include an electrical collection system, up to three collector  
28 substations, up to 12 meteorological towers, communication and supervisory control systems  
29 and data acquisition systems (SCADA), up to two operations and maintenance (O&M) buildings,  
30 up to 72 miles of new or improved access roads, and temporary construction areas.  
31

---

<sup>2</sup> WRWAMD3Doc11. Request for Amendment 3. 2018-09-18. RFA3 Section 3.0 states, “The Site Certificate does not restrict individual turbine generating capacity.” The Council disagrees with this statement. Table 2 of the Site Certificate, as approved in July 2017, presents the range of turbine specifications approved for use at the facility site, and specifies a limit of 2.5 MW for individual turbine generating capacity. Therefore, the facility, as approved, may not include wind turbines with an individual generating capacity that exceeds 2.5 MW.

1 **I.C. Description of Approved Facility Site Location**

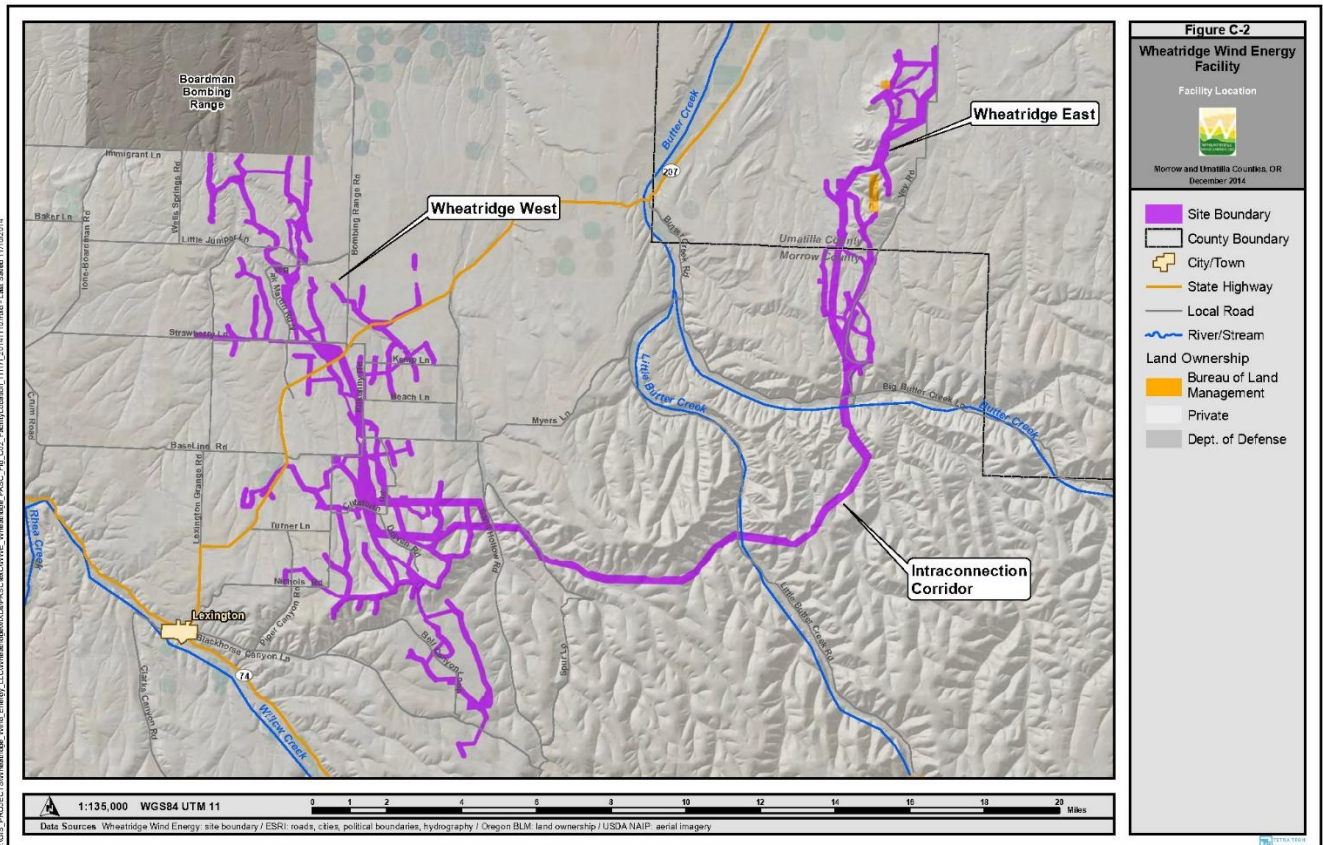
2  
3 *Site Boundary*

4  
5 The facility site boundary includes approximately 13,097 acres of private land, within Morrow  
6 and Umatilla counties, and includes the perimeter of the energy facility site, all temporary  
7 laydown, staging areas and intraconnection transmission corridors.

8  
9 The energy facility site is divided into two groups, Wheatridge West and Wheatridge East.  
10 Wheatridge West is located entirely within Morrow County, bisected by Oregon Highway  
11 207, approximately 5 miles northeast of Lexington and approximately 7 miles northwest of  
12 Heppner. Wheatridge East is located approximately 16 miles northeast of Heppner and  
13 includes land in both Morrow and Umatilla counties. Wheatridge West and Wheatridge East  
14 would be connected via a 230 kV transmission line or “intraconnection” transmission line  
15 (see Figure 1, *Facility Location* below).

16  
17 **Figure 1: Facility Location**

18



19  
20

1 *Micrositing Corridor*

2

3 Micrositing corridor means a continuous area of land within which construction of facility  
4 components may occur subject to site specific conditions.<sup>3</sup> Council authorizes micrositing  
5 corridors for wind facilities when a certificate holder has adequately studied the entire corridor  
6 and demonstrated compliance with Council standards based on impacts of facility components  
7 anywhere within the corridor.

8

9 The Council approved a micrositing corridor for this facility which is a minimum of  
10 approximately 660 feet in width around turbines. The micrositing corridor width around site  
11 access roads and electrical collection lines (collector lines) is narrower, between 200 and 500  
12 feet in width. The micrositing corridor is wider for the area surrounding the substations,  
13 meteorological towers (met towers), O&M buildings, and construction yards.

14

15 *Intraconnection Transmission Line Corridor*

16

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

22

23 The approved 230 kV intraconnection transmission line route options, as presented in ASC  
24 Exhibit C (Figures C-4a through C-4d), are summarized below:

25

- 26 • Option 1: 31.5-mile 230 kV intraconnection transmission line extending from  
27 Wheatridge East Substation 3 to Wheatridge West Substation 1
- 28
- 29 • Option 2: 31.3-mile 230 kV intraconnection transmission line extending from  
30 Wheatridge East Substation 3 to Wheatridge West Substation 2b, and then to  
31 Wheatridge West Substation 2a (alternate)
- 32
- 33 • Option 3: 24.5-mile 230 kV intraconnection transmission line extending from  
34 Wheatridge West Substation 1 to Wheatridge East Substation 3
- 35
- 36 • Option 4: 27.8 mile 230 kV intraconnection transmission line extending from  
37 Wheatridge West Substation 2a to Wheatridge West Substation 2b, and then to  
38 Wheatridge East Substation 3

---

<sup>3</sup> OAR 345-001-0010(32)

1 **I.D. Procedural History**

2  
3 The Council issued the *Final Order on the Application for Site Certificate* for the Wheatridge  
4 Wind Energy Facility (Final Order on ASC) on April 28, 2017. The site certificate became  
5 effective on May 24, 2017. On June 14, 2017, the certificate holder submitted Request for  
6 Amendment 1 of the site certificate, requesting to transfer certificate holder ownership from  
7 Swaggart Wind Power, LLC to a new parent company, NextEra Energy Resources, LLC. The  
8 Council issued the final order and first amended site certificate on July 27, 2017. The first  
9 amended site certificate became effective on August 17, 2017.

10  
11 **II. AMENDMENT PROCESS**

12  
13 **II.A. Requested Amendment**

14  
15 The certificate holder requests Council approval for additional flexibility in wind turbine  
16 technologies selected during final facility design to allow changes in the previously approved  
17 wind turbine dimension specifications. Changes in wind turbine dimension specification would  
18 include increasing maximum blade tip height from 476 to 499.7 feet (145 to 152.3 meters);  
19 increasing maximum blade length from 197 to 204.1 feet (60 to 62.2 meters); increasing hub  
20 height from 278 to 291.3 feet (85 to 88.6 meters); and, increasing rotor diameter from 393 to  
21 416.7 feet (120 to 152.3 meters).

22  
23 OAR 345-027-0060(1)(d) requires that the certificate holder identify the specific language of the  
24 site certificate, including affected conditions, that the certificate holder proposes to change,  
25 add, or delete through the amendment process.

26  
27 The certificate holder requests to amend Noise Control Condition 2 (PRE-NC-01(c)) and remove  
28 Noise Control Condition 4 (OPR-NC-01) as described in RFA3 Section 6.3.1 *Noise Control*  
29 *Regulations*. The Council’s evaluation of the requested condition amendments is presented in  
30 Section III.Q.1. *Noise Control Regulations* of this order.

31  
32 **II.B. Amendment Review Process**

33  
34 Council rules describe the processes for transfers, Type A, Type B, and Type C review of a  
35 request for amendment at OAR 345-027-0051. The Type A review is the standard or “default”  
36 site certificate amendment process for changes that require an amendment. Type C review  
37 process is associated with construction-related changes. The key procedural difference  
38 between the Type A and Type B review is that the Type A review includes a public hearing on  
39 the draft proposed order and an opportunity for a contested case proceeding. The primary  
40 timing differences between Type A and Type B review include the maximum allowed timelines  
41 for the Department’s determination of completeness of the preliminary request for  
42 amendment, as well as the issuance of the draft proposed order, and proposed order. It is  
43 important to note that Council rules authorize the Department to adjust the timelines for these  
44 specific procedural requirements, if necessary.



1 On April 9, 2018, the certificate holder submitted a Type B review amendment determination  
2 request (Type B Review ADR) for Request for Amendment 3 (RFA3), requesting the  
3 Department's review and determination of whether, based on evaluation of the OAR 345-027-  
4 0057(8) factors, the amendment request could be reviewed under the Type B review process.  
5 The Type B review ADR for RFA3 requested that the Department review facility modifications,  
6 including a proposed differing turbine model option with increased blade length, hub height,  
7 rotor diameter and total turbine height; and two battery storage systems (20 and 30  
8 megawatts).

9

10 Pursuant to OAR 345-027-0057(6), on April 25, 2018, the Department issued a written  
11 determination to the certificate holder stating that the modifications proposed for RFA3 be  
12 processed under the Type A review process. On May 18, 2018, the certificate holder re-  
13 submitted a Type B Review ADR for RFA3, and also submitted a preliminary request for  
14 amendment (pRFA). The Department initiated consultation with select reviewing agencies and  
15 posted an announcement on its project website notifying the public that pRFA3 had been  
16 received. Within the Type B Review ADR, the certificate holder requested that the Department  
17 reconsider the previous determination of a Type A review process as well as provide separate  
18 amendment determinations for the modifications to the wind turbines and for the battery  
19 storage additions. In a letter issued on June 14, 2018, the Department concluded that Type A  
20 review be maintained for the proposed facility modifications to the wind turbines and for the  
21 battery storage, even if separated.

22

23 OAR 345-027-0057(6) allows that, at the request of the certificate holder or a Council member,  
24 the Department's determination must be referred to the Council for concurrence, modification,  
25 or rejection. The certificate holder requested to refer the Department's Type A review  
26 determination to Council for its consideration. Additionally, the certificate holder requested  
27 that the Council provide separate decisions on amendment review pathways for the proposed  
28 wind turbine changes and battery storage systems.

29

30 At its June 29, 2018 meeting, the Council evaluated the Department's separate determinations  
31 for the turbine modifications and the battery storage facilities. The Council determined that the  
32 proposed battery storage components be processed under Type A review, and the proposed  
33 modifications to the wind turbines, including increasing the hub height, blade length, and  
34 increasing the blade tip height be processed under Type B review. The Council's decision was  
35 supported by the evaluation conducted during the review of application for site certificate  
36 (ASC) and the findings in the Final Order on the ASC issued April 28, 2017. The facility  
37 components proposed and consequently approved by Council in the *Final Order on the ASC*  
38 included turbine models that exceeded heights proposed in RFA3.

39

40 On June 8, 2018, the Department notified the certificate holder that the pRFA was incomplete  
41 and concurrently issued a request for additional information (RAI's) associated with the  
42 modifications to the wind turbines. Under OAR 345-027-0063(5), an RFA is complete when the  
43 Department finds that a certificate holder has submitted information adequate for the Council  
44 to make findings or impose conditions for all applicable laws and Council standards. The

1 certificate holder submitted a complete RFA3 on September 18, 2018. On September 28, 2018,  
2 the Department posted the complete RFA3 on its website and posted an announcement on the  
3 project website informing the public that the complete RFA3 had been received and was  
4 available for viewing.

5  
6 Reviewing Agency Comments on Preliminary Request for Amendment 3

7  
8 The Department received comments on the Wheatridge Wind Energy Facility RFA3 from the  
9 following reviewing agencies and Special Advisory Groups:

- 10  
11
- 12 • Oregon Department of Aviation
  - 13 • Oregon Department of Fish and Wildlife
  - 14 • Morrow County Board of Commissioners (Special Advisory Group)
  - 15 • Umatilla County Board of Commissioners (Special Advisory Group)

16 Comments from these agencies are incorporated into the analysis of Council standards below,  
17 as applicable, and provided in Attachment B of this order.

18  
19 **II.C. Council Review Process**

20  
21 On September 28, 2018, the Department issued the draft proposed order, and a notice of a 31-  
22 day comment period on RFA3 and the draft proposed order (notice), extending from September  
23 28 through October 29, 2018. The notice was distributed to all persons on the Council’s general  
24 mailing list, to the special mailing list established for the facility, to an updated list of property  
25 owners supplied by the certificate holder, and to a list of reviewing agencies as defined in OAR  
26 345-001-0010(52).

27  
28 The Department received 4 comments on the record of the draft proposed order from: Oregon  
29 Department of Fish and Wildlife; Umatilla County Planning Department; Morrow County Board  
30 of Commissioners; and, the certificate holder. Attachment C of this order includes copies of the  
31 comments received on the record of the draft proposed order and an index presenting date  
32 comment received, commenter name and organization, and location within the order where  
33 the comment is addressed. Issues raised that are within the Council’s jurisdiction and related to  
34 the amendment are addressed under the applicable standards section below.

35  
36 To raise an issue on the record of the draft proposed order, a person must raise the issue in a  
37 written comment submitted after the date of the notice of the draft proposed order and  
38 received by the Department before the written comment deadline. The Council will not accept  
39 or consider public comments on the RFA3 or on the draft proposed order after the written  
40 comment deadline, listed above, that closes the record on the draft proposed order.

41  
42 On November 1, 2018, the Department issued the proposed order, taking into consideration  
43 Council comments, and comments received “on the record of the draft proposed order”

1 including any comments from reviewing agencies, special advisory groups, and Tribal  
2 Governments. Concurrent with the issuance of this proposed order, the Department issued a  
3 Notice of Proposed Order. The Notice of Proposed Order was distributed to all persons on the  
4 Council’s general mailing list, to the special mailing list established for the facility, to an updated  
5 list of property owners supplied by the certificate holder, and to a list of reviewing agencies as  
6 defined in OAR 345-001-0010(52). The proposed order recommended Council approve the third  
7 amended site certificate.

8  
9 At its November 16, 2018 meeting in Boardman, Oregon, in accordance with OAR 345-027-  
10 0075, Council reviewed the proposed order and adopted the proposed order, with  
11 modifications, as the final order and granted an amended site certificate.<sup>4</sup> Only those persons,  
12 including the certificate holder, who provided written comments on the draft proposed order  
13 by the written comment deadline may seek judicial review of the Council’s final order, as  
14 provided in ORS 469.403. Issues eligible for judicial review are limited to the issues raised in  
15 that person’s written comments on the draft proposed order.

16  
17 **II.D. Applicable Division 27 Rule Requirements**

18  
19 A site certificate amendment is necessary under OAR 345-027-0050(4) because the certificate  
20 holder requests to design, construct, and operate the facility in a manner different from the  
21 description in the site certificate, and the proposed changes: (1) could result in a significant  
22 adverse impact to a resource or interest protected by a Council standard that the Council has  
23 not addressed in an earlier order; (2) could impair the certificate holder’s ability to comply with  
24 a site certificate condition; or (3) could require new conditions or modification to existing  
25 conditions in the site certificate, or could meet more than one of these criteria.

26  
27 The Type B amendment review process (consisting of rules 345-027-0059, -0060, -0063, -0065, -  
28 0068, -0072, and -0075) shall apply to the Council’s review of a request for amendment that the  
29 Department or the Council approves for Type B review under 345-027-0057. The Council is  
30 reviewing Wheatridge Wind Energy Facility amendment request under the Type B review  
31 process because the RFA includes the changes described in OAR 345-027-0050(4), as explained  
32 in the preceding paragraph. Additionally, the Council considered the factors listed in OAR 345-  
33 027-0057(8) and determined that the amendment shall be reviewed with the Type B  
34 amendment process.<sup>5</sup>

35  
36  
37  
38  

---

<sup>4</sup> November 16, 2018 Council minutes/audio recording.

<sup>5</sup> The Council found that RFA3 shall be reviewed as a Type B amendment after considering the: (a) the complexity of the proposed change; (b) the anticipated level of public interest in the proposed change; (c) the anticipated level of interest by reviewing agencies; (d) the likelihood of significant adverse impact; and (e) the type and amount of mitigation, if any.

1 **III. REVIEW OF THE REQUESTED AMENDMENT**  
2

3 Under ORS 469.310, the Council is charged with ensuring that the “siting, construction and  
4 operation of energy facilities shall be accomplished in a manner consistent with protection of  
5 the public health and safety.” ORS 469.401(2) further provides that the Council must include in  
6 the amended site certificate “conditions for the protection of the public health and safety, for  
7 the time for completion of construction, and to ensure compliance with the standards, statutes  
8 and rules described in ORS 469.501 and ORS 469.503.”<sup>6</sup> The Council implements this statutory  
9 framework by adopting findings of fact, conclusions of law, and conditions of approval  
10 concerning the amended facility’s compliance with the Council’s Standards for Siting Facilities  
11 at OAR 345, Divisions 22, 24, 26, and 27.  
12

13 **III.A. General Standard of Review: OAR 345-022-0000**  
14

15 *(1) To issue a site certificate for a proposed facility or to amend a site certificate, the Council*  
16 *shall determine that the preponderance of evidence on the record supports the following*  
17 *conclusions:*  
18

19 *(a) The facility complies with the requirements of the Oregon Energy Facility Siting*  
20 *statutes, ORS 469.300 to ORS 469.570 and 469.590 to 469.619, and the*  
21 *standards adopted by the Council pursuant to ORS 469.501 or the overall public*  
22 *benefits of the facility outweigh the damage to the resources protected by the*  
23 *standards the facility does not meet as described in section (2);*  
24

25 *(b) Except as provided in OAR 345-022-0030 for land use compliance and except for*  
26 *those statutes and rules for which the decision on compliance has been delegated*  
27 *by the federal government to a state agency other than the Council, the facility*  
28 *complies with all other Oregon statutes and administrative rules identified in the*  
29 *project order, as amended, as applicable to the issuance of a site certificate for*  
30 *the proposed facility. If the Council finds that applicable Oregon statutes and*  
31 *rules, other than those involving federally delegated programs, would impose*  
32 *conflicting requirements, the Council shall resolve the conflict consistent with the*  
33 *public interest. In resolving the conflict, the Council cannot waive any applicable*  
34 *state statute.*  
35

36 \*\*\*

37 *(4) In making determinations regarding compliance with statutes, rules and*  
38 *ordinances normally administered by other agencies or compliance with*  
39 *requirements of the Council statutes if other agencies have special expertise, the*  
40 *Department of Energy shall consult such other agencies during the notice of*  
41 *intent, site certificate application and site certificate amendment processes.*  
42 *Nothing in these rules is intended to interfere with the state’s implementation of*  
*programs delegated to it by the federal government.*

---

<sup>6</sup> ORS 469.401(2).

1 **Findings of Fact**

2  
3 OAR 345-022-0000 provides the Council’s General Standard of Review and requires the Council  
4 to find that a preponderance of evidence on the record supports the conclusion that the  
5 facility, with proposed changes, would comply with the requirements of EFSC statutes and the  
6 siting standards adopted by the Council and that the facility, with proposed changes, would  
7 comply with all other Oregon statutes and administrative rules applicable to the issuance of an  
8 amended site certificate for the facility.

9  
10 The requirements of OAR 345-022-0000 are discussed in the sections that follow. The  
11 Department consulted with other state agencies, Morrow County Board of Commissioners and  
12 Umatilla County Board of Commissioners during review of pRFA3 to aid in the evaluation of  
13 whether the facility, with proposed changes, would maintain compliance with statutes, rules  
14 and ordinances otherwise administered by other agencies. Additionally, in many circumstances  
15 the Department relies upon these reviewing agencies’ special expertise in evaluating  
16 compliance with the requirements of Council standards.

17  
18 *Mandatory Conditions in Site Certificate [OAR 345-025-0006]*

19  
20 OAR 345-025-0006 lists certain mandatory conditions that the Council must adopt in every site  
21 certificate. Mandatory conditions, pursuant to OAR 345-025-0006, were imposed as conditions  
22 within the approved site certificate. Of relevance to this amendment request, Council  
23 previously imposed Mandatory Condition 2 (GEN-GS-03), mirroring OAR 345-025-0006(3)(a),  
24 requiring that the certificate holder design, construct, operate and retire the facility  
25 substantially as described in the site certificate.

26  
27 Consistent with Mandatory Condition 2 (GEN-GS-03), the site certificate (Table 2) established  
28 dimensional specifications and individual wind turbine generating capacity for the wind turbine  
29 technologies to be selected during final design. In RFA3, the certificate holder requests approval  
30 for changes in specified dimensions for blade length, hub height, rotor diameter, blade tip  
31 height, and aboveground blade tip clearance. The Council notes that a minimum above-ground  
32 blade tip clearance had not previously been included in the site certificate, but agrees that the  
33 dimension should be specified in the site certificate. In the draft proposed order, the  
34 Department recommended Council remove the previously imposed restriction on individual  
35 turbine generating capacity, 2.5 MW, as it is not a relevant factor in the compliance evaluation.  
36 Based on the analysis presented in the draft proposed order, the Department recommended  
37 Council amend Table 2 of the Site Certificate as presented in Table 1, *Proposed Wind Turbine*  
38 *Specification Range* below, which the Council adopts as presented below:<sup>7, 8</sup>

---

<sup>7</sup> In the draft proposed order, Table 1 incorrectly identified the maximum blade tip height dimension as 525 ft. In the proposed order, the Department corrected the dimension reference to 499.7 feet, consistent with the dimension change requested in RFA3, which the Council adopts.

<sup>8</sup> WRWAMD3Doc14. DPO Comments Certificate Holder 2018-10-16. On the record of the draft proposed order, the certificate holder requested that Table 1 of the draft proposed order be revised to remove the requirement that if

1

**Table 1: Proposed Wind Turbine Specification Range**

<b>Specification</b>	<b>Maximum</b>
<del>Turbine Generating Capacity (Individual)</del>	<del>2.5 MW</del>
Blade Length	<del>197</del> <u>204.1</u> ft.
Hub Height	<del>278</del> <u>291.3</u> ft.
Rotor Diameter	<del>393</del> <u>416.7</u> ft.
<del>Total Height</del> <u>Blade Tip Height</u> (tower height plus blade length)	<del>476</del> <u>499.7</u> ft.
<u>Aboveground Blade Tip Clearance</u>	<u>70.5</u> ft.
<u>Wind turbine types with the maximum dimension specifications shall be equipped with Low Noise Trailing Edge blades.</u>	

2

3 *Mandatory and Site-Specific Conditions in Site Certificates [OAR 345-025-0006 and OAR 345-*  
4 *025-0010]*

5

6 OAR 345-025-0006 lists certain mandatory conditions that the Council must adopt in every site  
7 certificate. The Council’s October 2017 rule changes moved the mandatory conditions from  
8 Division 27 to Division 25. As such, the Department recommends Council administratively  
9 amend the rule citations included in the following mandatory and site-specific conditions: GEN-  
10 GS-03, GEN-GS-04, GEN-GS-05, GEN-GS-06, GEN-GS-07, GEN-GS-08, GEN-GS-09, GEN-GS-10,  
11 GEN-GS-11, GEN-RF-01, PRE-RF-01, OPR-GS-01, RET-RF-01, RET-RF-02, and GEN-GS-12.<sup>9</sup>

12

13 **Conclusions of Law**

14

15 Based on the foregoing findings of fact and conclusions of law, and subject to compliance with  
16 the general, mandatory and site-specific site certificate conditions, the Department

---

wind turbines are selected with maximum dimensions, the wind turbines be equipped with low noise trailing edge (LNTE) blades. The certificate holder argues that there are a variety of technologies, modes and measures that would ensure the facility complies with the Noise Control Regulation and that that noise impacts are in the range of impacts previously analyzed.

As described in Section III.Q.1. *Noise Control Regulation* of this order, because the certificate holder provided an acoustic noise modeling analysis assuming wind turbines were equipped with LNTE blades, a noise reducing technology, the modeling approach included mitigation interpreted as necessary to minimize potential impacts. Because mitigation (LNTE blades) was utilized by the certificate holder in its evaluation and modeling of maximum noise levels of the proposed differing wind turbines, and the analysis of noise impacts under the Council’s Protected Areas and Recreation standards, and Noise Control Regulation rely on the results of the modeling to make findings that significant adverse noise impacts would not result from operations, the Council did not make changes to Table 1 as requested as it would authorize impacts not evaluated by Council.

<sup>9</sup> At the October 19, 2017 meeting, the Council approved a rulemaking project to reorganize Division 27 and rewrite its rules governing requests for amendments to site certificates. A component of this rulemaking was the renumbering of OAR 345-027-0006 (previous reference for mandatory conditions), to OAR 345-025-0006 (new reference for mandatory conditions) as well as the renumbering of site-specific condition from OAR 345-025-0023 to OAR 345-025-0010. The effective date of this rule change was October 24, 2017.

1 recommends that the Council find that the facility, with proposed changes, would satisfy the  
2 requirements of OAR 345-022-0000.

3  
4 **III.B. Organizational Expertise: OAR 345-022-0010**

5  
6 *(1) To issue a site certificate, the Council must find that the applicant has the organizational*  
7 *expertise to construct, operate and retire the proposed facility in compliance with*  
8 *Council standards and conditions of the site certificate. To conclude that the applicant*  
9 *has this expertise, the Council must find that the applicant has demonstrated the ability*  
10 *to design, construct and operate the proposed facility in compliance with site certificate*  
11 *conditions and in a manner that protects public health and safety and has demonstrated*  
12 *the ability to restore the site to a useful, non-hazardous condition. The Council may*  
13 *consider the applicant's experience, the applicant's access to technical expertise and the*  
14 *applicant's past performance in constructing, operating and retiring other facilities,*  
15 *including, but not limited to, the number and severity of regulatory citations issued to*  
16 *the applicant.*

17  
18 *(2) The Council may base its findings under section (1) on a rebuttable presumption that an*  
19 *applicant has organizational, managerial and technical expertise, if the certificate holder*  
20 *has an ISO 9000 or ISO 14000 certified program and proposes to design, construct and*  
21 *operate the facility according to that program.*

22  
23 *(3) If the applicant does not itself obtain a state or local government permit or approval for*  
24 *which the Council would ordinarily determine compliance but instead relies on a permit*  
25 *or approval issued to a third party, the Council, to issue a site certificate, must find that*  
26 *the third party has, or has a reasonable likelihood of obtaining, the necessary permit or*  
27 *approval, and that the applicant has, or has a reasonable likelihood of entering into, a*  
28 *contractual or other arrangement with the third party for access to the resource or*  
29 *service secured by that permit or approval.*

30  
31 *(4) If the applicant relies on a permit or approval issued to a third party and the third party*  
32 *does not have the necessary permit or approval at the time the Council issues the site*  
33 *certificate, the Council may issue the site certificate subject to the condition that the*  
34 *applicant shall not commence construction or operation as appropriate until the third*  
35 *party has obtained the necessary permit or approval and the applicant has a contract or*  
36 *other arrangement for access to the resource or service secured by that permit or*  
37 *approval.*

1 **Findings of Fact**

2  
3 Subsections (1) and (2) of the Council’s Organizational Expertise standard require that the  
4 certificate holder demonstrate its ability to design, construct and operate the facility, with  
5 proposed changes, in compliance with Council standards and all site certificate conditions, and  
6 in a manner that protects public health and safety, as well as its ability to restore the site to a  
7 useful, non-hazardous condition. The Council may consider the certificate holder’s experience  
8 and past performance in constructing, operating and retiring other facilities in determining  
9 compliance with the Council’s Organizational Expertise standard. Subsections (3) and (4)  
10 address third party permits.

11  
12 *Compliance with Council Standards and Site Certificate Conditions*

13  
14 The Council may consider a certificate holder’s past performance, including but not limited to  
15 the quantity or severity of any regulatory citations in the construction or operation a facility,  
16 type of equipment, or process similar to the facility, in evaluating whether a proposed change  
17 may impact the certificate holder’s ability to design, construct and operate a facility in  
18 compliance with Council standards and site certificate conditions.<sup>10</sup> To evaluate whether the  
19 proposed change in wind turbine dimension specification would impact the certificate holder’s  
20 ability to comply with Council standards and site certificate conditions, the Council evaluates  
21 the certificate holder’s relevant experience constructing and operating wind facilities and  
22 whether any regulatory citations have been received for its facilities.

23  
24 Wheatridge Wind Energy, LLC, is a project-specific LLC and therefore relies upon the  
25 organizational expertise and experience of its parent company, NextEra.<sup>11</sup> The certificate holder  
26 states that NextEra has not received any regulatory citations, nor has it received any North  
27 American Energy Reliability Corporation (NERC) violations, for the operation of an EFSC-  
28 jurisdictional wind facility (Stateline Wind Project).

29  
30 The certificate holder represents that qualified contractors, engineers, and manufacturers  
31 would be selected to construct the facility, with proposed changes; and, that these contractors,  
32 engineers, and manufacturers would comply with site certificate conditions. Council previously  
33 imposed Organizational Expertise Conditions 1 and 3 (PRE-OE-01 and PRE-OE-03) requiring the  
34 certificate holder to, prior to construction, provide the Department the major design,  
35 engineering, and construction contractor qualifications demonstrating substantial experience in

---

<sup>10</sup> OAR 345-021-0010(1)(d)(D)

<sup>11</sup> As noted in the Council’s *Final Order on Amendment 1*, the certificate holder’s parent company, NextEra, maintains approximately 66 billion dollars in capital and produces approximately 19,882 MW of energy from 175 facilities located throughout the United States and Canada. NextEra maintains a workforce of approximately 5,000 professionals that are employed in fields such as operations and maintenance, development, environmental services, construction, engineering, and legal services.



1 such work for similar facilities; and, contractually require contractors to comply with all  
2 applicable laws and regulations, and the terms of the site certificate.

3  
4 The Council finds that the certificate holder has demonstrated an ability to design, construct,  
5 and operate the facility, with proposed changes, in compliance with Council standards and site  
6 certificate conditions for the following reasons: the certificate holder demonstrates continued  
7 experience constructing and operating wind facilities; the certificate holder has not received  
8 regulatory citations for its EFSC jurisdictional wind facility (i.e. Stateline Wind Project); and,  
9 existing site certificate conditions require the certificate holder to select qualified contractors  
10 and contractually require compliance with site certificate conditions during facility design,  
11 construction and engineering.

12  
13 *Public Health and Safety*

14  
15 Construction and operation of the proposed larger wind turbines could result in public health  
16 and safety risks from proximity to blades and electrical equipment, and potential structural  
17 failure of tower or blades. This is further discussed in Sections III.P.1., *Public Health and Safety*  
18 *Standards for Wind Energy Facilities* of this order.

19  
20 Based upon the evidence on the record, and compliance with existing and amended conditions,  
21 the Council finds that the certificate holder has provided reasonable assurance that it can  
22 successfully construct, operate and retire the facility, with proposed changes, in a manner that  
23 protects public health and safety in accordance with the Organizational Expertise standard.

24  
25 *Ability to Restore the Site to a Useful, Non-Hazardous Condition*

26  
27 The certificate holder's ability to restore the facility site to a useful, non-hazardous condition is  
28 evaluated in Section III.G, *Retirement and Financial Assurance* of this order, in which the Council  
29 finds that the certificate holder would continue to be able to comply with the Retirement and  
30 Financial Assurance standard.

31  
32 *ISO 900 or ISO 14000 Certified Program*

33  
34 OAR 345-022-0010(2) is not applicable because the certificate holder has not proposed to  
35 design, construct or operate the facility, with proposed changes, according to an ISO 9000 or  
36 ISO 14000 certified program.

37  
38 *Third-Party Permits*

39  
40 OAR 345-022-0010(3) addresses the requirements for potential third party contractors. In RFA3,  
41 the certificate holder describes that the proposed changes would not require any additional  
42 state or local government permits or approvals for which the Council would ordinarily  
43 determine compliance but that would instead be issued to a third-party not previously  
44 considered.

1 **Conclusions of Law**

2  
3 Based on the evidence in the record, and subject to compliance with the existing and amended  
4 conditions, Council finds that the certificate holder would continue to satisfy the requirements  
5 of the Council’s Organizational Expertise standard.  
6

7 **III.C. Structural Standard: OAR 345-022-0020**

8  
9 *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council*  
10 *must find that:*

11  
12 *(a) The applicant, through appropriate site-specific study, has adequately characterized*  
13 *the seismic hazard risk of the site;*

14  
15 *(b) The applicant can design, engineer, and construct the facility to avoid dangers to*  
16 *human safety and the environment presented by seismic hazards affecting the site,*  
17 *as identified in subsection (1)(a);*

18  
19 *(c) The applicant, through appropriate site-specific study, has adequately characterized*  
20 *the potential geological and soils hazards of the site and its vicinity that could, in the*  
21 *absence of a seismic event, adversely affect, or be aggravated by, the construction*  
22 *and operation of the proposed facility; and*

23  
24 *(d) The applicant can design, engineer and construct the facility to avoid dangers to*  
25 *human safety and the environment presented by the hazards identified in subsection*  
26 *(c).*

27  
28 *(2) The Council may not impose the Structural Standard in section (1) to approve or deny an*  
29 *application for an energy facility that would produce power from wind, solar or*  
30 *geothermal energy. However, the Council may, to the extent it determines appropriate,*  
31 *apply the requirements of section (1) to impose conditions on a site certificate issued for*  
32 *such a facility.*

33  
34 *(3) The Council may not impose the Structural Standard in section (1) to deny an application*  
35 *for a special criteria facility under OAR 345-015-0310. However, the Council may, to the*  
36 *extent it determines appropriate, apply the requirements of section (1) to impose*  
37 *conditions on a site certificate issued for such a facility.*

38  
39 **Findings of Fact**

40  
41 As provided in section (1) above, the Structural Standard generally requires the Council to  
42 evaluate whether the certificate holder has adequately characterized the potential seismic,  
43 geological and soil hazards of the site, and whether the certificate holder can design, engineer  
44 and construct the facility to avoid dangers to human safety and the environment from these

1 hazards.<sup>12</sup> Pursuant to OAR 345-022-0020(2), the Council may issue a site certificate for a wind  
2 energy facility without making findings regarding compliance with the Structural Standard;  
3 however, the Council may apply the requirements of the standard to impose site certificate  
4 conditions. Under the mandatory condition in OAR 345-027-0020(12), the certificate holder  
5 must design, engineer and construct the facility to avoid dangers to human safety and the  
6 environment presented by seismic hazards affecting the site that are expected to result from all  
7 maximum probable seismic events.<sup>13</sup>

8  
9 The analysis area for the Structural Standard is the area within the site boundary.

10  
11 *Potential Seismic, Geological and Soil Hazards*

12  
13 In RFA3, the certificate holder asserts that, because the proposed larger wind turbines would  
14 be located in previously approved micro-siting corridors and site boundary area, the assessment  
15 of potential seismic, geological and soil hazards completed in 2014 during the ASC phase  
16 remains valid. To address rule changes in effect as of October 2017 modifying the Division 21,  
17 Exhibit H requirements for geologic and soil stability, the certificate holder discusses future  
18 climate condition impacts on the facility, with proposed changes. The certificate holder  
19 provides that likely temperature or rainfall increases would not impact the underlying geology  
20 of the facility and thus there is minimal risk to the environment and human safety by non-  
21 seismic geologic hazards associated with climate conditions.<sup>14</sup> Based on the certificate holder's  
22 representations, and DOGAMI's confirmation of compliance with applicable requirements  
23 during the 2012-2017 ASC phase, Council relies on the previous characterization of potential  
24 seismic, geological and soil hazards as presented in the *Final Order on the ASC*. A summary of  
25 the seismic and non-seismic hazards as evaluated in the *2017 Final Order on the ASC* is  
26 presented below.

27  
28 As described in the *Final Order on the ASC*, the geologic setting of the site boundary generally  
29 consists of loess and weak sedimentary rock overlying basalt bedrock. The region of the facility  
30 site is affected by four potential types of earthquakes: crustal, intraplate, volcanic, and deep  
31 subduction zone. Of these, the deep subduction zone earthquake along the Cascadia  
32 Subduction Zone (CSZ) has the potential to produce the largest magnitude earthquake. The  
33 certificate holder provided an assessment of the design parameters for ground motion that  
34 may affect the facility and to determine the maximum credible earthquake (MCE). The MCE has  
35 a peak ground acceleration (PGA) of 0.167g at the bedrock surface. This value of PGA on rock is  
36 an average representation of the acceleration most likely to occur within the site boundary for  
37 all seismic events (crustal, intraplate, or subduction).<sup>15</sup> The probabilistic seismic hazard analysis  
38 (a two-percent probability of exceedance in 50 years or a 2,500 year nominal recurrence

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<sup>12</sup> OAR 345-022-0020(3) does not apply to this facility because the facility, with proposed changes, is a not a special criteria facility under OAR 345-015-0310.

<sup>13</sup> The Council does not preempt the jurisdiction of any state or local government over matters related to building code compliance.

<sup>14</sup> WRWAMD3Doc11. Complete Request for Amendment 3, Section 6.1.1. 2018-09-17.

1 period), as conducted by the certificate holder during the ASC phase, resulted in an expected  
2 6.0 magnitude earthquake with a 16 mile epicentral distance from the site boundary, and a PGA  
3 of 0.167g.

4  
5 The Council previously found that the certificate holder adequately characterized the facility  
6 site as to the maximum credible earthquake and maximum probable ground motion, taking into  
7 account ground failure and amplification for the site specific soil profile under the maximum  
8 credible and maximum probable seismic event. Council previously imposed Mandatory  
9 Condition 7 (GEN-GS-08), pursuant to OAR 345-025-0006(12), requiring that the certificate  
10 holder design, engineer and construct the facility to avoid dangers to human safety and the  
11 environment presented by seismic hazards affecting the site that are expected to result from all  
12 maximum probable seismic events.

13  
14 As previously evaluated, non-seismic hazards in the facility vicinity include landslides, volcanic  
15 activity, erosion and the collapse of potential loess. The evaluation of landslides found no active  
16 landslides within the site boundary; during the ASC phase the certificate holder stated that  
17 evidence of landslides was found in close proximity to the southern portion of Wheatridge  
18 West but this area is not near the proposed location of the battery storage system.<sup>16</sup> In RFA3,  
19 the certificate holder reiterates that the risk of landslides is low and that the basalt bedrock  
20 present within the site boundary is structurally competent and free of existing landslides. The  
21 certificate holder stated in the ASC that the probability of volcanic activity impacting the facility  
22 is extremely unlikely. To further assess geotechnical considerations at the facility site, Council  
23 previously imposed Structural Standard Condition 1 (PRE-SS-01), presented below, requiring  
24 that the certificate holder review and assess potential seismic, geologic, and soil hazards of the  
25 facility site, in consultation with the Department and DOGAMI, through a pre-construction, site-  
26 specific geotechnical investigation.

27  
28 *Design, Engineer and Construct Facility to Avoid Dangers to Human Safety from Seismic and*  
29 *Non-Seismic Hazards*

30  
31 In RFA3, the certificate holder maintains that the pre-construction site specific geotechnical  
32 work required per Structural Standard Condition 1 (PRE-SS-01) would ensure that the proposed  
33 larger wind turbines are designed, engineered and constructed to avoid dangers to human  
34 safety from seismic and non-seismic hazards. The certificate holder commits to modifying  
35 facility layout and construction requirements as needed, based on the results of the pre-  
36 construction site-specific geotechnical investigation.

37  
38 Existing Structural Standard Condition 2 (GEN-SS-01) requires the design, engineering and  
39 construction of the facility to comply with current structural and buildings codes. Existing  
40 Structural Standard Conditions 3, 4, and 5 (PRE-SS-02, PRE-SS-03, PRE-SS-04, respectively)  
41 require that the pre-construction site-specific geotechnical investigation report, required per  
42 Structural Standard Condition 1 (PRE-SS-01), include an investigation of potentially active faults,

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<sup>16</sup> WRWAPPDoc139-7. ASC Exhibit H, p. 19. 2015-07-01.

1 slope instability and landslide hazards, swell and collapse potential. These conditions ensure  
2 that the pre-construction site-specific geotechnical investigation evaluate the potential seismic  
3 and non-seismic risks to the facility and identify any additional mitigation that would be  
4 undertaken to safely design, construct, and operate the facility. Additionally, existing Soil  
5 Protection Condition 1 (CON-SP-01) requires that the certificate holder conduct all construction  
6 activities in compliance with best management practices of an Erosion and Sediment Control  
7 Plan to reduce and mitigate erosion and sedimentation, as discussed further in Section III.D *Soil*  
8 *Protection* of this order.

9  
10 Based upon the analysis presented above and subject to compliance with existing conditions,  
11 Council finds that the certificate holder has adequately characterized the potential seismic,  
12 geologic and soil hazards within the site boundary and its vicinity, and that the certificate  
13 holder maintains the ability to design, engineer, and construct the facility, with proposed  
14 changes, to avoid dangers to human safety presented by the identified hazards.

15  
16 **Conclusions of Law**

17  
18 Based on the foregoing analysis, and subject to the existing conditions in the site certificate, the  
19 Council finds that the facility, with proposed changes, continues to comply with the Council's  
20 Structural Standard.

21  
22 **III.D. Soil Protection: OAR 345-022-0022**

23  
24 *To issue a site certificate, the Council must find that the design, construction and*  
25 *operation of the facility, taking into account mitigation, are not likely to result in a*  
26 *significant adverse impact to soils including, but not limited to, erosion and chemical*  
27 *factors such as salt deposition from cooling towers, land application of liquid effluent,*  
28 *and chemical spills.*

29  
30 **Findings of Fact**

31  
32 The Soil Protection standard requires the Council to find that, taking into account mitigation,  
33 the design, construction and operation of a facility, with proposed changes, are not likely to  
34 result in a significant adverse impact to soils.

35  
36 The analysis area for potential impacts to soils, as defined in the project order, is the area  
37 within the site boundary. The proposed larger wind turbines would be located within previously  
38 approved micrositing corridor and site boundary area (see Figure 1, *Facility Location*).

39  
40 *Potential Significant Adverse Impacts to Soils*

41  
42 In RFA3, the certificate holder requests approval to change the turbine dimensions specified in  
43 the site certificate to allow additional flexibility in the range of turbine technologies selected  
44 during final facility design. The changes in wind turbine dimensions include longer blade length,

1 taller maximum blade tip height, taller hub height, increased rotor diameter, and reduced  
2 minimum aboveground blade tip clearance. The facility site boundary would not be modified as  
3 a result of the proposed changes.

4  
5 *Potential Significant Adverse Impacts to Soil*

6  
7 Potential impacts to soils within the analysis area (site boundary) could occur during  
8 construction and operation of the facility, with proposed changes, from wind or water erosion,  
9 compaction, changes in drainage patterns, or spills or releases of chemicals or other liquid  
10 materials, as evaluated in Council's *Final Order on ASC*.

11  
12 Erosion control measures would be implemented during construction in accordance with  
13 previously imposed Soil Protection Conditions 1 and 2 (CON-SP-01 and CON-SP-02). Soil  
14 Protection Conditions 1 and 2 require the certificate holder to, during construction, implement  
15 erosion and sediment control measures and best management practices in accordance with the  
16 DEQ-approved National Pollutant Discharge Elimination System Construction Stormwater  
17 Discharge General Permit (NPDES) 1200-C. Council previously imposed Soil Protection Condition  
18 6 (OPR-SP-01) requiring the certificate holder to, during operations, implement and maintain  
19 erosion and sediment control measures and restrict vehicular use and maintenance activities to  
20 constructed access roads in order to avoid unnecessary erosion or spill risk. The Council finds  
21 that based upon compliance with existing conditions, potential soil erosion impacts during  
22 construction and operation would not likely be significant or adverse.

23  
24 Based on the foregoing analysis, the Council finds that compliance with existing conditions  
25 would minimize the potential for accidental chemical spills or leaks and soil erosion to cause a  
26 significant adverse impact to soils during construction and operation of the facility, with  
27 proposed changes.

28  
29 **Conclusions of Law**

30  
31 Based on the foregoing recommended findings of fact and conclusions of law, and subject to  
32 compliance with existing site certificate conditions, the Council finds that the facility, with  
33 proposed changes, would continue to comply with the Council's Soil Protection standard.

34  
35 **III.E. Land Use: OAR 345-022-0030**

36  
37 *(1) To issue a site certificate, the Council must find that the proposed facility complies*  
38 *with the statewide planning goals adopted by the Land Conservation and*  
39 *Development Commission.*

40  
41 *(2) The Council shall find that a proposed facility complies with section (1) if:*

42  
43 *(a) The applicant elects to obtain local land use approvals under ORS 469.504(1)(a)*  
44 *and the Council finds that the facility has received local land use approval under*

1                    *the acknowledged comprehensive plan and land use regulations of the affected*  
2                    *local government; or*

3  
4                    *(b) The applicant elects to obtain a Council determination under ORS 469.504(1)(b)*  
5                    *and the Council determines that:*

6  
7                    *(A) The proposed facility complies with applicable substantive criteria as*  
8                    *described in section (3) and the facility complies with any Land Conservation*  
9                    *and Development Commission administrative rules and goals and any land*  
10                   *use statutes directly applicable to the facility under ORS 197.646(3);*

11  
12                   *(B) For a proposed facility that does not comply with one or more of the*  
13                   *applicable substantive criteria as described in section (3), the facility*  
14                   *otherwise complies with the statewide planning goals or an exception to any*  
15                   *applicable statewide planning goal is justified under section (4); or*

16  
17                   *(C) For a proposed facility that the Council decides, under sections (3) or (6), to*  
18                   *evaluate against the statewide planning goals, the proposed facility complies*  
19                   *with the applicable statewide planning goals or that an exception to any*  
20                   *applicable statewide planning goal is justified under section (4).*

21                   \*\*\*

22                   **Findings of Fact**

23  
24                   The Land Use standard requires the Council to find that the facility, with proposed changes,  
25                   would continue to comply with local applicable substantive criteria, as well as the statewide  
26                   planning goals adopted by the Land Conservation and Development Commission (LCDC).<sup>17</sup>

27  
28                   The analysis area for potential land use impacts, as defined in the project order, is the area  
29                   within and extending ½-mile from the site boundary.

30  
31                   **Local Applicable Substantive Criteria**

32  
33                   On November 2, 2012, during the review of the ASC, the Council appointed the Umatilla County  
34                   Board of Commissioners and Morrow County Board of Commissioners as the Special Advisory  
35                   Group (SAG) for the facility. On behalf of and as authorized by the SAG, Morrow and Umatilla  
36                   County Planning Directors identified applicable substantive criteria to be considered during the  
37                   ASC phase and through subsequent amendment requests has identified changes in local code  
38                   to be considered applicable substantive criteria. In a comment provided on pRFA3, on behalf of  
39                   the SAG, Morrow County Planning Department confirmed that Morrow County Zoning  
40                   Ordinance (MCZO) Section 3.010 had been updated since Council’s previous evaluation, but  
41                   that the updates aligned local code requirements with state statute and would not affect

---

<sup>17</sup> The Council must apply the Land Use standard in conformance with the requirements of ORS 469.504.

1 Council’s previous findings of compliance with the Land Use standard.<sup>18</sup> In a comment provided  
 2 on pRFA3, Umatilla County Planning Department confirmed that there have been no changes in  
 3 local code provisions that would affect Council’s previous findings of compliance with the Land  
 4 Use standard.<sup>19</sup>

5

6 **IV.E.1 Morrow County**

7

8 Table 2, *Applicable Substantive Criteria – Morrow County*, below, summarizes the applicable  
 9 substantive criteria Council previously evaluated and determined the certificate holder could  
 10 satisfy.

11

**Table 2: Applicable Substantive Criteria – Morrow County**

<b>Morrow County Zoning Ordinance (MCZO)</b> <sup>20</sup>	
<i>Article 3 – Use Zones</i>	
Section 3.010	Exclusive Farm Use, EFU Zone
Section A	Purpose
Section C	Uses Permitted Outright
Section D	Conditional Uses Permitted
Section G	Dimensional Standards
<i>Article 4 – Supplementary Provisions</i>	
Section 4.165	Site Plan Review
<i>Article 6 – Conditional Uses</i>	
Section 6.015	Requirements Under a State Energy Facility Site Certificate
Section 6.020	General Criteria
Section 6.025	Resource Zone Standards for Approval
Section 6.030	General Conditions
Section 6.050	Standards Governing Conditional Uses
<b>Morrow County Comprehensive Plan</b>	
Agricultural Policy 1	
Energy Policies 2 and 3	
Fish and Wildlife Protection Plan (Attachment to M CCP)	

12

13 The Department reviewed the applicable substantive criteria as presented in Table 2: *Applicable*  
 14 *Substantive Criteria – Morrow County* above. Based on its review, because the site boundary

<sup>18</sup> WRWAMD3Doc6. pRFA3 Special Advisory Group Comment Morrow County. 2018-07-02.

<sup>19</sup> WRWAMD3Doc7. pRFA3 Reviewing Agency Comment Umatilla County. 2018-07-03.

<sup>20</sup> Morrow County also provided comments on the Morrow County Solid Waste Management Ordinance and the Morrow County Weed Control Ordinance. However, Morrow County clarified that those two ordinances do not contain applicable substantive criteria for purposes of the Council’s Land Use standard. (WRWAPPDoc10, Public Comment Morrow County, 02-09-2015). The applicant addressed the Solid Waste Management Ordinance in Exhibit V and the Weed Control Ordinance in Exhibit P.



1 was previously approved and would not change, the proposed changes in wind turbine  
2 dimensions would not be expected to impact the certificate holder's ability to satisfy  
3 requirements. However, as described in RFA3, Council previously imposed Land Use Condition 1  
4 (GEN-LU-01) requiring that wind turbines, sited within Morrow County, adhere to setback  
5 restrictions of 110 percent of the maximum blade to height from non-participant property  
6 boundaries; 100 feet from property boundaries, if practicable; and, not siting wind turbine  
7 foundations on a property boundary. This condition was imposed based on comments received  
8 on the ASC from Morrow County, and as agreed upon by the certificate holder, and not based  
9 on a requirement of an applicable substantive criteria. The condition was imposed under the  
10 Land Use standard, and includes a setback requirement (i.e. 110 percent of maximum blade-tip  
11 height from non-participant property boundary) that could be impacted by the proposed  
12 increase in maximum blade-tip height. In RFA3, the certificate holder asserts that the proposed  
13 change in wind turbine dimensions, specifically the increase in maximum blade tip height,  
14 would not impact its ability to comply with Land Use Condition 1 (GEN-LU-01).

15  
16 In RFA3, the certificate holder explains that facility design and wind turbine siting would include  
17 a minimum safety setback of 110 percent of the maximum blade tip height from public roads.<sup>21</sup>  
18 Based on the certificate holder's representation, and because the existing condition does not  
19 include road setbacks within Morrow County, the draft proposed order recommended that  
20 Council amend Land Use Condition 1 (GEN-LU-01) to establish a setback from wind turbines to  
21 the rights-of-way for county, state and interstate roads, which Council adopts as follows:

- 22  
23 **Land Use Condition 1 (GEN-LU-01), as amended:** The certificate holder shall design the  
24 facility to comply with the following wind turbine setback distances in Morrow County:  
25 a. Wind turbines shall be setback from the property line of any abutting property of  
26 any non-participant property owners a minimum of 110 percent of maximum blade  
27 tip height of the wind turbine tower.  
28 b. Wind turbines shall be setback 100 feet from all property boundaries, including  
29 participant property boundaries within the site boundary, if practicable.  
30 c. Wind turbine foundations shall not be located on any property boundary, including  
31 participant property boundaries within the site boundary.  
32 d. Wind turbines shall be setback 110% of the overall tower-to-blade tip height from  
33 the boundary right-of-way of county roads, state and interstate highways.  
34 [Final Order on ASC; AMD3]

35  
36 On the record of the draft proposed order, on behalf of Morrow County Board of  
37 Commissioners – one of the Special Advisory Groups for the facility – Morrow County Planning  
38 Department confirmed that the county had no issues with the recommendations and  
39 evaluation as presented in the draft proposed order.<sup>22</sup>

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<sup>21</sup> WRWAMD3Doc11. Request for Amendment 3. Section 6.2.1. p. 29-30. 2018-09-18.

<sup>22</sup> WRWAMD3Doc17. DPO Comment SAG Umatilla County. 2018-10-25.

1 Based on the evaluation provided above, and subject to compliance with existing and amended  
 2 conditions, Council finds that the facility, with the proposed changes, would continue to comply  
 3 with condition requirements.

4

5 **IV.E.2 Umatilla County**

6

7 Table 3, *Applicable Substantive Criteria – Umatilla County*, below, summarizes the applicable  
 8 substantive criteria that the Council previously evaluated and determined the certificate holder  
 9 could satisfy.

10

**Table 3: Applicable Substantive Criteria – Umatilla County**

<b>Umatilla County Development Ordinance (UCDO)</b>	
Section 152.060	Conditional Uses allowed on lands zoned for EFU
Section 152.061	Standards for all Conditional Uses on EFU Lands
Section 152.615	Additional Conditional Use Permit Restrictions
Section 152.616	Conditional Uses Permitted
<b>Umatilla County Comprehensive Plan (UCCP)</b>	
Citizen Involvement: Policy 1 and Policy 5	
Agriculture: Policies 1, 8 and 17	
Open Space, Scenic & Historic Areas, and Natural Areas: Policies 1(a), 5 (a & b), 6(a), 8(a), 9(a), 10 (c, d & e), 20(a), 20(b) (1-8), 22, 23(a), 24(a), 26, 37 & 38(a-c), 39(a) & 42(a)	
Air, Land, Water Quality: Policies 1, 7 & 8	
Natural Hazards: Policies 1 & 4	
Recreational Needs: Policy 1	
Economy of the County: Policies 1, 4 & 8(a-f)	
Public Facilities & Services: Policies 1(a-d), 2, 9 & 19	
Transportation: Policy 18 and 20	
Energy Conservation: Policy 1	

11

12 The Department reviewed the applicable substantive criteria as presented in Table 3: *Applicable*  
 13 *Substantive Criteria – Umatilla County* above. Based on its review, because the site boundary  
 14 was previously approved and would not change, the proposed changes in wind turbine  
 15 dimensions would not be expected to impact the certificate holder’s ability to satisfy  
 16 requirements of the applicable substantive criteria listed above, except for the setback  
 17 requirements established in UCDC Section 152.616(HHH)(6), as evaluated below.

18

19 *152.616(HHH)(6) Standards/Criteria of Approval.*

20

21 *The following requirements and restrictions apply to the siting of a Wind Power*  
 22 *Generation Facility:*

1  
2 (a) *Setbacks. The minimum setback shall be a distance of not less than the following:*

3  
4 (1) *From a turbine tower to a city urban growth boundary (UGB) shall be two miles.*  
5 *The measurement of the setback is from the centerline of a turbine tower to the*  
6 *edge of the UGB that was adopted by the city as of the date the application was*  
7 *deemed complete.*

8  
9 (2) *From turbine tower to land zoned Unincorporated Community (UC) shall be 1*  
10 *mile.*

11  
12 (3) *From a turbine tower to a rural residence shall be 2 miles. For purposes of this*  
13 *section, "rural residence" is defined as a legal, existing single family dwelling*  
14 *meeting the standards of §152.058 (F)(1)-(4), or a rural residence not yet in*  
15 *existence but for which a zoning permit has been issued, on a unit of land not a*  
16 *part of the Wind Power Generation Facility, on the date a Wind Power*  
17 *Generation Facility application is submitted. For purposes of this section, the*  
18 *setback does not apply to residences located on properties within the Wind*  
19 *Power Generation Facility project application. The measurement of the setback is*  
20 *from the centerline of the turbine tower to the center point of the rural residence.*

21  
22 (4) *From a turbine tower to the boundary right-of-way of County Roads, state and*  
23 *interstate highways, 110% of the overall tower-to-blade tip height. Note: The*  
24 *overall tower-to-blade tip height is the vertical distance measured from grade to*  
25 *the highest vertical point of the blade tip.*

26  
27 (5) *From tower and project components, including transmission lines, underground*  
28 *conduits and access roads, to known archeological, historical or cultural sites*  
29 *shall be on a case by case basis, and for any known archeological, historical or*  
30 *cultural site of the Confederated Tribes of the Umatilla Indian Reservations the*  
31 *setback shall be no less than 164 feet (50 meters).*

32  
33 UCDC Section 152.616(HHH)(6)(a) includes standards for conditional uses within EFU zoned  
34 land, specifically setback requirements for wind turbines. As presented above, UCDC Section  
35 152.616(HHH)(6)(a)(1), (2) and (3) impose setback distances from turbine towers within city  
36 urban growth boundaries within Umatilla County; lands zoned Unincorporated Community;  
37 and, rural residences, respectively. Because these setback distances are specific to turbine  
38 tower location, and because the micro-siting corridor/site boundary would not change as a  
39 result of the proposed larger wind turbines, the Department recommends Council find that the  
40 proposed change in wind turbine dimensions would not impact the certificate holder's ability to  
41 satisfy these setback requirements.

42  
43 UCDC Section 152.616(HHH)(6)(a)(4) imposes setback distances based on 110 percent of the  
44 overall tower to blade tip height to county, state and interstate highway road rights-of-way.

1 Council previously imposed Land Use Condition 16 (GEN-LU-06) requiring that the certificate  
2 holder comply with this setback restriction. Because this setback is based on maximum blade  
3 tip height, which would change based on the proposed larger wind turbines, the changes  
4 included in RFA3 could impact the certificate holder’s ability to satisfy the setback requirement.  
5 The certificate holder, however, affirms that the proposed larger wind turbines would not  
6 impact its ability to satisfy the setback requirements.

7  
8 As noted above, previously imposed Land Use Condition 16 (GEN-LU-06) included one of five  
9 setback requirements from UCDC Section 152.616(HHH)(6)(a). The five setback requirements  
10 not previously included in the condition appear not to have been included based on the  
11 certificate holder’s assertion that it would satisfy the requirements. Because the certificate  
12 holder is required to comply with Umatilla County’s applicable substantive criteria from UCDC,  
13 including UCDC Section 152.616(HHH)(6)(a)(1)-(5), and represented in its ASC that it would  
14 comply with all setback requirements, Council administratively amends Land Use Condition 16  
15 (GEN-LU-06) to align with Umatilla County Section 152.616(HHH)(6)(a) as follows:<sup>23</sup>

16  
17 **Land Use Condition 16 (GEN-LU-06), as amended:** During micrositing of the facility, the  
18 certificate holder shall ensure that wind turbines are sited based on a minimum setback  
19 of:

- 20 a. 110% of the overall tower-to-blade tip height from the boundary right-of-way of  
21 county roads and state and interstate highways in Umatilla Counties.
- 22 b. 2 miles from turbine towers to a city urban growth boundary.
- 23 c. 1 mile from turbine towers to land within Umatilla County lands zoned  
24 Unincorporated Community.
- 25 d. 2 miles from turbine towers to rural residences within Umatilla County.
- 26 e. 164 feet (50 meters) from tower and facility components to known archeological,  
27 historical and cultural sites or CTUIR cultural site.

28 [Final Order on ASC; AMD3]  
29

30 Based on the evaluation provided above, and subject to compliance with the amended  
31 condition, Council finds that the facility, the proposed changes, would continue to satisfy  
32 Umatilla County setback standards.  
33

---

<sup>23</sup> In the proposed order, recommended amended Land Use Condition 16(b) stated, “2 miles from turbine towers to City of Umatilla urban growth boundary.” After review of the proposed order and comments received on the draft proposed order from Umatilla County Planning Department, Council modified Land Use Condition 16(b) to be consistent with UCDC 152.616(HHH)(6)(a), which establishes that the setback applies to all cities within the Umatilla County, not solely City of Umatilla.

1 **Conclusions of Law**  
2

3 Based on the foregoing findings and the evidence in the record, and subject to compliance with  
4 existing and amended site certificate conditions, Council finds that the facility, with proposed  
5 changes, would continue to comply with the Council’s Land Use standard.  
6

7 **III.F. Protected Areas: OAR 345-022-0040**  
8

9 *(1) Except as provided in sections (2) and (3), the Council shall not issue a site certificate*  
10 *for a proposed facility located in the areas listed below. To issue a site certificate for a*  
11 *proposed facility located outside the areas listed below, the Council must find that,*  
12 *taking into account mitigation, the design, construction and operation of the facility are*  
13 *not likely to result in significant adverse impact to the areas listed below. References in*  
14 *this rule to protected areas designated under federal or state statutes or regulations are*  
15 *to the designations in effect as of May 11, 2007:*  
16

17 *(a) National parks, including but not limited to Crater Lake National Park and Fort*  
18 *Clatsop National Memorial;*  
19

20 *(b) National monuments, including but not limited to John Day Fossil Bed National*  
21 *Monument, Newberry National Volcanic Monument and Oregon Caves National*  
22 *Monument;*  
23

24 *(c) Wilderness areas established pursuant to The Wilderness Act, 16 U.S.C. 1131 et*  
25 *seq. and areas recommended for designation as wilderness areas pursuant to 43*  
26 *U.S.C. 1782;*  
27

28 *(d) National and state wildlife refuges, including but not limited to Ankeny, Bandon*  
29 *Marsh, Baskett Slough, Bear Valley, Cape Meares, Cold Springs, Deer Flat, Hart*  
30 *Mountain, Julia Butler Hansen, Klamath Forest, Lewis and Clark, Lower Klamath,*  
31 *Malheur, McKay Creek, Oregon Islands, Sheldon, Three Arch Rocks, Umatilla, Upper*  
32 *Klamath, and William L. Finley;*  
33

34 *(e) National coordination areas, including but not limited to Government Island,*  
35 *Ochoco and Summer Lake;*  
36

37 *(f) National and state fish hatcheries, including but not limited to Eagle Creek and*  
38 *Warm Springs;*  
39

40 *(g) National recreation and scenic areas, including but not limited to Oregon Dunes*  
41 *National Recreation Area, Hell’s Canyon National Recreation Area, and the Oregon*  
42 *Cascades Recreation Area, and Columbia River Gorge National Scenic Area;*  
43

1           (h) State parks and waysides as listed by the Oregon Department of Parks and  
2           Recreation and the Willamette River Greenway;

3  
4           (i) State natural heritage areas listed in the Oregon Register of Natural Heritage  
5           Areas pursuant to ORS 273.581;

6  
7           (j) State estuarine sanctuaries, including but not limited to South Slough Estuarine  
8           Sanctuary, OAR Chapter 142;

9  
10          (k) Scenic waterways designated pursuant to ORS 390.826, wild or scenic rivers  
11          designated pursuant to 16 U.S.C. 1271 et seq., and those waterways and rivers listed  
12          as potentials for designation;

13  
14          (l) Experimental areas established by the Rangeland Resources Program, College of  
15          Agriculture, Oregon State University: the Prineville site, the Burns (Squaw Butte) site,  
16          the Starkey site and the Union site;

17  
18          (m) Agricultural experimental stations established by the College of Agriculture,  
19          Oregon State University, including but not limited to: Coastal Oregon Marine  
20          Experiment Station, Astoria Mid-Columbia Agriculture Research and Extension  
21          Center, Hood River Agriculture Research and Extension Center, Hermiston Columbia  
22          Basin Agriculture Research Center, Pendleton Columbia Basin Agriculture Research  
23          Center, Moro North Willamette Research and Extension Center, Aurora East Oregon  
24          Agriculture Research Center, Union Malheur Experiment Station, Ontario Eastern  
25          Oregon Agriculture Research Center, Burns Eastern Oregon Agriculture Research  
26          Center, Squaw Butte Central Oregon Experiment Station, Madras Central Oregon  
27          Experiment Station, Powell Butte Central Oregon Experiment Station, Redmond  
28          Central Station, Corvallis Coastal Oregon Marine Experiment Station, Newport  
29          Southern Oregon Experiment Station, Medford Klamath Experiment Station, Klamath  
30          Falls;

31  
32          (n) Research forests established by the College of Forestry, Oregon State University,  
33          including but not limited to McDonald Forest, Paul M. Dunn Forest, the Blodgett  
34          Tract in Columbia County, the Spaulding Tract in the Mary's Peak area and the  
35          Marchel Tract;

36  
37          (o) Bureau of Land Management areas of critical environmental concern,  
38          outstanding natural areas and research natural areas;

39  
40          (p) State wildlife areas and management areas identified in OAR chapter 635,  
41          Division 8.

42          \*\*\*

43          (3) The provisions of section (1) do not apply to transmission lines or natural gas  
44          pipelines routed within 500 feet of an existing utility right-of-way containing at least one

1 transmission line with a voltage rating of 115 kilovolts or higher or containing at least  
 2 one natural gas pipeline of 8 inches or greater diameter that is operated at a pressure of  
 3 125 psig.

4  
 5 **Findings of Fact**

6  
 7 The Protected Areas standard requires the Council to find that, taking into account mitigation,  
 8 the design, construction, and operation of a facility are not likely to result in significant adverse  
 9 impacts to any protected area as defined by OAR 345-022-0040. Impacts to protected areas are  
 10 evaluated based on identification of protected areas, pursuant to OAR 345-022-0040, within  
 11 the analysis area and an evaluation of the following potential impacts during facility  
 12 construction and operation: excessive noise, increased traffic, water use, wastewater disposal,  
 13 visual impacts of facility structures or plumes, and visual impacts from air emissions.

14  
 15 In accordance with OAR 345-001-0010(59)(e) and consistent with the study area boundary, the  
 16 analysis area for protected areas is the area within and extending 20 miles from the site  
 17 boundary.

18  
 19 In RFA3, the certificate holder references 16 protected areas within the analysis area that were  
 20 previously evaluated by Council in the 2016 *Final Order on ASC*. These protected areas are  
 21 presented in Table 4, *Protected Areas within Facility Analysis Area and Distance from Site*  
 22 *Boundary* below.

23  
**Table 4: Protected Areas within Facility Analysis Area and  
 Distance from Site Boundary**

Protected Area (OAR Reference)	Distance from Site Boundary (in miles)
Lindsay Prairie Preserve (345-022-0040(1)(i))	0
Boardman RNA (Research Natural Area) (345-022-0040(1)(o))	2.3
Oregon Trail ACEC (Area of Critical Environmental Concern) (345-022-0040(1)(o))	2.7
Oregon State University Agriculture Research and Extension Center, Hermiston (345-022-0040(1)(m))	9
Cold Springs National Wildlife Refuge (345-022-0040(1)(d))	13
Three Mile Adult Hold Fish Hatchery (345-022-0040(1)(f))	13.5
Coyote Springs Wildlife Management Area	14

**Table 4: Protected Areas within Facility Analysis Area and Distance from Site Boundary**

Protected Area (OAR Reference)	Distance from Site Boundary (in miles)
(345-022-0040(1)(p))	
Umatilla National Wildlife Refuge (345-022-0040(1)(d))	14
Power City Wildlife Management Area (345-022-0040(1)(p))	14.5
Horn Butte Curlew ACEC (345-022-0040(1)(o))	15
Hat Rock State Park (345-022-0040(1)(h))	16.5
Irrigon Wildlife Management Area (345-022-0040(1)(p))	16.5
Irrigon Hatchery (345-022-0040(1)(f))	17.5
McNary National Wildlife Refuge (345-022-0040(1)(d))	18
Willow Creek Wildlife Management Area (345-022-0040(1)(p))	18
Umatilla Hatchery (345-022-0040(1)(f))	20
Source: WRWAPPDoc139-20. ASC Exhibit T. 2015-07-01.	

1  
2 As presented in Table 3, *Protected Areas within Facility Analysis Area and Distance from Site*  
3 *Boundary*, the majority of the listed protected areas are located at least 15 miles from the  
4 facility site boundary. As previously identified in the *Final Order on ASC*, the protected areas  
5 closest to the site boundary include the Lindsay Prairie Preserve (<0 mile), Boardman Research  
6 Natural Area (2.3 miles), and Oregon Trail Area of Critical Environmental Concern (2.7 miles).  
7 Potential adverse impacts to protected areas during construction and operation of the facility,  
8 with proposed changes, from noise, traffic, water use and wastewater disposal, and visual are  
9 discussed below.

10  
11 *Potential Noise Impacts*

12  
13 The significance of potential noise impacts to identified protected areas is based on the  
14 magnitude and likelihood of the impact on the affected human population or natural resource



1 that uses the protected area.<sup>24</sup> The nearest protected area, Lindsay Prairie Preserve is a site  
2 managed to protect native grassland and wildlife habitat. Based on this function and purpose,  
3 the Lindsay Prairie Preserve could be affected if adverse noise levels from the facility, with  
4 proposed changes, were audible. Potential noise impacts at the Lindsay Prairie Preserve from  
5 construction and operation of the facility, with proposed changes, are evaluated below.

6  
7 *Construction*

8  
9 The proposed larger wind turbines would generate construction-related noise. In RFA3, the  
10 certificate holder asserts that the proposed larger wind turbines would not cause a change in  
11 construction activities, specifically that larger equipment would not be needed for delivery nor  
12 would wider crane or access road paths be needed. Therefore, while construction-related noise  
13 at protected areas would not be expected to differ from the impacts included in the *Final Order*  
14 *on ASC*, the Council presents a summary of the previous assessment for reference.

15  
16 Construction related noise would be short-term and intermittent and would result from site  
17 clearing, excavation, foundation work, and wind turbine installation. Construction equipment  
18 noise levels presented in ASC Exhibit X range from 42 (crane) to 56 (loader/dozer) dBA, at 2,000  
19 feet. The certificate holder previously described that peak construction noise at the Lindsay  
20 Prairie Preserve would be 55 dBA. Council previously determined that this level of short-term,  
21 intermittent noise would not interfere with the primary purpose of the protected area (i.e.  
22 habitat preservation).

23  
24 Existing Noise Control Condition 1 (CON-NC-01) would reduce noise impacts during  
25 construction by requiring the use of exhaust mufflers on combustion engine-powered  
26 equipment, use of air-inlet silencers, shrouds and shields, as appropriate; and requires that the  
27 certificate holder establish a noise complaint response system, including a system for the  
28 certificate holder to receive and resolve noise complaints.

29  
30 Based on Council’s previous reasoning and because construction-related noise is not  
31 anticipated to increase based on proposed changes in RFA3, the Council continues to find that  
32 construction of the facility, with proposed changes, would not be likely to result in significant  
33 adverse noise impacts at the Lindsay Prairie Preserve. Because the other protected areas within  
34 the analysis area are located at greater distances from the facility site boundary than the  
35 Lindsay Prairie Preserve, the Council concludes that potential construction-related noise

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<sup>24</sup> The Protected Areas standard requires the Council to find that, taking into account mitigation, the design, construction and operation of a facility are not likely to result in significant adverse impacts to any protected area as defined by OAR 345-022-0040. OAR 345-001-0010(53) defines “significant” as: “having an important consequence, either alone or in combination with other factors, based upon the magnitude and likelihood of the impact on the affected human population or natural resources, or on the importance of the natural resources affected, considering the context of the action or impact, its intensity and the degree to which possible impacts are caused by the proposed action. Nothing in this definition is intended to require a statistical analysis of the magnitude or likelihood of a particular impact.”

1 impacts from the facility, with proposed changes, at these protected areas would also not likely  
2 be potentially significant or adverse.

3  
4 *Operation*

5  
6 The proposed changes in wind turbine dimensions result in potential maximum overall A-  
7 weighted sound power level output of 110.5 dBA, which includes +2 dBA to account for  
8 uncertainty, and represents an increase in A-weighted sound power level of the previously  
9 approved wind turbines at 107.0 dBA. In RFA3, the certificate holder provides a noise analysis  
10 of the facility, with proposed changes, including the following sources:<sup>25</sup>

- 11  
12 • Wind turbines with Low Noise Trailing Edge technology (149 wind turbines at 110.5 dBA;  
13 16 wind turbines at 108.0 dBA)  
14 • Substation transformers (1 160 MVA transformer at 98 dBA at Wheatridge East  
15 Substation; 2 225 MVA transformers at Wheatridge West Substation at 94 dBA)  
16 • Battery storage systems (56 heating, ventilation and air conditioning modules at 103  
17 dBA; 28 power inverters at 93 dBA; and 28 distribution transformers at 72 dBA)

18  
19 In RFA3, the certificate holder provided a noise modeling analysis for operational noise, which  
20 demonstrates that the facility, with proposed changes, would be similar to or less than  
21 evaluated in ASC Exhibit L and Council's *Final Order on ASC*. Council previously found that  
22 facility-related operational noise would be inaudible at all protected areas other than the  
23 Lindsay Prairie Preserve where potential operational sound levels between 36 to 54 dBA are  
24 anticipated.<sup>26</sup>

25  
26 Council previously concluded that audible noise levels between 36 to 54 dBA would not  
27 interfere with the primary purpose of the protected area (i.e. habitat preservation). Therefore,  
28 based on the Council's previous findings and the certificate holder's updated noise modeling  
29 assessment demonstrating that operational noise from the facility, with proposed changes,  
30 would be similar to or less than 54 dBA, the Council finds that operation of the facility, with  
31 proposed changes, would not be likely to result in significant adverse noise impacts to any  
32 protected areas within the analysis area.

33  
34  
35  
36  
37  
38  

---

<sup>25</sup> WRWAMD3Doc11. Request for Amendment 3. 2018-09-18. The noise analysis provided in RFA3 includes noise sources from the facility, with changes proposed under RFA2 (i.e. two proposed battery storage systems) and RFA3. While the RFA3 noise analysis includes noise sources from the proposed battery storage systems presented in RFA2, recommended findings of fact and conclusions of law are focused on potential changes in operational noise from the proposed changes in wind turbine technologies.

<sup>26</sup> WRWAPPDoc196. Final Order on ASC, p. 211. 2017-05-24.

1 *Potential Traffic Impacts*

2

3 *Construction*

4

5 The proposed larger wind turbines would generate construction-related traffic, but not that  
6 would substantially differ from the impacts included in the *Final Order on ASC*. Therefore, the  
7 Council presents a summary of the previous assessment for reference.

8

9 The certificate holder previously described that construction-related trucks would utilize I-84,  
10 OR-207 and local county roads during construction; and, confirmed that facility construction  
11 traffic would not occur north of I-84. All but five of the protected areas are located north of I-84  
12 and therefore, those areas would be largely unaffected by temporary traffic impacts generated  
13 during facility construction. Of the five protected areas south of I-84, only the Boardman  
14 Research Natural Area (RNA) and Lindsay Prairie Preserve are likely to experience impacts from  
15 construction-related traffic of the facility. Council previously imposed Public Services Condition  
16 6 (PRE-PS-01) requiring that the certificate holder implement a Traffic Management Plan, as  
17 approved by the Department, that would include best management practices (BMP's) such as  
18 traffic control BMP's and reduction practices to minimize potential construction-related traffic  
19 impacts.

20

21 Based on Council's previous reasoning and because construction-related traffic is not  
22 anticipated to substantially increase based on proposed changes in RFA3, the Council continues  
23 to find that, based upon compliance with Public Services Condition 6 (PRE-PS-01), construction-  
24 related traffic impacts would not be likely to result in a significant adverse traffic impact to  
25 protected areas within the analysis area.

26

27 *Operation*

28

29 The proposed larger wind turbines would generate operational-related traffic. However, the  
30 certificate holder asserts that the proposed larger wind turbines would not result in changes to  
31 previously evaluated operational traffic impacts of 10 to 20 vehicle trips per day, which were  
32 previously determined not likely to have a significant adverse impact to protected area access  
33 roads.<sup>27</sup> Because RFA3 would not result in changes to the expected number of permanent  
34 employees, the Council finds that operational-traffic impacts would not be likely to result in a  
35 significant adverse impact to protected areas within the analysis area.

36

37 *Potential Water Use and Wastewater Disposal Impacts*

38

39 *Construction and Operation*

40

41 Construction and operation of the proposed larger wind turbines would not result in changes to  
42 the previously evaluated maximum water use and wastewater disposal needs, as evaluated in

---

<sup>27</sup> WRWAPPDoc196. Final Order on ASC. 2017-04-28.

1 the *Final Order on ASC*. For reference, the Council presents a summary of the previous  
2 evaluation.

3  
4 In the ASC Exhibit O, facility construction would use approximately 43.2 to 78 million gallons of  
5 water for road construction, concrete mixing, dust suppression and other construction-related  
6 activities from licensed sources in the vicinity of the facility; no ground or surface water  
7 withdrawals would take place beyond those already permitted for existing water suppliers.<sup>28</sup>  
8 During operation, the facility would have minimal water needs that would be fulfilled through  
9 the use of exempt wells at the O&M buildings.<sup>29</sup>

10  
11 In the ASC Exhibit L, the certificate holder indicated that industrial wastewater would not be  
12 produced during construction or operation of the facility. Sanitary wastes generated during  
13 construction would be contained in portable toilets and managed by a licensed contractor, and  
14 sanitary wastes generated at the O&M building during operations would be discharged to a  
15 permitted onsite septic system. Stormwater runoff would be managed in accordance with the  
16 BMPs described in the NPDES 1200-C / Erosion and Sediment Control Plan (Exhibit I,  
17 Attachment I-2).<sup>30</sup> In *Section IV.D*, Soil Protection of the original *Final Order* the Council  
18 imposed several conditions requiring the certificate holder to manage activities that generate  
19 wastewater in a way that protects soils and is in accordance with the requirements of an NPDES  
20 1200-C stormwater discharge permit.

21  
22 Because the proposed larger wind turbines would not result in changes to construction or  
23 operational-related water use and wastewater disposal, the Council finds that the facility, with  
24 proposed changes, would continue not to be likely to result in significant adverse impacts from  
25 water use and wastewater disposal within any protected area.<sup>31</sup>

### 26 *Visual Impacts of Facility Structures*

27  
28  
29 The proposed larger wind turbines, at 449.7 feet, would not result in an increase in visual  
30 impacts at protected areas as evaluated in the *Final Order on ASC*. The previous evaluation of  
31 visual impacts of facility structures, or wind turbines, was based on up to 292 wind turbines at  
32 525-feet. Based on the previous analysis, Council found that the facility would not be likely to  
33 result in a significant adverse visual impact to any protected area.

34  
35 The Council presents a summary of the zone of visual influence (ZVI) analysis, which assessed  
36 potential visual impacts to protected areas. The ZVI analysis evaluated the landscape using  
37 digital bare earth modeling, removing landscape features for a “worse-case” visibility scenario.  
38 Three protected areas are located within 9 miles of the site boundary, which include the

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<sup>28</sup> WRWAPPDoc139. ASC Exhibit O, Section 2.1. 2015-07-01.

<sup>29</sup> WRWAPPDoc139. ASC Exhibit O, Section 2.2. 2015-07-01.

<sup>30</sup> WRWAPPDoc139. ASC Exhibit L, Section 4.3. 2015-07-01.

<sup>31</sup> WRWAPPDoc196. *Final Order on the Site Certificate*, p. 158. 2-17-04-28.

1 Lindsay Prairie Preserve (0 miles), Boardman RNA (2.3 miles), and the Oregon Trail ACEC (2.7)  
2 miles.

3  
4 *Lindsay Prairie Preserve*

5  
6 Lindsay Prairie Preserve is less than one mile away from the site boundary and is managed for  
7 vegetation and wildlife preservation. The site is not managed for its scenic qualities. Because of  
8 the intent of management as a habitat preserve, the Council previously found that the visual  
9 impact of the facility at the Lindsay Prairie Preserve would not likely result in a significant  
10 adverse impact to this protected area

11  
12 *Boardman Research Natural Area (RNA)*

13  
14 The Boardman RNA is located approximately 2.3 miles from the site boundary and is managed  
15 primarily for the preservation of vegetation and wildlife. The site is entirely located within the  
16 Boardman Bombing Range, is not managed for its scenic values, nor is there the allowance of  
17 public access. Additionally, the existing viewshed includes transmission lines, wind turbines,  
18 and agricultural irrigation equipment, therefore, the Council previously found that the visual  
19 impact of the facility at the Boardman RNA would not likely result in a significant adverse  
20 impact to this protected area.<sup>32</sup>

21  
22 *Oregon Trail Area of Critical Environmental Concern (ACEC), Echo Meadows*

23  
24 The Oregon Trail ACEC is approximately 2.7 miles from the site boundary and is managed by the  
25 Bureau of Land Management (BLM) to preserve scenic quality under the BLM Visual Resource  
26 Management system; however, there are no designated views or viewsheds associated with  
27 the ACEC. The existing viewshed at Echo Meadows contains transmission lines and wind  
28 turbines. The Council previously found that while facility components would result in a change  
29 to the existing viewshed of the Oregon Trail ACEC site, there are no specified management  
30 plans of scenic or visual qualities, and there is the presence of similar structures within the  
31 existing viewshed, the visual impacts of construction and operation of the facility would not  
32 likely result in a significant adverse impact to this protected area.

33  
34 Because the Final Order on ASC evaluated visual impacts from wind turbines extending greater  
35 heights than that currently proposed (525-feet versus 499.7 feet, the Council relies on its  
36 previous reasoning and continue to find that the visual impacts of the facility, with proposed  
37 changes, would not result in a significant adverse impact to these protected areas.

38 *Visual Impacts from Air Emissions*

39  
40 There would be no air emissions from the wind facility and therefore no related visual  
41 impacts.<sup>33</sup>

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<sup>32</sup> WRWAPPDoc196. Final Order on ASC, p. 159-160. 2017-05-24.

<sup>33</sup> WRWAPPDoc196 Final Order on ASC, p. 154. 2017-05-24.

1 **Conclusions of Law**

2  
3 Based on the foregoing recommended findings, the Council finds that the design, construction  
4 and operation of the facility, with proposed changes, would not be likely to result in significant  
5 adverse impacts to any protected areas, in compliance with the Council’s Protected Area  
6 standard.

7  
8 **III.G. Retirement and Financial Assurance: OAR 345-022-0050**

9  
10 *To issue a site certificate, the Council must find that:*

- 11  
12 (1) *The site, taking into account mitigation, can be restored adequately to a useful, non-*  
13 *hazardous condition following permanent cessation of construction or operation of*  
14 *the facility.*  
15  
16 (2) *The applicant has a reasonable likelihood of obtaining a bond or letter of credit in a*  
17 *form and amount satisfactory to the Council to restore the site to a useful, non-*  
18 *hazardous condition.*

19  
20 **Findings of Fact**

21  
22 The Retirement and Financial Assurance standard requires a finding that the facility site can be  
23 restored to a useful, non-hazardous condition at the end of the facility’s useful life, should  
24 either the certificate holder stop construction or should the facility cease to operate.<sup>34</sup> In  
25 addition, it requires a demonstration that the certificate holder can obtain a bond or letter of  
26 credit in a form and amount satisfactory to the Council to restore the site to a useful, non-  
27 hazardous condition.

28  
29 *Restoration of the Site Following Cessation of Construction or Operation*

30  
31 OAR 345-022-0050(1) requires the Council to find that the site of the facility, with proposed  
32 changes, can be restored to a useful non-hazardous condition at the end of the facility’s useful  
33 life.

34  
35 The proposed larger wind turbines would not result in new or differing tasks and actions  
36 necessary for site restoration. Therefore, the Council presents a summary of the site restoration  
37 tasks and actions previously identified for the facility, as approved. Based on review of the  
38 record for the facility, restoring the site to a useful, nonhazardous condition upon cessation of  
39 construction or operations (or upon retirement) would involve removal of all turbine  
40 components, meteorological towers, aboveground electrical components, transformers and  
41 other substation equipment; removing foundations to a minimum depth of three feet below  
42 grade; and grading and replanting the affected area.

---

<sup>34</sup> OAR 345-022-0050(1).

1 Council previously imposed conditions obligating the certificate holder to prevent the  
2 development of conditions (R&FA Condition 1 [GEN-RF-01]; R&FA Condition 2 [RET-RF-01];  
3 R&FA Condition 3 [RET-RF-02]) on the site that would preclude restoration.

4  
5 Based upon compliance with existing conditions, the Council finds that the site of the facility,  
6 with proposed changes, could be adequately restored to a useful, non-hazardous condition  
7 following permanent cessation of construction or operation.

8  
9 *Estimated Cost of Site Restoration*

10  
11 OAR 345-022-0050(2) requires the Council to find that the certificate holder continues to have a  
12 reasonable likelihood of obtaining a bond or letter of credit in a form and *amount* necessary to  
13 restore the site of the facility, with proposed changes, to a useful non-hazardous condition  
14 [Emphasis added].

15  
16 In RFA3, the certificate holder requests flexibility in its final selection of wind turbine type,  
17 including the ability to construct and operate larger wind turbines. The proposed larger wind  
18 turbines would result in an increase in the weight of wind turbine tower and nacelles from 196  
19 to 326.6 tons. The weight of wind turbine tower and nacelles is a factor considered in the  
20 retirement cost estimate. The certificate holder provides an updated retirement cost estimate,  
21 based on the methodology utilized for the retirement cost estimate approved in the *Final Order*  
22 *on ASC*, from \$18.1 million (Q1 2015 dollars) for up to 292 wind turbines to \$18,654,000 (Q3  
23 2018 dollars) for up to 200 wind turbines with the increased weight.

24  
25 The certificate holder requests flexibility to construct and operate wind turbines within a range  
26 of dimensions, not to exceed those presented in Table 1, *Proposed Wind Turbine Specification*  
27 *Range* of this order. The certificate holder represents that if the proposed larger wind turbines  
28 are selected during final design, not more than 200 wind turbines (versus up to 292 wind  
29 turbines allowed by the site certificate) would be sited. Based on this representation, the  
30 Council considers that \$18,654,000 (Q3 2018 dollars) is a reasonable estimate of an amount  
31 satisfactory to restore the site of the facility, with proposed changes, to a useful, non-hazardous  
32 condition.

33  
34 *Ability of the Certificate Holder to Obtain a Bond or Letter of Credit*

35  
36 OAR 345-022-0050(2) requires the Council to find that the certificate holder has a reasonable  
37 likelihood of obtaining a bond or letter of credit in a *form* and amount necessary to restore the  
38 facility site, with proposed changes, to a useful non-hazardous condition [Emphasis added].

39  
40 A bond or letter of credit provides a site restoration remedy to protect the state of Oregon and  
41 its citizens if the certificate holder fails to perform its obligation to restore the site. The bond or  
42 letter of credit must remain in force until the certificate holder has fully restored the site. OAR  
43 345-025-0010(8) establishes a mandatory condition, imposed under Retirement and Financial  
44 Assurance Condition 4 (PRE-RF-01), which ensures compliance with this requirement.

1 As described above, the amount necessary to restore the site of the facility, with proposed  
2 changes, to a useful, nonhazardous condition would be approximately \$18.7 million (Q3 2018  
3 dollars), adjusted annually as required per existing Retirement and Financial Assurance  
4 Condition 5 (PRE-RF-02). The certificate holder notes that the previously approved retirement  
5 cost estimate, once inflated to Q3 2018 dollars, would be \$19.2 million, less than the estimate  
6 associated the with proposed larger wind turbines.

7  
8 To demonstrate its ability to receive an adequate bond or letter of credit, the certificate holder  
9 refers to a June 8, 2017 letter from Wells Fargo Bank included as part of the record for Request  
10 for Amendment 1. The letter states that “[Wells Fargo] has an ongoing relationship with NEER  
11 and there is a reasonable likelihood that we will provide a letter of credit for this project should  
12 it be required... understanding that the potential liability of the letter of credit could total an  
13 amount of up to eighteen million one hundred thousand dollars (18,100,000).”<sup>35</sup> The Council  
14 acknowledges that the 2017 bank letter is less than the retirement cost estimate provided in  
15 RFA3 (i.e. \$18.1 million versus \$18.7 million). However, the bank letter is intended solely to  
16 demonstrate that the certificate holder has a reasonable likelihood of obtaining a bond or letter  
17 of credit in the amount necessary for site restoration, as required prior to construction. The  
18 amount necessary for site restoration must be based on the methodology, as approved by  
19 Council in *Final Order on ASC*. Adjustments to the final site restoration bond or letter of credit  
20 amount may be made but are limited to final facility design adjustments (e.g. based on final  
21 number of wind turbines, which may be less than 292; final number of substations, which may  
22 be less than 3; etc.)

23  
24 Based on the 2017 bank letter, and because the retirement cost estimate of the facility, with  
25 proposed changes, would be less than the facility once inflated, Council considers that the  
26 certificate holder continues to demonstrate a reasonable likelihood of obtaining a bond or  
27 letter of credit in the amount necessary for site restoration. Additionally, as described above  
28 and in accordance with Retirement and Financial Assurance Condition 5 (PRE-RF-02),  
29 construction cannot begin on the facility until the Department receives a satisfactory bond or  
30 letter of credit.

31  
32 Subject to compliance with existing conditions, the Council finds that the site of the facility,  
33 with proposed changes, can be restored adequately to a useful, non-hazardous condition  
34 following permanent cessation of construction or operation. Additionally, Council finds that the  
35 certificate holder has a reasonable likelihood of obtaining a bond or letter of credit in a form  
36 and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.

37  
38  
39  
40  
41  

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<sup>35</sup> WRWAMD3Doc11. Complete Request for Amendment 3, Section 6.1.5. 2018-09-18 and WRWAMD1Doc20 Final Order on Amendment 1, p. 15, 2017-08-25.



1 **Conclusions of Law**

2

3 Based on the foregoing findings of fact, and subject to compliance with the Retirement and  
4 Financial Assurance conditions, the Council finds that the facility, with proposed changes, would  
5 continue to comply with the Council’s Retirement and Financial Assurance standard.

6

7 **III.H. Fish and Wildlife Habitat: OAR 345-022-0060**

8

9 *To issue a site certificate, the Council must find that the design, construction and*  
10 *operation of the facility, taking into account mitigation, are consistent with:*

11

12 *(1) The general fish and wildlife habitat mitigation goals and standards of OAR 635-415-*  
13 *0025(1) through (6) in effect as of February 24, 2017\*\*\**

14

15 **Findings of Fact**

16

17 The EFSC Fish and Wildlife Habitat standard requires the Council to find that the design,  
18 construction and operation of a facility is consistent with the Oregon Department of Fish and  
19 Wildlife’s (ODFW) habitat mitigation goals and standards, as set forth in OAR 635-415-0025.  
20 This rule creates requirements to mitigate impacts to fish and wildlife habitat, based on the  
21 quantity and quality of the habitat as well as the nature, extent, and duration of the potential  
22 impacts to the habitat. The rule also establishes a habitat classification system based on value  
23 the habitat would provide to a species or group of species. There are six habitat categories;  
24 Category 1 being the most valuable and Category 6 the least valuable.

25

1 The analysis area for potential impacts to fish and wildlife habitat, as defined in the project  
2 order, is the area within the site boundary and extending ½-mile from all ground-disturbing  
3 activities.

4

5 *Habitat Types and Categories in the Analysis Area*

6

7 Based on review of ASC Exhibit P, previously identified habitat category, type and subtypes  
8 within the analysis area include:

9

- 10 • Grassland: Exotic Annual and Native Perennial (habitat categories 1-4)
- 11 • Shrub-steppe: Basin Big Sagebrush and Rabbitbrush/Snakeweed (habitat categories 1-4)
- 12 • Escarpment: Exposed Rock (habitat category 2)
- 13 • Developed: Revegetated or Other Planted Grassland (habitat category 3)
- 14 • Developed: Irrigated Agriculture, Dryland Wheat, and Other (habitat category 6)

15

16 *Potential Impacts to Fish and Wildlife Habitat*

17

18 The facility, with proposed changes, would cause temporary, temporal and permanent habitat  
19 impacts. In RFA3, the certificate holder explains that while a change in the maximum number of  
20 wind turbines, at 292 wind turbines, is not requested, the proposed larger wind turbines may  
21 allow the certificate holder to construct and operate fewer than 292 wind turbines, thereby  
22 reducing potential habitat impacts.

23

24 In RFA3, the certificate holder asserts that the proposed larger wind turbines would not cause a  
25 change in construction activities, specifically that larger equipment would not be needed for  
26 delivery nor would wider crane or access road paths be needed. The certificate holder also  
27 describes that O&M activities, such as blade repair and replacement, for the proposed larger  
28 wind turbines would not result in differing permanent or temporary disturbance impacts than  
29 previously evaluated. Therefore, Council considers that the proposed larger wind turbines would  
30 not result in an increase from the 292-wind turbine layout evaluated in the *Final Order on ASC*.  
31 For reference, Council summarizes the previously evaluated permanent and temporary habitat  
32 impacts below.

33

34 *Temporary and Permanent Impacts*

35

36 The facility, as approved, would permanently impact up to 171 acres of Category 2, 3, 4 and 6  
37 habitats, with approximately 60 percent within Category 6 habitat. Approximately 52 acres of  
38 permanent impacts would occur within Category 2 through 4 habitat. The facility, as previously  
39 approved, would temporarily impact approximately 1,197 acres of Category 2, 3, 4 and 6  
40 habitats. Of the overall temporary impacts, 65 percent of the impacts would occur within  
41 Category 6 habitat, and that approximately 419 acres would be within Category 2 through 4

1 habitat.<sup>36</sup> The facility, as previously approved, would not result in permanent or temporary  
2 impacts to Category 1 or 5 habitat.

3  
4 Temporary, temporal and permanent impacts to Category 2, 3 and 4 would be mitigated  
5 through previously imposed Fish and Wildlife Habitat Condition 1 (PRE-FW-01), Fish and  
6 Wildlife Habitat Condition 10 (PRE-FW-04) and Fish and Wildlife Habitat Condition 11 (PRE-FW-  
7 05), as summarized below:

- 8
- 9 • **Fish and Wildlife Habitat Condition 1 (PRE-FW-01)** requires that, prior to construction,  
10 the certificate holder conduct a field-based habitat survey to confirm the habitat  
11 categories of all areas to be affected by facility components
- 12 • **Fish and Wildlife Habitat Condition 10 (PRE-FW-04)** requires that, during operation, the  
13 certificate holder implement the requirements of a Habitat Mitigation Plan (HMP) (see  
14 Attachment D to this order), to be reviewed and approved by the Department, in  
15 consultation with ODFW, demonstrating compliance with ODFW's Habitat and  
16 Mitigation Policy
- 17 • **Fish and Wildlife Habitat Condition 11 (PRE-FW-05)** requires that, during operations,  
18 the certificate holder restore and revegetate disturbed habitat areas as outlined in the  
19 final Revegetation Plan, to be reviewed and approved by the Department, in  
20 consultation with ODFW.

#### 21 *Potential Impacts to State Sensitive Species*

22  
23  
24 The proposed changes in wind turbine dimensions may pose additional avian collision risk due  
25 to the larger rotor-swept area from the longer turbine blades and taller hub height. The  
26 certificate holder also identifies that the proposed taller maximum blade tip height may cause  
27 the rotor-swept area to overlap with flight heights of migrating birds that were previously  
28 above shorter turbine models, also leading to increased collision risk. Moreover, the proposed  
29 lower aboveground minimum blade tip clearance may lead to greater collision risk of low-flying  
30 avian species that would have passed below the blade clearance of previous wind turbine  
31 models. However, RFA3 cites various scientific studies that have shown conflicting results, and  
32 concludes that there is no consensus and remaining uncertainty whether larger wind turbines  
33 increase mortality risk to avian species. The certificate holder also notes that if fewer turbines  
34 are used at the facility, as is possible if the proposed larger wind turbines are selected during  
35 final design, risk of collision may be reduced accordingly.<sup>37</sup>

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36 WRWAPPDoc196 Final Order on ASC, pp. 175-176, 2017-05-24.

37 WRWAMD3Doc15. DPO Comment Reviewing Agency ODFW. 2018-10-23. On the record of the draft proposed order, ODFW commented expressing that the previously imposed wildlife mitigation and monitoring requirements were sufficient, given uncertainties in scientific evidence of increased bird and bat mortality from larger wind turbines. ODFW also requested that the bird and bat fatality monitoring, as required under the WMMP, include survey areas covering a mix of turbines, if final design includes a mix of turbine types. Language consistent with this comment was included in the draft amended WMMP provided as Attachment F of this order.

1 While current scientific studies regarding increased collision risk to birds and bats from larger  
2 wind turbines may be uncertain, the Council previously imposed Fish and Wildlife Habitat  
3 Condition 4 (PRE-FW-02) requiring the certificate holder to implement a Wildlife Monitoring  
4 and Mitigation Plan (WMMP). The WMMP, currently in draft form and included as Attachment  
5 E to this order, requires the certificate holder to conduct short-term and long-term surveys to  
6 evaluate wildlife impacts. Specifically, the WMMP requires that the certificate holder conduct  
7 raptor nest surveys on 5-year intervals for the life of the facility. The WMMP also requires that  
8 the certificate holder conduct a short-term post-construction bird and bat fatality monitoring  
9 study and an avian use and behavior study, both of which will provide important data that can  
10 be used in adaptive management.

11  
12 Based on the flexibility requested, including a range of wind turbine technologies potentially  
13 selected during final facility design, Council amends the draft WMMP post-construction bird and  
14 bat fatality monitoring study to specify that the sample size of wind turbines include an equal  
15 proportion of each wind turbine type, if a mix of wind turbines is selected during final design,  
16 and that it include meteorological towers. Including a representative sample of all wind turbine  
17 models used at the facility will provide data regarding each wind turbine model's impact on  
18 avian and bat species that can be used in adaptive management at the facility and future  
19 management recommendations in accordance with the WMMP. Results of these post-  
20 construction studies would be compared against the WMMP's thresholds of concern that, if  
21 exceeded, would require the certificate holder to implement additional mitigation if  
22 determined appropriate. The Council amends the draft WMMP to clarify that if any mitigation is  
23 required for a threshold of exceedance, that the mitigation must be approved through  
24 amendment of the WMMP by Council. Additional mitigation could include other wildlife studies  
25 or other mitigation as deemed appropriate, through Council review, as sufficiently benefiting the  
26 affected species.

27  
28 Based on review of previously imposed Fish and Wildlife Habitat conditions, the Department  
29 identified an administrative error in Fish and Wildlife Habitat Condition 5 (CON-FW-02), which  
30 requires that the certificate holder comply with buffer distances from active nests to  
31 construction activities, during sensitive nesting and breeding seasons. The condition, as  
32 presented in the site certificate, erroneously excluded a table presenting the buffer distances  
33 and seasonal restrictions, which had been included in the condition as presented in the *Final*  
34 *Order on ASC*. The Council amends Fish and Wildlife Habitat Condition 5, as recommended by  
35 the Department, as follows:

36

37 **Fish and Wildlife Habitat Condition 5 (CON-FW-02), as amended:**

38 During construction within the time periods listed below, the certificate holder shall  
39 implement buffer zones around nest sites of the species listed below. No ground-  
40 disturbing activities within the buffer zone shall occur during the seasonal  
41 restrictions. The construction workforce and facility employees must be provided  
42 maps with the locations of the buffer zones and be instructed to avoid ground-  
43 disturbing activity within the buffer zone during construction activities.

44

<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>

1  
2 Based on the above analysis, Council finds that the design, construction, and operation of the  
3 facility, with proposed changes, taking into account mitigation, would be consistent with the  
4 fish and wildlife habitat mitigation goals and standards of OAR 345-415-0025.

5  
6 **Conclusions of Law**

7  
8 Based on the foregoing findings of fact and conclusions, and subject to compliance with existing  
9 and amended site certificate conditions, Council finds that facility, with proposed changes,  
10 would continue to comply with the Council's Fish and Wildlife Habitat standard.

11  
12 **III.I. Threatened and Endangered Species: OAR 345-022-0070**

13  
14 *To issue a site certificate, the Council, after consultation with appropriate state agencies,*  
15 *must find that:*

16  
17 *(1) For plant species that the Oregon Department of Agriculture has listed as*  
18 *threatened or endangered under ORS 564.105(2), the design, construction and*  
19 *operation of the proposed facility, taking into account mitigation:*

20  
21 *(a) Are consistent with the protection and conservation program, if any, that the*  
22 *Oregon Department of Agriculture has adopted under ORS 564.105(3); or*

23  
24 *(b) If the Oregon Department of Agriculture has not adopted a protection and*  
25 *conservation program, are not likely to cause a significant reduction in the*  
26 *likelihood of survival or recovery of the species; and*

27  
28 *(2) For wildlife species that the Oregon Fish and Wildlife Commission has listed as*  
29 *threatened or endangered under ORS 496.172(2), the design, construction and*  
30 *operation of the proposed facility, taking into account mitigation, are not likely to*  
31 *cause a significant reduction in the likelihood of survival or recovery of the species.*

32  
33 **Findings of Fact**

34  
35 The Threatened and Endangered Species standard requires the Council to find that the design,  
36 construction, and operation of the facility, with proposed changes, are not likely to cause a  
37 significant reduction in the likelihood of survival or recovery of a fish, wildlife, or plant species

1 listed as threatened or endangered by Oregon Department of Fish and Wildlife (ODFW) or  
2 Oregon Department of Agriculture (ODA). For threatened and endangered plant species, the  
3 Council must also find that the facility, with proposed changes, is consistent with an adopted  
4 protection and conservation program from ODA. Threatened and endangered species are those  
5 listed under ORS 564.105(2) for plant species and ORS 496.172(2) for fish and wildlife species.  
6 For the purposes of this standard, threatened and endangered species are those identified as  
7 such by either the Oregon Department of Agriculture or the Oregon Fish and Wildlife  
8 Commission.<sup>38</sup>

9  
10 The analysis area for threatened or endangered plant and wildlife species, as established in the  
11 project order, is the area within and extending 5-miles from the site boundary.

### 12 *Potential Impacts to Identified Threatened and Endangered Species*

14  
15 In order to identify endangered and threatened species that might occur within the analysis  
16 area, the certificate holder, from 2011 through 2013, conducted literature review and field  
17 surveys. Two state listed threatened or endangered species were identified and observed  
18 within the site boundary, Laurent’s milkvetch - a State-listed threatened plant species; and  
19 Washington ground squirrel - a State-listed threatened wildlife species.

20  
21 Council previously imposed Threatened and Endangered Species Condition 3 (PRE-TE-03)  
22 requiring that the certificate holder conduct a pre-construction survey for Laurent’s milkvetch  
23 and flag and avoid areas where the species is located. However, the condition did not specify  
24 the sensitive plant survey area. Council amends the condition to specify the survey area,  
25 consistent with the survey distances and methodologies the certificate holder conducted in  
26 preparation of the ASC.<sup>39</sup>

27  
28 On the record of the draft proposed order, the certificate holder requested removal of the  
29 recommended amended condition language and argued that the initial survey areas, used as  
30 the basis for the recommended amended condition, used a wider survey area than is necessary  
31 to provide information for the avoidance of Laurent’s milkvetch, if identified during pre-  
32 construction surveys.<sup>40</sup> The Department considers the survey area, as defined in the  
33 recommended amended condition, necessary based on the extent of the previously approved  
34 1,000-foot intraconnection transmission line corridor, and uncertainty and changes that occur  
35 in facility design between pre-construction surveys and final facility component siting. The  
36 Department, however, considers the certificate holder’s request reasonable and recommended  
37 that Council maintain the previously recommended amended language specifying the survey  
38 area, but allow for review of the appropriate survey area, prior to construction, by the

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<sup>38</sup> Although the Council’s standard does not address federally-listed threatened or endangered species, certificate holders must comply with all applicable federal laws, including laws protecting those species, independent of the site certificate.

<sup>39</sup> WRWAPPDoc139-16 Wheatridge ASC Exhibit P Fish and Wildlife Habitat, Attachment P-1, p. 14. 2015-07-01.

<sup>40</sup> WRWAMD3Doc14 DPO Comments Certificate Holder. 2018-10-16.

1 Department in consultation with Oregon Department of Agriculture. Based on these  
2 recommendations, Council amends Threatened and Endangered Species Condition 3 as follows:

3  
4 **Threatened and Endangered Species Condition 3 (PRE-TE-03), as amended:** To avoid  
5 potential impacts to Laurent’s milkvetch, the certificate holder must:

- 6 i. Conduct preconstruction plant surveys in suitable habitat for Laurent’s milkvetch  
7 within 1,000-feet of temporary and permanent disturbance from the 230 kV  
8 intraconnection transmission line; and, within 500-feet of temporary and permanent  
9 disturbance from all other facility components, unless extent of survey area from  
10 temporary and permanent disturbances is otherwise agreed upon by the  
11 Department in consultation with Oregon Department of Agriculture. If the species is  
12 found to occur, the certificate holder must install protection flagging around the  
13 plant population and avoid any ground disturbance within this zone.
- 14 ii. Ensure that any plant protection zone established under (a) above is included on  
15 construction plans showing the final design locations.
- 16 iii. If herbicides are used to control weeds, the certificate holder shall follow the  
17 manufacturer’s guidelines in establishing a buffer area around confirmed  
18 populations of Laurent’s milkvetch. Herbicides must not be used within the  
19 established buffers.

20 [Final Order on ASC, Threatened and Endangered Species Condition 3; AMD3]

21  
22 Council previously imposed Threatened and Endangered Species Condition 1 (PRE-TE-01)  
23 requiring that, prior to construction, the certificate holder conduct a protocol-level survey in all  
24 areas of suitable habitat within 1,000 feet of any ground disturbing activity for Washington  
25 ground squirrel, to ensure avoidance of any temporary or permanent impacts to Washington  
26 ground squirrel habitat.<sup>41</sup>

27  
28 Based upon compliance with previously imposed and amended conditions, Council finds that  
29 the facility with proposed changes would not be likely to cause a significant reduction in the  
30 likelihood or survival of any species listed as threatened or endangered.

31  
32 **Conclusions of Law**

33  
34 Based on the foregoing findings of fact and conclusions, and subject to compliance with existing  
35 and amended site certificate conditions, the Council finds that the facility, with proposed

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<sup>41</sup> Threatened and Endangered Species Condition 2 (PRE-TE-02), as imposed, incorrectly referenced Fish and Wildlife Habitat Condition 3 for the finalization and implementation of the Wildlife Monitoring and Mitigation Plan (WMMP). The condition should reference Fish and Wildlife Habitat Condition 4. Therefore, Council administratively amends Threatened and Endangered Species Condition 3 to reference Fish and Wildlife Habitat Condition 4.

1 changes, would continue to comply with the Council’s Threatened and Endangered Species  
2 standard.

3  
4 **III.J. Scenic Resources: OAR 345-022-0080**

5  
6 *(1) Except for facilities described in section (2), to issue a site certificate, the Council*  
7 *must find that the design, construction and operation of the facility, taking into*  
8 *account mitigation, are not likely to result in significant adverse impact to scenic*  
9 *resources and values identified as significant or important in local land use plans,*  
10 *tribal land management plans and federal land management plans for any lands*  
11 *located within the analysis area described in the project order.*

12 \*\*\*

13  
14 **Findings of Fact**

15  
16 OAR 345-022-0080 requires the Council to determine that the design, construction and  
17 operation of the proposed facility are not likely to have a “significant adverse impact” to any  
18 significant or important scenic resources and values in the analysis area. In applying the  
19 standard set forth in OAR 345-022-0080(1), the Council assesses the visual impacts of facility  
20 structures on significant or important scenic resources described in “local land use plans, tribal  
21 land management plans and federal land management plans for any lands located within the  
22 analysis area described in the project order.” For purposes of this rule, “local land use plans”  
23 includes applicable state land use and management plans.

24  
25 The Project Order defines the analysis area for the Scenic Resources standard as the area within  
26 and extending 10-miles from the site boundary.<sup>42</sup>

27  
28 In RFA3, the certificate holder describes that there are not any management plans that have  
29 changed since the Council’s evaluation of the ASC.<sup>43</sup> A table of the relevant management plans  
30 is provided below in Table 5, *Important Scenic Resources Inventory*. Based on the certificate  
31 holder’s review of applicable land use plans and management, there are no significant or  
32 important scenic resources within the analysis area.

33  
34  
35  
36  

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<sup>42</sup> WRWNOIDoc22. Project Order, p. 24. 2013-05-22.

<sup>43</sup> WRWAMD3Doc2. Preliminary Request for Amendment 2, Section 6.1.8. 2018-05-18.



**Table 5: Important Scenic Resources Inventory**

<b>Jurisdiction</b>	<b>Plan</b>	<b>Scenic Resources Specified in Plan (Y/N)</b>	<b>Important or Significant Scenic Resources Identified in Analysis Area (Y/N)</b>
<b>Counties</b>			
Morrow County	Morrow County Comprehensive Plan and Zoning Ordinance, as updated through 2011	No	No
Umatilla County	Umatilla County Comprehensive Plan, as amended through 2010	Yes	No
<b>Cities</b>			
City of Lone	City of Lone Comprehensive Plan (1987)	No	No
City of Lexington	City of Lexington Comprehensive Plan (1979)	No	No
City of Heppner	City of Heppner Comprehensive Plan (2004)	No	No
City of Hermiston	City of Hermiston Comprehensive Plan, as amended through 2014	No	No
City of Stanfield	City of Stanfield Comprehensive Plan (1983) and Development Code (2003)	No	No
City of Echo	City of Echo Comprehensive Plan (2005) and Zoning Administrative Regulations (2010)	No	No
<b>Tribal</b>			
None applicable	None	-	-
<b>Federal</b>			
BLM, Vale District, Baker Resource Area	Baker Resource Management Plan (BLM 1989)	Yes	No
NPS	Management and Use Plan Update, Oregon National Historic Trail and Mormon Pioneer National	No	No
DoD	Integrated Natural Resource Management Plan and Integrated Cultural Resource Management Plan for Boardman Bombing Range (Naval Weapons System Training Facility), 2012	No	No

**Table 5: Important Scenic Resources Inventory**

Jurisdiction	Plan	Scenic Resources Specified in Plan (Y/N)	Important or Significant Scenic Resources Identified in Analysis Area (Y/N)
USFS/ODOT	Blue Mountain Scenic Byway Interpretive Management Plan	Yes	No

1  
2 In RFA3, the certificate holder summarizes the zone of visual influence (ZVI) analysis previously  
3 evaluated, which assessed the potential for the facility to be seen from four Key Observation  
4 Points (KOPs). The ZVI visually simulated the effects of 525 foot wind turbines and other facility  
5 components. Facility components would be visible at “low to moderate” levels at KOPs;  
6 however, there were not any management directives to preserve views or corresponding scenic  
7 qualities at any of the KOP locations.<sup>44</sup>

8  
9 Council previously imposed Scenic Resources Conditions 1 (GEN-SR-01) and 2 (GEN-SR-02)  
10 based upon the certificate holder’s representations to reduce, avoid, and mitigate adverse  
11 visual impacts from the facility. Specifically, Scenic Resources Conditions 1 addresses  
12 minimizing the visual impacts from lighting at the substations and O&M buildings and Scenic  
13 Resources Conditions 2 addresses finishing facility components in neutral colors consistent with  
14 the surrounding landscape as well as limiting vegetative clearing and facility signage.

15  
16 Council previously found that the results of the visual impact analysis (of wind turbines at 525  
17 feet and other facility components) identified that facility components would have low to  
18 moderate visibility at the selected KOP locations. Additionally, there are no management  
19 directions for preservation of views or scenic quality at any of the KOP locations. The Council  
20 relies on its previous reasoning and continues to find that the, the facility, with proposed  
21 changes, is not likely to result in significant adverse impact to any identified scenic resources  
22 and values.

23  
24 **Conclusion of Law**

25  
26 Based on the foregoing findings of fact and conclusions of law, the Council continues to find  
27 that the facility, with proposed changes, would comply with the Council’s Scenic Resources  
28 standard.

29  
30 **III.K. Historic, Cultural, and Archaeological Resources: OAR 345-022-0090**

31  
32 *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the*  
33 *Council must find that the construction and operation of the facility, taking into account*  
34 *mitigation, are not likely to result in significant adverse impacts to:*

---

<sup>44</sup> WRWAPPDoc196. Final Order on ASC, p. 200. 2017-05-24.

1  
2 *(a) Historic, cultural or archaeological resources that have been listed on, or would*  
3 *likely be listed on the National Register of Historic Places;*

4  
5 *(b) For a facility on private land, archaeological objects, as defined in ORS*  
6 *358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c); and*

7  
8 *(c) For a facility on public land, archaeological sites, as defined in ORS 358.905(1)(c).*

9  
10 *(2) The Council may issue a site certificate for a facility that would produce power from*  
11 *wind, solar or geothermal energy without making the findings described in section (1).*  
12 *However, the Council may apply the requirements of section (1) to impose conditions on*  
13 *a site certificate issued for such a facility.*

14 \*\*\*

15  
16 **Findings of Fact**

17  
18 Subsection (1) of the Historic, Cultural and Archaeological Resources standard, OAR 345-022-  
19 0090, generally requires the Council to find that a proposed facility or facility, with proposed  
20 changes, is not likely to result in significant adverse impacts to identified historic, cultural, or  
21 archaeological resources. Subsection (2) of OAR 345-022-0090 provides that the findings  
22 described in subsection (1) may be waived for wind facilities. However, the Council may impose  
23 site certificate conditions based on the requirements of this standard.

24  
25 The analysis area for the evaluation of potential impacts to identified historic, cultural or  
26 archeological resources, as defined in the project order, is the area within the site boundary.

27  
28 The proposed larger wind turbines would be located within previously approved micrositng  
29 corridor and site boundary area. In RFA3, the certificate holder provides a summary of the field  
30 and desktop archaeological surveys conducted for the entire 13,097 acres within the site  
31 boundary during the ASC review phase. Previous pedestrian field surveys recorded 21  
32 archaeological sites and isolated finds within the site boundary, 7 of which were recommended  
33 for inclusion on the National Register of Historic Places and as such, would be protected by the  
34 Council's Historic, Cultural, and Archaeological Resources standard. On the record of the ASC,  
35 SHPO agreed with the eligibility evaluation.

36  
37 Council previously imposed Historic, Cultural and Archaeological Resources Conditions 1  
38 through 5 (PRE-HC-01, PRE-HC-02, CON-HC-01, PRE-HC-03, and CON-HC-02) to avoid and  
39 reduce the potential for adverse impacts to historic, cultural, and archaeological resources.  
40 Specific to the proposed larger wind turbines, Historic, Cultural, and Archeological Resources  
41 Condition 3 requires that onsite construction personnel are trained to identify cultural and  
42 archaeological resources, and understand the requirements if such resources are discovered  
43 during construction, and Historic, Cultural, and Archeological Resources Condition 5 (CON-HC-

1 02) outlines protocols to be followed if archeological or cultural resources are inadvertently  
2 discovered during construction.

3  
4 Based upon the analysis presented above and subject to compliance with existing conditions,  
5 Council finds that the facility, with proposed changes, would not be likely to result in significant  
6 adverse impacts to resources protected by the Council’s Historic, Cultural and Archaeological  
7 Resources standard.

8  
9 **Conclusions of Law**

10  
11 Based on the foregoing analysis, and subject to compliance with existing conditions, the Council  
12 finds that the facility, with proposed changes, would continue to comply with the Council’s  
13 Historic, Cultural, and Archaeological Resources Standard.

14  
15 **III.L. Recreation: OAR 345-022-0100**

16  
17 *(1) Except for facilities described in section (2), to issue a site certificate, the Council must*  
18 *find that the design, construction and operation of a facility, taking into account*  
19 *mitigation, are not likely to result in a significant adverse impact to important*  
20 *recreational opportunities in the analysis area as described in the project order. The*  
21 *Council shall consider the following factors in judging the importance of a recreational*  
22 *opportunity:*

- 23  
24 *(a) Any special designation or management of the location;*  
25 *(b) The degree of demand;*  
26 *(c) Outstanding or unusual qualities;*  
27 *(d) Availability or rareness;*  
28 *(e) Irreplaceability or irretrievability of the opportunity.*

29 \*\*\*45

30  
31 **Findings of Fact**

32  
33 The Recreation standard requires the Council to find that the design, construction, and  
34 operation of a facility would not likely result in significant adverse impacts to “important”  
35 recreational opportunities. Therefore, the Council’s Recreation standard applies only to those  
36 recreation areas that the Council finds to be “important,” utilizing the factors listed in the sub-  
37 paragraphs of section (1) of the standard. The importance of recreational opportunities is  
38 assessed based on five factors outlined in the standard: special designation or management,  
39 degree of demand, outstanding or unusual qualities, availability or rareness, and irreplaceability  
40 or irretrievability of the recreational opportunity. The certificate holder evaluates impacts to  
41 important recreational opportunities based on the potential of construction or operation of the

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<sup>45</sup> The facility is not a special criteria facility under OAR 345-0015-0310; therefore, OAR 345-022-0100(2) is not applicable.

1 facility, with proposed changes, to result in any of the following: direct or indirect loss of an  
2 important recreational opportunity, excessive noise, increased traffic, and visual impacts of  
3 facility structures or plumes.

4  
5 In accordance with OAR 345-001-0010(59)(d) and consistent with the study area boundary, the  
6 analysis area for recreational opportunities is the area within and extending 5 miles from the  
7 site boundary.

#### 8 9 Recreational Opportunities within the Analysis Area

10  
11 Important recreational opportunities within the 5-mile analysis area include:<sup>46</sup>

- 12
- 13 • Oregon National Historic Trail High-Potential Segment (1.2 miles from site boundary)
- 14 • Oregon Trail Well Spring Interpretive Site (1.2 miles from site boundary)
- 15 • Echo Meadows Site/Oregon Trail Area of Critical Environmental Concern (2.5 miles from  
16 site boundary)
- 17 • Blue Mountain State Scenic Byway (OR-74) (2.6 miles from site boundary)
- 18 • Morrow County Fairgrounds (3.0 miles from site boundary)
- 19 • Willow Creek Water Park (3.0 miles from site boundary)<sup>47</sup>
- 20

#### 21 Evaluation of Potential Impacts to Important Recreation Opportunities

22  
23 Under the Council’s Recreation standard, the Council must find that, taking into account  
24 mitigation, the facility, with proposed changes, is not likely to result in a significant adverse  
25 impact to those identified important recreational opportunities. The Council presents its  
26 evaluation of potential impacts below.

27  
28 As presented above, the six identified important recreational opportunities within the 5-mile  
29 analysis area are located between 1.2 to 3 miles from the site boundary.

#### 30 31 *Potential Direct or Indirect Loss of Recreational Opportunity*

32  
33 The proposed larger wind turbines would be located within previously approved site boundary  
34 area, entirely within private property, and would not be located on or within any of the  
35 identified important recreational opportunities. Therefore, the facility, with proposed changes,  
36 would not physically disturb, or result in ground disturbance, to the important recreational  
37 opportunities identified within the analysis area. The facility, with proposed changes, would  
38 also not require any temporary or permanent closure or removal of the important recreation  
39 opportunities to public use. Therefore, the Council finds that the facility, with proposed

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<sup>46</sup> WRWAPPDoc139-20. ASC Exhibit T. 2015-07-01.

<sup>47</sup> WRWAPPDoc196. Final Order on ASC. 2016-05-24. In the Final Order on ASC, the Council disagreed with the certificate holder’s representation that Willow Creek Water Park met the criteria for an “important” recreational opportunity. However, the Council included an evaluation of potential impacts to this recreational opportunity.

1 changes, would not be expected to result in direct or indirect loss to important recreational  
2 opportunities within the analysis area.

3  
4 *Potential Noise Impacts*

5  
6 *Construction*

7  
8 The proposed larger wind turbines would generate construction-related noise. In RFA3, the  
9 certificate holder asserts that the proposed larger wind turbines would not cause a change in  
10 construction activities, specifically that larger equipment would not be needed for delivery nor  
11 would wider crane or access road paths be needed. Therefore, construction-related noise at  
12 important recreational opportunities would not be expected to differ from the impacts  
13 included in the *Final Order on ASC*. For reference, the Council presents a summary of the  
14 previous assessment of construction-related impacts.

15  
16 Construction related noise would be short-term and intermittent and would result from site  
17 clearing, excavation, foundation work, and wind turbine installation. Construction equipment  
18 noise levels presented in ASC Exhibit X range from 42 (crane) to 56 (loader/dozer) dBA, at 2,000  
19 feet. The Oregon Trail Well Spring Interpretive Site (which is also the closest point of the  
20 Oregon Trail High-Potential Segment) is located approximately 1.2 miles from the site  
21 boundary. The Council acknowledges that the analysis area extends 5-miles from the site  
22 boundary, but presents an evaluation of impacts at the nearest important recreational  
23 opportunity as a proxy for potential impacts at further distances from the site boundary.

24  
25 Existing Noise Control Condition 1 (CON-NC-01) would reduce noise impacts during  
26 construction by requiring the use of exhaust mufflers on combustion engine-powered  
27 equipment, use of air-inlet silencers, shrouds and shields, as appropriate; and requires that the  
28 certificate holder establish a noise complaint response system, including a system for the  
29 certificate holder to receive and resolve noise complaints.

30  
31 Based on the low dBA level expected at the nearest important recreational opportunity and  
32 compliance with the above-reference condition, and because construction related noise would  
33 be temporary and short-term in duration, the Council finds that construction of the facility, with  
34 proposed changes, would not be likely to result in significant adverse noise impacts at the  
35 Oregon Trail Well Spring Interpretive Site. Because the other important recreational  
36 opportunities within the analysis area are located at greater distances from the facility site  
37 boundary than the Oregon Trail Well Spring Interpretive Site, Council concludes that potential  
38 construction-related impacts from the facility, with proposed changes, at these important  
39 recreational opportunities would also not likely be potentially significant or adverse.

1     *Operation*<sup>48</sup>

2  
3     The proposed changes in wind turbine dimensions result in potential maximum overall A-  
4     weighted sound power level output of 110.5 dBA, which includes +2 dBA to account for  
5     uncertainty, and represents an increase in A-weighted sound power level of the previously  
6     approved wind turbines at 107.0 dBA. In RFA3, the certificate holder provides a noise analysis  
7     of the facility, with proposed changes, including the following sources:<sup>49</sup>

- 8  
9
  - 10         • Wind turbines with Low Noise Trailing Edge technology (149 wind turbines at 110.5 dBA;  
11             16 wind turbines at 108.0 dBA)
  - 12         • Substation transformers (1 160 MVA transformer at 98 dBA at Wheatridge East  
13             Substation; 2 225 MVA transformers at Wheatridge West Substation at 94 dBA)
  - 14         • Battery storage systems (56 heating, ventilation and air conditioning modules at 103  
15             dBA; 28 power inverters at 93 dBA; and 28 distribution transformers at 72 dBA)

16     In RFA3, the certificate holder provided a noise modeling analysis for operational noise, which  
17     demonstrates that the facility, with proposed changes, would be similar to or less than  
18     evaluated in ASC Exhibit T and Council’s *Final Order on ASC*. Council previously found that  
19     facility-related operational noise would not exceed 31 dBA at the nearest important  
20     recreational opportunities (i.e. Oregon National Historic Trail – segment and site, 1.2 miles from  
21     the site boundary), which represents a noise level comparable in volume to a whisper.<sup>50</sup> The  
22     remaining four recreational opportunities identified as important would be located greater  
23     than two miles from the site boundary and therefore would experience lesser worst-case noise  
24     levels due to attenuation of 26 dBA or less during facility operations.

25  
26     Based on the Council’s previous findings and the certificate holder’s updated noise modeling  
27     assessment demonstrating that operational noise from the facility, with proposed changes,  
28     would be similar to or less than 31 dBA at important recreational opportunities within the  
29     analysis, Council continues to find that operation of the facility, with proposed changes, would  
30     not be likely to result in significant adverse noise impacts.

---

<sup>48</sup> Following Council’s review of the proposed order at its November 16, 2018 meeting, modifications adopted in the proposed order included incorporating the operational noise analysis into the Recreation standard. The operational noise analysis was included in RFA3 and similarly described in Section III.F *Protected Areas* of the proposed order but had been inadvertently omitted from the section. The modification was not viewed as a substantive or material change.

<sup>49</sup> WRWAMD3Doc11. Request for Amendment 3. 2018-09-18. The noise analysis provided in RFA3 includes noise sources from the facility, with changes proposed under RFA2 (i.e. two proposed battery storage systems) and RFA3. While the RFA3 noise analysis includes noise sources from the proposed battery storage systems presented in RFA2, recommended findings of fact and conclusions of law are focused on potential changes in operational noise from the proposed changes in wind turbine technologies.

<sup>50</sup> WRWAPPDoc196. Final Order on ASC. 2017-05-24.

1 *Potential Traffic Impacts*

2

3 *Construction*

4

5 The proposed larger wind turbines would generate construction-related traffic. In RFA3, the  
6 certificate holder asserts that the proposed larger wind turbines would not cause a change in  
7 construction activities, nor increase number of construction workers compared the peak  
8 activities evaluated in the *Final Order on ASC*. The Council, therefore, presents a summary of  
9 the previous assessment for reference.

10

11 Roads that provide access to important recreational opportunities, specifically Oregon Trail  
12 Well Spring Interpretive Site and Echo Meadows/Oregon Trail ACEC, which could be impacted  
13 by construction-related traffic include OR-207 and/or Bombing Range Road and Little Juniper  
14 Canyon Road. Council previously considered potential construction-related traffic impacts not  
15 likely to be significant or adverse because impacts would occur during the morning peak hours,  
16 when visitors are unlikely to arrive at the recreational opportunities. In addition, Council  
17 imposed Public Services Condition 6 (PRE-PS-01) requiring that the certificate holder implement  
18 a Traffic Management Plan, as approved by the Department, that would include best  
19 management practices (BMP's) such as traffic control BMP's and reduction practices to  
20 minimize potential construction-related traffic impacts.<sup>51</sup>

21

22 Because construction of the facility, with proposed changes, is not expected to increase traffic  
23 impacts compared to those considered in Council's *Final Order on the ASC*, where construction-  
24 related traffic impacts at important recreational opportunities were not expected to be  
25 significant or adverse, and based upon compliance with Public Services Condition 6 (PRE-PS-01),  
26 Council continues to find that construction-related traffic impacts would not to be likely to  
27 result in a significant adverse traffic impact to important recreational opportunities within the  
28 analysis area.

29

30 *Operation*

31

32 The facility, with proposed changes, would generate operational-related traffic. However, the  
33 certificate holder asserts that the proposed larger wind turbines would not result in changes to  
34 previously evaluated operational traffic impacts of 10 to 20 vehicle trips per day, which were  
35 previously determined not likely to have a significant adverse impact to recreational  
36 opportunity access roads.<sup>52</sup> Because RFA3 would not result in changes to the expected number  
37 of permanent employees, Council finds that operational-traffic impacts would continue not to  
38 be likely to result in a significant adverse impact to important recreational opportunities within  
39 the analysis area.

40

41

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<sup>51</sup> WRWAPPDoc196. Final Order on ASC. 2017-05-24.

<sup>52</sup> WRWAPPDoc196. Final Order on ASC. 2017-04-28.



1 *Potential Visual Impacts*  
2

3 The proposed larger wind turbines, at 449.7 feet, would not result in an increase in visual  
4 impacts at important recreational opportunities as evaluated in the *Final Order on ASC*. The  
5 previous evaluation of visual impacts of facility structures, or wind turbines, was based on up to  
6 292 wind turbines at 525-feet. Based on the previous analysis, Council found that the facility  
7 would not be likely to result in a significant adverse visual impact to any important recreational  
8 opportunity.  
9

10 The Council presents a summary of the zone of visual influence (ZVI) analysis, which assessed  
11 potential visual impacts to important recreational opportunities. The ZVI analysis evaluated the  
12 landscape using digital bare earth modeling, removing landscape features for a “worse-case”  
13 visibility scenario. The certificate holder previously determined that some portions of the  
14 facility would be visible from four of the six important recreation opportunities:  
15

- 16 • Oregon National Historic Trail
- 17 • Well Spring Interpretive Site
- 18 • Echo Meadows/Oregon Trail Area of Critical Environmental Concern
- 19 • Blue Mountain Scenic Byway  
20

21 In its original *Final Order on the ASC*, the Council found that construction and operation of the  
22 proposed facility would not likely result in a significant adverse visual impacts to any of the  
23 important recreational opportunities within the analysis area, based upon the distance  
24 between the important recreational opportunities (ranging from 1.2 to 2.6 miles) and the  
25 facility, the short route or trail segment from which wind turbines would be visible, as well as  
26 the existing visual character of the region and the lack of facility emissions or plumes.<sup>53</sup>  
27

28 Because the proposed maximum turbine height proposed in RFA3 is less than the maximum  
29 blade tip height evaluated for compliance with the Recreation standard in the *Final Order on*  
30 *ASC*, and because the certificate holder does not propose to change the micro-siting corridor,  
31 Council finds that the proposed change in wind turbine dimensions would not be likely to result  
32 in new visual impacts to important recreational opportunities.  
33

34 **Conclusions of Law**  
35

36 Based on the foregoing recommended findings of fact and conclusions, and subject to  
37 compliance with existing site certificate conditions, Council finds that the facility, with proposed  
38 changes, would continue to comply with the Council’s Recreation standard.  
39  
40  
41

---

<sup>53</sup> WRWAPPDoc196. Final Order on ASC, p.214. 2017-04-28.

1 **III.M. Public Services: OAR 345-022-0110**

2  
3 *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the*  
4 *Council must find that the construction and operation of the facility, taking into account*  
5 *mitigation, are not likely to result in significant adverse impact to the ability of public*  
6 *and private providers within the analysis area described in the project order to provide:*  
7 *sewers and sewage treatment, water, storm water drainage, solid waste management,*  
8 *housing, traffic safety, police and fire protection, health care and schools.*

9  
10 *(2) The Council may issue a site certificate for a facility that would produce power from*  
11 *wind, solar or geothermal energy without making the findings described in section (1).*  
12 *However, the Council may apply the requirements of section (1) to impose conditions on*  
13 *a site certificate issued for such a facility.*

14 \*\*\*

15 **Findings of Fact**

16  
17 The Council’s Public Services standard requires the Council to find that the facility, with  
18 proposed changes, is not likely to result in significant adverse impacts on the ability of public  
19 and private service providers to supply sewer and sewage treatment, water, stormwater  
20 drainage, solid waste management, housing, traffic safety, police and fire protection, health  
21 care, and schools. Pursuant to OAR 345-022-0110(2), the Council may issue a site certificate for  
22 a facility that would produce power from wind energy without making findings regarding the  
23 Public Services standard; however, the Council may impose site certificate conditions based  
24 upon the requirements of the standard.

25  
26 In accordance with OAR 345-001-0010(59)(b) and consistent with the study area boundary, the  
27 analysis area for potential impacts to public services from construction and operation of the  
28 facility, with proposed changes, is defined as the area within and extending 10-miles from the  
29 site boundary.

30  
31 *Sewer and Sewage Treatment; Stormwater Drainage*

32  
33 The facility, with proposed changes, would not generate sewage or require sewage treatment,  
34 nor require construction or expansion of public stormwater drainage facilities. Therefore,  
35 construction and operation of the facility, with proposed changes, would not impact public and  
36 private providers of sewer, sewage treatment or stormwater drainage.

37  
38 *Water*

39  
40 Construction and operation of the facility, with proposed changes, would not result in increased  
41 water use as evaluated in the *Final Order on ASC*. Based on the review of the record for the  
42 facility, and for reference, the certificate holder estimated that facility construction, as  
43 approved, would require approximately 43.2 to 78 million gallons of water. Water used for  
44 construction would be procured from licensed sources in the vicinity of the facility, such as the

1 Port of Morrow.<sup>54</sup> The certificate holder relies upon correspondence submitted in ASC Exhibit U  
2 from four municipal water suppliers, including the Port of Morrow, which confirmed adequate  
3 supply and capacity to meet the facility’s water use needs during construction. Based on  
4 confirmation from public water providers obtained in 2014 during the ASC phase, and because  
5 the proposed change in wind turbine dimensions would not increase construction-related  
6 water demand, Council finds that construction of the facility, with proposed changes, would  
7 continue not to be likely to result in significant adverse impacts on the ability of public or  
8 private providers of water to deliver services.

9  
10 Operational water use would be served by onsite, permit-exempt wells and would not result in  
11 impacts on the ability of public or private providers of water to deliver services.

12  
13 *Solid Waste Management*

14  
15 Construction of the proposed larger wind turbines, if selected during final design, may result in  
16 increased solid waste generation.<sup>55</sup> However, the certificate holder asserts that any potential  
17 increase in solid waste generation would not alter the certificate holder’s ability to comply with  
18 conditions in the site certificate related to solid waste management. Council previously  
19 imposed Waste Minimization Condition 2 (PRE-WM-01) and Public Service Condition 3 (CON-  
20 PS-01) requiring that the certificate holder, prior to construction, develop a waste management  
21 plan, to be implemented during construction. The conditions require that the plan include  
22 measures for recycling and segregating waste, and discharging concrete wash water onsite,  
23 when possible.

24  
25 Operation of the facility, with proposed changes, would not result in increased solid waste as  
26 evaluated in the *Final Order on ASC*. As provided in the *Final Order on ASC*, the certificate  
27 holder indicated up to 6 cubic yards per month of solid waste would be generated during  
28 operations. Council previously imposed Public Services Condition 4 (OPR-PS-03) requiring that,  
29 during operation, the certificate holder implement a waste management plan. The condition  
30 requires that the certificate holder train employees to minimize and recycle solid waste;  
31 segregate hazardous and non-hazardous waste; and utilize a licensed waste hauler for offsite  
32 removal and transport to a licensed waste management facility.

33  
34 Because construction and operation of the proposed larger wind turbines would not be  
35 expected to substantially increase solid waste generation, and based on compliance with  
36 previously imposed conditions, Council finds that the facility, with proposed changes, would not  
37 be likely to result in a significant adverse impact on the ability of public and private providers of  
38 solid waste management to deliver services.

39  
40  
41  

---

<sup>54</sup> WRWAMD3. Request for Amendment 3. Section 4.4. 2018-09-18.

<sup>55</sup> WRWAMD3. Request for Amendment 3, p. 11. 2018-09-18.

1 *Traffic Safety*

2

3 The proposed larger wind turbines would generate construction- and operational-related  
4 traffic. In RFA3, the certificate holder asserts that the proposed larger wind turbines would not  
5 cause a change in construction or operational activities, as evaluated in the *Final Order on ASC*.

6

7 In ASC Exhibit U, the certificate holder identified primary transportation routes for construction  
8 related traffic to be I-84 and OR-207, and indicated that the following major county roads  
9 would convey significant amounts of construction traffic: Bombing Range Road, Big Butter  
10 Creek Road, Little Butter Creek Road, Baseline Road, Juniper Lane, Strawberry Lane, and Sand  
11 Hollow Road in Morrow County. As evaluated in the *Final Order on ASC*, it was estimated that  
12 during the 6 months when construction of the intraconnection line and the wind farm would  
13 occur concurrently, and accounting for peak periods, the primary transportation routes would  
14 experience facility-related truck traffic of an estimated maximum of 125 round trips per day  
15 (250 one-way trips) for 24 days of construction per month.<sup>56</sup> As provided in the *Final Order on*  
16 *ASC*, the anticipated Level of Service (LOS) for construction traffic (LOS A) would be the same as  
17 the current peak hour LOS for all area roads accessed by construction traffic, with the exception  
18 of the intersection of Oregon Trail Road with OR-207 where traffic control measures were  
19 recommended.<sup>57</sup>

20

21 Council previously imposed Public Services Condition 6 (PRE-PS-01) requiring that, prior to  
22 construction, the certificate holder coordinate with Oregon Department of Transportation  
23 (ODOT) and county road officials to develop and implement a Traffic Management Plan, as  
24 approved by the Department, that would include best management practices (BMP's) to  
25 minimize potential construction-related traffic impacts. BMP's include maintaining emergency  
26 vehicle access to private property, using chase vehicles if required by ODOT, and notifying  
27 nearby landowners prior to the start of construction.

28

29 Because the proposed larger wind turbines would not alter the impacts previously evaluated,  
30 and based on the traffic impact minimization measures to be implemented in accordance with  
31 Public Services Condition 6 (PRE-PS-01), the Council finds that construction related traffic  
32 impacts (i.e. vehicle trip generation) from the facility, with proposed changes, would not be  
33 likely to result in a significant adverse impact to the ability of public or private providers of  
34 traffic safety.

35

36 The proposed larger wind turbines would generate operational-related traffic. However, the  
37 certificate holder asserts that the proposed larger wind turbines would not result in changes to  
38 previously evaluated operational traffic impacts of 10 to 20 vehicle trips per day, which were  
39 previously determined not likely to have a significant adverse impact to public and private  
40 traffic safety providers within the analysis area. The Council, therefore, relies on its previous  
41 reasoning and continues to find that operational-traffic impacts (i.e. vehicle trip generation)

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<sup>56</sup> WRWAPPDoc196. Final Order on ASC, p.221. 2017-05-24.

<sup>57</sup> WRWAPPDoc196. Final Order on ASC, p.223. 2017-05-24.

1 from the facility, with proposed changes, would not to be likely to result in a significant adverse  
2 impact to the ability of public or private providers of traffic safety.

3  
4 *Police Protection*

5  
6 Construction and operation of the proposed larger wind turbines is not expected to change the  
7 previously estimated temporary or permanent number of workers previously evaluated in the  
8 Council's *Final Order on ASC*.<sup>58</sup>

9  
10 In the *Final Order on ASC* it was estimated that the facility would employ an average of 240  
11 workers during construction and a maximum of 360 individuals during peak construction; and  
12 approximately 10 to 20 permanent employees during operations.<sup>59</sup> Council previously imposed  
13 Public Service Conditions 10 (CON-PS-02) and 12 (OPR-PS-04) requiring that, during  
14 construction and operations, the certificate holder provide 24 hour private security, and ensure  
15 that law enforcement agencies have up-to-date contact information of relevant facility staff,  
16 respectively. Additionally, Council previously imposed Public Health and Safety Standards for  
17 Wind Facilities Condition 2 (OPR-WF-01) requiring that facility substations be fenced with  
18 locked gates.

19  
20 The Council finds that based upon compliance with existing conditions, construction and  
21 operation of the facility, with proposed changes, would not be likely to result in a significant  
22 adverse impact on the ability of public and private police providers to provide services.

23  
24 *Fire Protection*

25  
26 Construction and operation of the proposed larger wind turbines is not expected to change  
27 impacts to or demand for fire protection services as evaluated in the Council's *Final Order on*  
28 *ASC*.<sup>60</sup>

29  
30 The proposed change in wind turbine dimensions would not modify the site boundary, so the  
31 certificate holder maintains that reliance on rural fire protection districts would remain  
32 unchanged. During the review of the ASC, the certificate holder provided correspondence with  
33 each fire district verifying their service area and that they did not anticipate that the facility  
34 would significantly impact the operations of the agency.<sup>61</sup> However, each rural fire protection  
35 district also stated that they do not have the ability to perform confined space rescue or high  
36 angle rescue.

37  
38 Council previously imposed Public Services Conditions 14 (CON-PS-03) and Public Services  
39 Condition 15 (PRO-PS-01) requiring that construction and operational personnel are trained and

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<sup>58</sup> WRWAMD3Doc2. Preliminary Request for Amendment 2. Section 6.1.10, 2018-05-18.

<sup>59</sup> WRWAPPDoc196. Final Order on ASC, p. 215. 2017-05-24.

<sup>60</sup> WRWAMD3Doc2. Preliminary Request for Amendment 2. Section 6.1.10, 2018-05-18.

<sup>61</sup> WRWAPPDoc196. Final Order on ASC, p.227. 2017-05-24.

1 equipped for fall protection, high angle and confined space rescue. Further, the Council  
2 adopted Public Services Condition 13 (PRE-PS-04) requiring the certificate holder to develop an  
3 Emergency Management Plan, to be approved by the Department in consultation with the local  
4 fire protection districts. The Emergency Management Plan covers safety and fire training  
5 protocols, emergency contact information as well as other fire and safety requirements. These  
6 conditions as well as other conditions addressing fire, safety and impacts to fire-service  
7 providers are not anticipated to be affected by the proposed changes provided in RFA3. Public  
8 Services Condition 18 outlines requirements for fire prevention and response training for  
9 personnel.

10  
11 The Council finds that compliance with existing conditions would continue to minimize  
12 potential adverse impacts from construction and operation of the facility, with proposed  
13 changes, to public and private providers of fire protection services.

14  
15 *Housing, Schools, and Healthcare*

16  
17 Construction and operation of the proposed larger wind turbines would not contribute  
18 substantial numbers of additional workers, compared to what was considered and approved by  
19 Council in the *Final Order on ASC*. As described in the *Final Order on ASC*, Council found that  
20 there was sufficient supply of hotel rooms and other housing options in the communities within  
21 commuting distance to the facility site for the temporary influx of construction workers.  
22 Additionally, Council found that the estimated current and anticipated housing vacancies within  
23 surrounding communities would provide adequate housing for the permanent operational  
24 workforce would not have a substantial adverse impact on housing in the analysis area.

25  
26 Based on its previous reasoning and because the facility, with proposed changes, would not  
27 increase the expected number of temporary or permanent workers, Council finds that the  
28 facility, with proposed changes, would not be likely to result in a significant adverse impact on  
29 the ability of public and private providers of housing, schools, and health care to deliver  
30 services.

31  
32 **Conclusions of Law**

33  
34 Based on the foregoing analysis, and subject to the existing conditions, the Council finds that  
35 the facility, with proposed changes, would continue to comply with the Council's Public Services  
36 standard.

37  
38 **III.N. Waste Minimization: OAR 345-022-0120**

39  
40 *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council*  
41 *must find that, to the extent reasonably practicable:*

42  
43 *(a) The applicant's solid waste and wastewater plans are likely to minimize generation*  
44 *of solid waste and wastewater in the construction and operation of the facility, and*

1                   when solid waste or wastewater is generated, to result in recycling and reuse of such  
2                   wastes;

3                   (b) *The applicant’s plans to manage the accumulation, storage, disposal and*  
4                   *transportation of waste generated by the construction and operation of the facility*  
5                   *are likely to result in minimal adverse impact on surrounding and adjacent areas.*

6  
7                   (2) *The Council may issue a site certificate for a facility that would produce power from*  
8                   *wind, solar or geothermal energy without making the findings described in section (1).*  
9                   *However, the Council may apply the requirements of section (1) to impose conditions on*  
10                  *a site certificate issued for such a facility.*

11                  \*\*\*

12  
13                  **Findings of Fact**

14  
15                  The Waste Minimization standard requires the Council to find that the certificate holder will  
16                  minimize the generation of solid waste and wastewater, and that the waste generated would  
17                  be managed to minimally impact surrounding and adjacent areas. Pursuant to OAR 345-022-  
18                  0020(2), the Council may issue a site certificate for a wind facility without making findings  
19                  regarding the Waste Minimization standard; however, the Council may impose site certificate  
20                  conditions based upon the requirements of the standard.

21  
22                  *Solid Waste and Wastewater*

23  
24                  *Construction*

25  
26                  Construction of the proposed larger wind turbines, if selected during final design, may result in  
27                  increased solid waste and wastewater generation.<sup>62</sup> However, the certificate holder asserts that  
28                  any potential increase in solid waste and wastewater generation would not alter the certificate  
29                  holder’s ability to comply with conditions in the site certificate related to solid waste  
30                  management.

31  
32                  Council previously imposed Waste Minimization Condition 2 (PRE-WM-01) and Public Service  
33                  Condition 3 (CON-PS-01) requiring that the certificate holder, prior to construction, develop a  
34                  waste management plan, to be implemented during construction. The conditions require that  
35                  the plan include measures for recycling and segregating waste, and discharging concrete wash  
36                  water onsite, when possible. Based on the low level of construction-related waste and waste  
37                  water anticipated during construction, and compliance with previously imposed conditions,  
38                  Council finds that the facility, with proposed changes, would continue to minimize and manage  
39                  solid waste and wastewater, resulting in minimal adverse impacts on surrounding and adjacent  
40                  areas from construction of the facility, with proposed changes.

41  
42  

---

<sup>62</sup> WRWAMD3Doc11. Request for Amendment 3, p. 11, 2018-09-18.

1     *Operations*

2

3     Operation of the facility, with proposed changes, would not result in increased solid waste as  
4     evaluated in the *Final Order on ASC*. Operation of the facility, with proposed changes, would  
5     not result in wastewater. As provided in the *Final Order on ASC*, the certificate holder indicated  
6     up to 6 cubic yards per month of solid waste would be generated during operations. Council  
7     previously imposed Public Services Condition 4 (OPR-PS-03) requiring that, during operation,  
8     the certificate holder implement a waste management plan. The condition requires that the  
9     certificate holder train employees to minimize and recycle solid waste; segregate hazardous  
10    and non-hazardous waste; and utilize a licensed waste hauler for offsite removal and transport  
11    to a licensed waste management facility.

12

13    Based on the foregoing analysis, the likelihood of potential adverse impacts on surrounding and  
14    adjacent areas from solid waste generated during operation of the facility, with proposed  
15    changes, is low based on the limited quantity of waste that could be generated. Moreover,  
16    compliance with previously imposed conditions would minimize potential operational solid  
17    waste.

18

19    **Conclusions of Law**

20

21    Based on the foregoing analysis, and subject to existing conditions, Council finds that that  
22    facility, with proposed changes, would continue to comply with the Council’s Waste  
23    Minimization standard.

24

25    **III.O. Division 23 Standards**

26

27    The Division 23 standards apply only to “nongenerating facilities” as defined in ORS  
28    469.503(2)(e)(K), except nongenerating facilities that are related or supporting facilities. The  
29    facility, with proposed changes, would not be a nongenerating facility as defined in statute and  
30    therefore Division 23 is inapplicable to the facility, with proposed changes.

31

32    **III.P. Division 24 Standards**

33

34    The Council’s Division 24 standards include specific standards for the siting of energy facilities,  
35    including wind projects, underground gas storage reservoirs, transmission lines, and facilities  
36    that emit carbon dioxide.

37

38    **III.P.1. Public Health and Safety Standards for Wind Energy Facilities: OAR 345-024-0010**

39

40    *To issue a site certificate for a proposed wind energy facility, the Council must find that the*  
41    *applicant:*

42

- 43        (1) *Can design, construct and operate the facility to exclude members of the public from*  
44        *close proximity to the turbine blades and electrical equipment.*



1  
2 (2) *Can design, construct and operate the facility to preclude structural failure of the tower*  
3 *or blades that could endanger the public safety and to have adequate safety devices and*  
4 *testing procedures designed to warn of impending failure and to minimize the*  
5 *consequences of such failure.*  
6

7 **Findings of Fact**  
8

9 OAR 345-024-0010 requires the Council to consider specific public health and safety standards  
10 related to wind energy facilities. Under this standard, the Council must evaluate a certificate  
11 holder’s proposed measures to exclude members of the public from proximity to the turbine  
12 blades and electrical equipment, and the certificate holder’s ability to design, construct and  
13 operate the facility, with proposed changes, to prevent structural failure of the tower or blades  
14 and to provide sufficient safety devices to warn of failure.  
15

16 *Potential Public Health and Safety Impacts from Proximity to Turbine Blades*  
17

18 The proposed larger wind turbines would increase the maximum blade tip height from 476 to  
19 499.7 feet, and would lower the minimum above-ground blade-tip clearance from 83 to 70.5  
20 feet. These proposed changes in wind turbine dimension could result in potential public health  
21 and safety impacts from increased proximity to turbine blades. However, the certificate holder  
22 describes that the facility, with proposed changes, would be located entirely on private property,  
23 and that access roads to wind turbines would be gated or locked when not in use.<sup>63</sup> The  
24 certificate holder describes that existing conditions are sufficient to minimize any increase in  
25 potential public health and safety risks from proximity to the proposed larger wind turbine  
26 blades, as evaluated below.  
27

28 Council previously imposed Land Use Condition 1 (GEN-LU-01) and Land Use Condition 16 (GEN-  
29 LU-06) imposing setback restrictions from wind turbines to property boundaries and road rights-  
30 of-way within both Morrow and Umatilla counties. As described in Section III.E. *Land Use*, the  
31 Council amends both conditions to establish setback requirements based on the certificate  
32 holder’s representation and to be consistent with county requirements. Based on the evaluation  
33 of safety devices and monitoring programs presented below, the Council considers that the  
34 facility design, including restricted access from locked gates, and setbacks imposed in the  
35 amended conditions, would be sufficient to minimize potential increases in public health and  
36 safety risks from proximity to the proposed larger wind turbine blades.  
37

38 Related to potential hazard impacts to navigable airspace, Council previously imposed Public  
39 Services Condition 9 (PRE-PS-04) requiring that, prior to construction, the certificate holder  
40 submit to the Department of Aviation and Federal Aviation Administration (FAA) Notice of  
41 Proposed Construction or Alteration (7460-1) forms identifying final facility component  
42 locations and requesting a Determination of No Hazard, as required under FAA regulations for

---

<sup>63</sup> WRWAMD3Doc11. Request for Amendment 3. Section 6.2.1. 2018-09-18.

1 final wind turbine siting. In RFA3, the certificate holder acknowledges that final wind turbine  
2 locations require approval from the FAA, and if any final wind turbine locations are not allowed  
3 by the FAA, the certificate holder asserts that mitigation options are available and would be  
4 implemented in order to obtain a No Hazard determination.

5  
6 The Council finds that compliance with the existing and amended conditions would continue to  
7 satisfy the requirements of the standard and ensure that the facility, with proposed changes, is  
8 designed, constructed, and operated to exclude members of the public from close proximity to  
9 the turbine blades.

10  
11 *Potential Impacts from Structural Failure of the Tower or Blades and Safety Devices and Testing*  
12 *Procedures to Warn of Impending Failure*

13  
14 The proposed changes in wind turbine dimensions could result in public health and safety risks  
15 from any potential increases in blade failure risks. The Council evaluates the sufficiency of  
16 previously imposed conditions related to safety devices and testing procedures to warn of  
17 impending failure and minimize potential increases in risk.

18  
19 The site certificate includes a number of existing conditions that were imposed to address  
20 sub(2) of the standard and which would continue to ensure that the certificate holder reduces  
21 the risk of potential impacts from structural failure of the wind turbine tower or blades. Public  
22 Health and Safety for Wind Facilities Condition 3 (GEN-WF-01) requires that turbine  
23 manufacturer’s recommendations for handling instruction and procedures are followed during  
24 construction, minimizing structural defects from improper handling. Public Health and Safety  
25 Standards for Wind Facilities Condition 4 (CON-WF-02) requires installation of self-monitoring  
26 devices on each wind turbine that would alert operators of dangerous conditions and would  
27 also automatically shut down wind turbines in the event of a mechanical problem.

28  
29 In the draft proposed order, the Department recommended Council amend Public Health and  
30 Safety Standards for Wind Facilities Condition 4 (CON-WF-02) to require that the certificate  
31 holder, prior to and during operations, submit an operational safety monitoring program that,  
32 at a minimum, includes a blade and tower inspection and reporting requirement. The intent of  
33 the reporting requirement is to allow the Department an opportunity to review causal factors in  
34 the event of tower or blade failure during operations. If the evaluation of causal factors  
35 identifies that tower or blade failure was preventable by the certificate holder, the Department  
36 maintains authority to issue citation of corrective actions or violation of the site certificate. The  
37 Council amends the condition, as recommended in the draft proposed order, as follows:

38  
39 **Public Health and Safety Standards for Wind Facilities Condition 4 (CON-WF-02), as**  
40 **amended:** Prior to and during operations ~~During construction~~, the certificate holder  
41 shall:

- 42 a. Install and maintain self-monitoring devices on each turbine, linked to sensors at  
43 the operations and maintenance building, connected to a fault annunciation panel

1 or supervisory control and data acquisition (SCADA) system to alert operators to  
2 potentially dangerous conditions.

3 b. The certificate holder shall maintain automatic equipment protection features in  
4 each turbine that would shut down the turbine and reduce the chance of a  
5 mechanical problem causing a fire. The certificate holder shall immediately remedy  
6 any dangerous conditions.

7 c. Submit to the Department materials or other documentation demonstrating the  
8 facility's operational safety-monitoring program and cause analysis program, for  
9 review and approval. The program shall, at a minimum, include requirements for  
10 regular turbine blade and turbine tower component inspections and maintenance,  
11 based on wind turbine manufacturer recommended frequency.

12 d. The certificate holder shall document inspection and maintenance activities  
13 including but not limited to date, turbine number, inspection type (regular or other),  
14 turbine tower and blade condition, maintenance requirements (i.e. equipment used,  
15 component repair or replacement description, impacted area location and size), and  
16 wind turbine operating status. This information shall be submitted to the  
17 Department pursuant to OAR 345-026-0080 in the facility's annual compliance  
18 report.

19 e. In the event of blade or tower failure, the certificate holder shall report the incident  
20 to the Department within 72 hours, in accordance with OAR 345-026-0170(1), and  
21 shall, within 90-days of blade or tower failure event, submit a cause analysis to the  
22 Department for its compliance evaluation.

23 [Final Order on ASC; AMD3]  
24

25 The Council finds that compliance with the existing and amended conditions would continue to  
26 satisfy the requirements of the standard and ensure that the facility, with proposed changes, is  
27 designed, constructed, and operated to preclude structural failure of the tower or blades that  
28 could endanger public safety, and that the facility, with proposed changes, would have  
29 adequate safety devices and testing procedures to warn of impending failure and minimize  
30 consequences of such failure, should it occur.

### 31 32 **Conclusions of Law**

33  
34 Based on the foregoing analysis, and subject to compliance with existing and amended site  
35 certificate conditions, the Council finds that the facility, with the proposed changes, would  
36 continue to comply with the Council's Public Health and Safety Standards for Wind Energy  
37 Facilities.

### 38 39 **III.P.2. Cumulative Effects Standard for Wind Energy Facilities [OAR 345-024-0015]**

40  
41 *To issue a site certificate for a proposed wind energy facility, the Council must find that the*  
42 *applicant can design and construct the facility to reduce cumulative adverse environmental*  
43 *effects in the vicinity by practicable measures including, but not limited to, the following:*  
44

- 1 (1) *Using existing roads to provide access to the facility site, or if new roads are needed,*
- 2 *minimizing the amount of land used for new roads and locating them to reduce adverse*
- 3 *environmental impacts.*
- 4 (2) *Using underground transmission lines and combining transmission routes.*
- 5 (3) *Connecting the facility to existing substations, or if new substations are needed,*
- 6 *minimizing the number of new substations.*
- 7 (4) *Designing the facility to reduce the risk of injury to raptors or other vulnerable wildlife in*
- 8 *areas near turbines or electrical equipment.*
- 9 (5) *Designing the components of the facility to minimize adverse visual features.*
- 10 (6) *Using the minimum lighting necessary for safety and security purposes and using*
- 11 *techniques to prevent casting glare from the site, except as otherwise required by the*
- 12 *Federal Aviation Administration or the Oregon Department of Aviation.*

### 13

### 14 **Findings of Fact**

### 15

16 This standard requires the use of practicable measures to reduce the cumulative adverse  
17 environmental effects by practicable measures.

#### 18

#### 19 *Access Roads*

#### 20

21 OAR 345-024-0015(1) encourages the use of existing roads for facility site access, minimizing  
22 the amount of land used for new roads, and locating new roads in such a manner that reduces  
23 adverse environmental impacts. The certificate holder is not proposing to expand or modify any  
24 access roads. Previously-approved access roads that would be constructed to serve the overall  
25 facility would be sited along farm field edges to limit overall impacts to soils, habitat and  
26 agricultural practices.

27

28 Soil Protection Conditions 1 (CON-SP-01) and 2 (CON-SP-02) require that, during construction,  
29 the certificate holder implement erosion and sediment control measures outlined in the NPDES  
30 1200-C permit and ESCP to reduce adverse environmental impacts from facility roads. Because  
31 the proposed larger wind turbines would not result in new permanent or temporary access  
32 roads, the Council continues to find that the certificate holder demonstrates that it would use  
33 existing roads where practicable to provide access to the site of the facility, with proposed  
34 changes, and where previously approved new roads would be utilized, they would be located to  
35 reduce adverse environmental impacts and constructed in a manner that minimizes the amount  
36 of land used.

#### 37

#### 38 *Transmission Lines and Substations*

#### 39

40 OAR 345-024-0015(2) and (3) encourage wind facilities to utilize underground transmission  
41 lines, combine transmission routes and minimize the number of new substations.

42

43 RFA3 does not propose new transmission lines or substations, or changes to the previously  
44 approved site boundary or micrositing corridor. Therefore, the Council finds that RFA3 would

1 not result in a significant adverse impact under OAR 345-024-0015(2) and (3) that was not  
2 addressed in a previous Council order and incorporate reasoning and analysis presented in *Final*  
3 *Order on ASC* by reference.

4  
5 *Wildlife Protection*

6  
7 OAR 345-024-0015(4) encourages facility design that reduces the risk of injury to raptors or  
8 other vulnerable wildlife in areas near wind turbines or electrical equipment.

9  
10 In RFA3, the certificate holder states that the proposed change in turbine dimensions could  
11 have a beneficial cumulative effect because fewer wind turbines would be sited if the proposed  
12 larger wind turbines are selected during final design. Because the certificate holder has not  
13 requested to reduce the maximum allowable number of wind turbines at the facility, and  
14 requests flexibility in its final facility design selection of wind turbines, the Council evaluates the  
15 sufficiency of existing site certificate conditions in addressing OAR 345-024-0015(4) based on a  
16 worst-case or maximum layout scenario (i.e. 292 of the proposed larger wind turbines).

17  
18 The proposed larger wind turbines would increase the maximum turbine blade tip height from  
19 476 feet, as previously approved, to 499.7 feet and increase rotor-swept diameter from 393  
20 feet, as previously approved, to 416.7 feet. The proposed changes in wind turbine type could  
21 result in increased bird and bat fatality risk from wind turbine collision. As discussed in Section  
22 III.H, *Fish and Wildlife Habitat*, the Council previously imposed Fish and Wildlife Habitat  
23 Condition 4 (PRE-FW-02) requiring the certificate holder to implement a Wildlife Monitoring  
24 and Mitigation Plan (WMMP). The WMMP, currently in draft form and included as Attachment  
25 E to this order, requires the certificate holder to conduct a post-construction bird and bat  
26 fatality monitoring study and an avian use and behavior study, both of which will provide  
27 important data that can be used in adaptive management.

28  
29 In addition, Council previously imposed Fish and Wildlife Habitat 6 (GEN-FE-02) requiring that  
30 the certificate holder design the facility to minimize raptor injury by adhering to Avian  
31 Powerline Interaction Committee suggested practices for raptor protection on powerlines and  
32 installing anti-perching devices on transmission pole tops and cross arms where poles are  
33 within the site or are located within one-quarter mile of any wind turbine. Additionally, as  
34 described in *Section III.I Threatened and Endangered Species*, there are no avian species listed  
35 as threatened or endangered by ODFW that are anticipated to occur in the facility analysis area.

36  
37 Based on compliance with other existing site certificate conditions, the certificate holder would  
38 implement the following measures to further reduce and avoid wildlife impacts:

- 39  
40
- 41 • Pre- and post-construction raptor nest monitoring, seasonal timing restrictions and  
42 avoidance requirements
  - 43 • Habitat mitigation, revegetation and monitoring
  - Weed control and monitoring

1 Subject to compliance with existing site certificate conditions, the Council finds the certificate  
2 holder continues to demonstrate that it can reduce cumulative adverse environmental effects  
3 in the vicinity by designing the facility, with proposed changes, to reduce the risk of injury to  
4 raptors or other vulnerable wildlife in areas near wind turbines or electrical equipment.

5  
6 *Visual Features*

7  
8 OAR 345-024-0015(5) encourages the certificate holder to design a facility to minimize adverse  
9 visual features.

10  
11 The visual features of the proposed larger wind turbines would be less than those evaluated in  
12 the *Final Order on ASC*, as the visual impacts evaluated in the *Final Order on ASC* were based on  
13 up to 292 wind turbines at 525-feet compared to the changes proposed in RFA3 of up to 200  
14 wind turbines at 499.7-feet. Therefore, the Council finds that RFA3 would not result in a  
15 significant adverse impact under OAR 345-024-0015(5) that was not addressed in a previous  
16 Council order.

17  
18 Based on compliance with existing site certificate conditions, the certificate holder would  
19 implement the following measures to reduce potential visual impacts from the facility:

- 20
- 21 • The O&M building would be designed and constructed to be generally consistent with  
22 the character of agricultural buildings used by farmers or ranchers in the area, and the  
23 buildings finished in a neutral color to blend with the surrounding landscape
  - 24 • Substation structures would be finished in neutral colors to blend with the surrounding  
25 landscape
  - 26 • Lighting would be kept to a minimum necessary, and designed to prevent offsite glare
  - 27 • No advertising or commercial signage would be displayed on any part of the proposed  
28 facility
  - 29 • Temporary impact areas would be restored and revegetated as soon as practicable  
30 following completion of construction
- 31

32 Based on the evidence in the record and subject to compliance with existing site certificate  
33 conditions, the Council relies on its previous reasoning and continues to find that the certificate  
34 holder demonstrates that it can reduce cumulative adverse environmental effects in the vicinity  
35 by designing the components of the facility, with proposed changes, to minimize adverse visual  
36 features.

37  
38 *Lighting*

39  
40 OAR 345-024-0015(6) requires the use of techniques to prevent casting glare from the site and  
41 the use of minimum lighting necessary for safety and security purposes, except as otherwise  
42 required by the Federal Aviation Administration (FAA) and the Oregon Department of Aviation.

1 RFA3 does not propose changes to previously evaluated exterior lighting of the facility  
2 substation and O&M building. Therefore, the Council finds that RFA3 would not result in a  
3 significant adverse impact under OAR 345-024-0015(4) that was not addressed in a previous  
4 Council order.

5  
6 Scenic Resources Condition 1 (GEN-SR-01) requires wind turbines to be equipped with the  
7 minimum turbine tower lighting required by FAA; O&M building and substation lighting to be  
8 shielded and directed downward to reduce glare; and minimum lighting necessary used during  
9 repairs and emergencies. Subject to compliance with existing site certificate conditions, the  
10 Council finds that the certificate holder continues to demonstrate that it can reduce cumulative  
11 adverse environmental effects in the vicinity by designing the components of the facility, with  
12 proposed changes, to minimize the adverse impacts of lighting.

13  
14 **Conclusions of Law**

15  
16 Based on the foregoing findings of fact and conclusions, and subject to compliance with the site  
17 certificate conditions, the Council finds that the facility, with proposed changes, would comply  
18 with the Council's Cumulative Effects Standards for Wind Energy Facilities.

19  
20 **III.P.3. Siting Standards for Transmission Lines: OAR 345-024-0090**

21  
22 *To issue a site certificate for a facility that includes any transmission line under Council*  
23 *jurisdiction, the Council must find that the applicant:*

24  
25 *(1) Can design, construct and operate the proposed transmission line so that alternating*  
26 *current electric fields do not exceed 9 kV per meter at one meter above the ground*  
27 *surface in areas accessible to the public;*

28 *(2) Can design, construct and operate the proposed transmission line so that induced*  
29 *currents resulting from the transmission line and related or supporting facilities will be*  
30 *as low as reasonably achievable.*

31  
32 **Findings of Fact**

33 This standard addresses safety hazards associated with electric fields around transmission lines.  
34 Section (1) of OAR 345-024-0090 sets a limit for electric fields from transmission lines of not  
35 more than 9 kV per meter at one meter above the ground surface in areas that are accessible to  
36 the public. Section (2) requires implementation of measures to reduce the risk of induced  
37 current.

38  
39 RFA3 does not propose changes to the previously approved 230 kV intraconnection  
40 transmission line or its location, and therefore does not apply to the proposed changes  
41 included in the amendment request. However, for the record, the Council finds that RFA3  
42 would not result in a significant adverse impact under OAR 345-024-0090(1) and (2) that was

1 not addressed in a previous Council order and incorporates reasoning and analysis presented in  
2 its previous final orders for the facility.

3  
4 The Council addressed the Siting Standards for Transmission Lines in section IV.Q of the *Final*  
5 *Order on the ASC* and found the facility to be in compliance with the standard. In the *Final*  
6 *Order on the ASC*, the Council found that the certificate holder could construct and operate the  
7 transmission lines so that alternating current electric fields do not exceed 9 kV per meter at one  
8 meter above the ground surface in areas accessible to the public. The Council further found  
9 that the certificate holder could design, construct and operate the transmission lines so that  
10 induced currents resulting from the transmission lines would be as low as reasonably  
11 achievable.

12  
13 Subsection (2) of the standard requires the Council to find that a certificate holder can design,  
14 construct, and operate transmission lines so that induced currents will be as low as reasonably  
15 achievable. The Council previously found that the facility would comply with this standard, as  
16 the certificate holder would provide appropriate grounding of fences and metal-roofed  
17 buildings in order to reduce the risk of induced current. The Council previously imposed Siting  
18 Standard Condition 1 (CON-TL-01) requiring that the certificate holder design, construct and  
19 operate the transmission line in accordance with the 2012 Edition National Electric Safety Code  
20 standards to reduce risk of induced current; and implement reasonable measures to reduce  
21 and manage potential human exposure to electromagnetic fields.

### 22 23 **Conclusion of Law**

24 For the reasons discussed above, and subject to compliance with the existing site certificate  
25 conditions, the Council finds that the facility, with proposed changes, would not result in a  
26 significant adverse impact under OAR 345-024-0090 that was not addressed in a previous  
27 Council order and would continue to comply with the Council’s Siting Standards for  
28 Transmission Lines.

### 29 30 **III.Q. Other Applicable Regulatory Requirements Under Council Jurisdiction**

31  
32 Under ORS 469.503(3) and under the Council’s General Standard of Review (OAR 345-022-  
33 0000), the Council must determine whether the proposed facility complies with “all other  
34 Oregon statutes and administrative rules...as applicable to the issuance of a site certificate for  
35 the proposed facility.” This section addresses the applicable Oregon statutes and administrative  
36 rules that are not otherwise addressed in Council standards, including noise control regulations,  
37 regulations for removal or fill of material affecting waters of the state, and regulations for  
38 appropriating ground water.



1 III.Q.1. Noise Control Regulations: OAR 340-035-0035

2  
3 *(1) Standards and Regulations:*

4 \*\*\*

5 *(b) New Noise Sources:*

6  
7 *(B) New Sources Located on Previously Unused Site:*

8  
9 *(i) No person owning or controlling a new industrial or commercial noise source*  
10 *located on a previously unused industrial or commercial site shall cause or*  
11 *permit the operation of that noise source if the noise levels generated or*  
12 *indirectly caused by that noise source increase the ambient statistical noise*  
13 *levels, L10 or L50, by more than 10 dBA in any one hour, or exceed the levels*  
14 *specified in Table 8, as measured at an appropriate measurement point, as*  
15 *specified in subsection (3)(b) of this rule, except as specified in subparagraph*  
16 *(1)(b)(B)(iii).*

17  
18 *(ii) The ambient statistical noise level of a new industrial or commercial noise*  
19 *source on a previously unused industrial or commercial site shall include all*  
20 *noises generated or indirectly caused by or attributable to that source including*  
21 *all of its related activities. Sources exempted from the requirements of section*  
22 *(1) of this rule, which are identified in subsections (5)(b) - (f), (j), and (k) of this*  
23 *rule, shall not be excluded from this ambient measurement.*

24  
25 *(iii) For noise levels generated or caused by a wind energy facility:*

26  
27 *(I) The increase in ambient statistical noise levels is based on an assumed*  
28 *background L50 ambient noise level of 26 dBA or the actual ambient*  
29 *background level. The person owning the wind energy facility may*  
30 *conduct measurements to determine the actual ambient L10 and L50*  
31 *background level.*

32 *(II) The "actual ambient background level" is the measured noise level at the*  
33 *appropriate measurement point as specified in subsection (3)(b) of this*  
34 *rule using generally accepted noise engineering measurement practices.*  
35 *Background noise measurements shall be obtained at the appropriate*  
36 *measurement point, synchronized with windspeed measurements of hub*  
37 *height conditions at the nearest wind turbine location. "Actual ambient*  
38 *background level" does not include noise generated or caused by the wind*  
39 *energy facility.*

40 *(III) The noise levels from a wind energy facility may increase the ambient*  
41 *statistical noise levels L10 and L50 by more than 10 dBA (but not above*  
42 *the limits specified in Table 8), if the person who owns the noise sensitive*  
43 *property executes a legally effective easement or real covenant that*  
44 *benefits the property on which the wind energy facility is located. The*

1                    *easement or covenant must authorize the wind energy facility to increase*  
2                    *the ambient statistical noise levels, L10 or L50 on the sensitive property by*  
3                    *more than 10 dBA at the appropriate measurement point.*

4                    *(IV) For purposes of determining whether a proposed wind energy facility*  
5                    *would satisfy the ambient noise standard where a landowner has not*  
6                    *waived the standard, noise levels at the appropriate measurement point*  
7                    *are predicted assuming that all of the proposed wind facility's turbines*  
8                    *are operating between cut-in speed and the wind speed corresponding to*  
9                    *the maximum sound power level established by IEC 61400-11 (version*  
10                   *2002-12). These predictions must be compared to the highest of either the*  
11                   *assumed ambient noise level of 26 dBA or to the actual ambient*  
12                   *background L10 and L50 noise level, if measured. The facility complies*  
13                   *with the noise ambient background standard if this comparison shows*  
14                   *that the increase in noise is not more than 10 dBA over this entire range*  
15                   *of wind speeds.*

16                   *(V) For purposes of determining whether an operating wind energy facility*  
17                   *complies with the ambient noise standard where a landowner has not*  
18                   *waived the standard, noise levels at the appropriate measurement point*  
19                   *are measured when the facility's nearest wind turbine is operating over*  
20                   *the entire range of wind speeds between cut-in speed and the windspeed*  
21                   *corresponding to the maximum sound power level and no turbine that*  
22                   *could contribute to the noise level is disabled. The facility complies with*  
23                   *the noise ambient background standard if the increase in noise over*  
24                   *either the assumed ambient noise level of 26 dBA or to the actual ambient*  
25                   *background L10 and L50 noise level, if measured, is not more than 10 dBA*  
26                   *over this entire range of wind speeds.*

27                   *(VI) For purposes of determining whether a proposed wind energy facility*  
28                   *would satisfy the Table 8 standards, noise levels at the appropriate*  
29                   *measurement point are predicted by using the turbine's maximum sound*  
30                   *power level following procedures established by IEC 61400-11 (version*  
31                   *2002-12), and assuming that all of the proposed wind facility's turbines*  
32                   *are operating at the maximum sound power level.*

33                   *(VII) For purposes of determining whether an operating wind energy facility*  
34                   *satisfies the Table 8 standards, noise generated by the energy facility is*  
35                   *measured at the appropriate measurement point when the facility's*  
36                   *nearest wind turbine is operating at the windspeed corresponding to the*  
37                   *maximum sound power level and no turbine that could contribute to the*  
38                   *noise level is disabled.*

39                   *\*\*\**

40                   **Findings of Fact**

41  
42                   The Department of Environmental Quality (DEQ) noise control regulations at OAR 340-035-0035  
43                   have been adopted by Council as the compliance requirements for EFSC-jurisdiction energy  
44                   facilities.

1 The analysis area for the Noise Control Regulation is the area within and extending 1-mile from  
2 the site boundary.

3

4 Noise generated by a wind energy facility located on a previously unused site must comply with  
5 two tests: the “ambient noise degradation test” and the “maximum allowable noise test.”

6 Under the ambient noise degradation test, facility-generated noise must not increase the  
7 ambient hourly L10 or L50 noise levels at any noise sensitive property by more than 10 dBA

8 when turbines are operating “between cut-in speed and the wind speed corresponding to the  
9 maximum sound power level.” To show that a facility complies with this test, the certificate

10 holder may use an assumed ambient hourly L50 noise level of 26 dBA or measure the actual  
11 ambient hourly noise levels at the receiver in accordance with the procedures specified in the

12 regulation. In this case, the certificate holder has elected to use an assumed ambient hourly L50  
13 noise level of 26 dBA.

14

15 To demonstrate compliance with the ambient noise degradation test, the noise generated  
16 during facility operation must not cause the hourly L<sub>50</sub> noise level at any noise-sensitive

17 property to exceed 36 dBA. However, OAR 340-035-0035(1)(b)(B)(iii)(III) relieves the certificate  
18 holder from having to show compliance with the ambient noise degradation test “if the person

19 who owns the noise sensitive property executes a legally effective easement or real covenant  
20 that benefits the property on which the wind energy facility is located” (a “noise waiver”).

21

22 Under the maximum allowable noise test at OAR 340-035-0035(1)(b)(B)(i) a wind energy facility  
23 may not exceed the noise levels specified in Table 8 of the noise rules, as represented in Table

24 2, *Statistical Noise Limits for Industrial and Commercial Noise Sources* below. Pursuant to OAR  
25 340-035-0035(1)(b)(B)(iii)(III), it is not possible for a property owner to waive an exceedance

26 under the maximum allowable noise test.  
27

**Table 2: Statistical Noise Limits for Industrial and Commercial Noise Sources**

Statistical Descriptor <sup>1</sup>	Maximum Permissible Hourly Statistical Noise Levels (dBA)	
	Daytime (7:00 AM - 10:00 PM)	Nighttime (10:00 PM - 7:00 AM)
L50	55	50
L10	60	55
L1	75	60

Notes:  
1. The hourly L50, L10 and L1 noise levels are defined as the noise levels equaled or exceeded 50 percent, 10 percent, and 1 percent of the hour, respectively.  
Source: OAR 340-035-0035, Table 8

28

29 *Potential Noise Impacts*

30

31 Potential noise impacts from construction and operation of the facility, with proposed changes,  
32 within the analysis area are presented below. The analysis area for the Noise Control Regulation

1 is the area within and extending 1-mile from the site boundary.

2  
3 *Construction*

4  
5 OAR 340-035-0035(5)(g) specifically exempts noise caused by construction activities. In RFA3,  
6 the certificate holder affirms that construction of the facility, with proposed changes, would not  
7 result in changes to previously evaluated construction activities. As evaluated in the *Final Order*  
8 *on ASC*, construction-related noise levels would be short-term and temporary and would not  
9 exceed a period of four weeks. In addition, due the linear nature of construction activities,  
10 noise levels would continue to decrease due to attenuation as construction of access roads and  
11 wind turbines progress away from noise sensitive receptor locations. Council previously  
12 imposed Noise Control Condition 1 (CON-NC-01) requiring that, during construction,  
13 combustion engine-powered equipment be equipped with exhaust mufflers; air-inlet silencers  
14 shrouds and shields be used, as appropriate; and requires that the certificate holder establish a  
15 noise complaint response system, including a system for the certificate holder to receive and  
16 resolve noise complaints.

17  
18 *Operations*

19  
20 The certificate holder provides noise modeling results of the facility, with proposed changes, in  
21 RFA3 Attachment 4 and explains that the results assume all wind turbines would be equipped  
22 with Low Noise Trailing Edge technology, and operating continuously and concurrently at the  
23 maximum manufacturer-rated sound level. For its analysis, the certificate holder assumed a  
24 modified layout utilizing 165 wind turbines and used the Computer Aided Noise Abatement  
25 (CadnaA), version 2018 MR1 software program to make the predictions of peak noise levels at  
26 noise-sensitive properties within the analysis area. The program includes sound propagation  
27 factors adopted from International Organization for Standardization’s (ISO) 9613-2  
28 “Attenuation of Sound during Propagation Outdoors” to account for geometric divergence,  
29 atmospheric absorption, reflection from surfaces, screening by topography and obstacles,  
30 terrain complexity and ground effects, source directivity factors, seasonal foliage effects, and  
31 meteorological conditions.

32  
33 The proposed changes in wind turbine dimensions result in potential maximum overall A-  
34 weighted sound power level output of 110.5 dBA, which includes +2 dBA to account for  
35 uncertainty, and represents an increase in A-weighted sound power level of the previously  
36 approved wind turbines at 107.0 dBA. In RFA3, the certificate holder provides a noise analysis  
37 of the facility, with proposed changes, including the following sources:<sup>64</sup>

---

<sup>64</sup> WRWAMD3Doc11. Request for Amendment 3. 2018-09-18. The noise analysis provided in RFA3 includes noise sources from the facility, with changes proposed under RFA2 (i.e. two proposed battery storage systems) and RFA3. While the RFA3 noise analysis includes noise sources from the proposed battery storage systems presented in RFA2, findings of fact and conclusions of law are focused on potential changes in operational noise from the proposed changes in wind turbine technologies.

- 1 • Wind turbines with Low Noise Trailing Edge technology (149 wind turbines at 110.5 dBA;  
2 16 wind turbines at 108.0 dBA)
- 3 • Substation transformers (1 160 MVA transformer at 98 dBA at Wheatridge East  
4 Substation; 2 225 MVA transformers at Wheatridge West Substation at 94 dBA)
- 5 • Battery storage systems (56 heating, ventilation and air conditioning modules at 103  
6 dBA; 28 power inverters at 93 dBA; and 28 distribution transformers at 72 dBA)

7  
8 Noise modeling results show that there are 19 noise sensitive receptors that would exceed the  
9 10 dBA threshold above ambient or assumed ambient noise (assumed ambient baseline is 26  
10 dBA, per OAR 340-035-0035(1)(b)(B)(iii)(I)); however, as described in RFA3, these 19 noise  
11 sensitive receptors are all “participating property owners,” meaning those landowners have  
12 signed a lease with the certificate holder and have indicated that they are willing to sign a noise  
13 waiver, if necessary.<sup>65</sup> The noise modeling results also show that the facility, with proposed  
14 changes, would not exceed the maximum allowable decibel threshold of 50 dBA at any noise  
15 sensitive receptor within the analysis area.

16  
17 Council previously imposed Noise Control Condition 2 (PRE-NC-01) requiring that, prior to  
18 construction, the certificate holder submit to the Department a noise assessment based on final  
19 facility design and layout, using the maximum sound power level for all noise-generating facility  
20 components and identifying the wind turbines that would be operated in Noise Reduction  
21 Operation (NRO) mode. The condition further requires that noise waivers necessary at noise  
22 sensitive receptor locations, where the ambient degradation noise level is exceeded, be  
23 secured and provided to the Department. In addition, Council previously imposed Noise Control  
24 Condition 3 (OPR-NC-01), Noise Control Condition 5 (OPR-NC-02), and Noise Control Condition  
25 5 (OPR-NC-03) requiring that, during operations, the certificate holder operate wind turbines in  
26 NRO mode; maintain a complaint response system to address noise compliances; and, if  
27 required by Council, monitor and record statistical noise levels to verify that operational noise  
28 from the facility complies with the noise control regulation, respectively.

29  
30 The certificate holder requests that flexibility to construct and operate the facility, as approved,  
31 be maintained, including the previously evaluated 292 1.7 MW wind turbine layout and 200 2.5  
32 MW layout. However, RFA3 includes a request to amend Noise Control Condition 2 (PRE-NC-01)  
33 and delete Noise Control Condition 5 (OPR-NC-03) to remove reference to wind turbines  
34 operating in NRO mode, as presented below:

35  
36 **Certificate Holder Proposed Amended Noise Control Condition 2 (PRE-NC-01):** Prior to  
37 construction, the certificate holder shall provide to the department:

- 38 A. Information that identifies the final design locations of all facility components to be  
39 built at the facility;
- 40 B. The maximum sound power level for the facility components and the maximum  
41 sound power level and octave band data for the turbine type(s) and transformers

---

<sup>65</sup> WRWAMD3Doc11. Complete Request for Amendment 3, Attachment 3. 2018-09-18.

1 selected for the facility based on manufacturers' warranties or confirmed by other  
2 means acceptable to the department;

- 3 C. The results of the noise analysis of the final facility design performed in a manner  
4 consistent with the requirements of OAR 340-035-0035(1)(b)(B) (iii)(IV) and (VI). The  
5 analysis must demonstrate to the satisfaction of the department that the total noise  
6 generated by the facility (including turbines and transformers) would meet the  
7 ambient noise degradation test and maximum allowable test at the appropriate  
8 measurement point for all potentially-affected noise sensitive properties, or that the  
9 certificate holder has obtained the legally effective easement or real covenant for  
10 expected exceedances of the ambient noise degradation test described (d) below.  
11 ~~The analysis must also identify the noise reduction operation (NRO) mode approach~~  
12 ~~that will be used during facility operation and include a figure that depicts the~~  
13 ~~turbines that will be operating in NRO mode and the associated dBA reduction level;~~  
14 ~~and,~~

- 15 D. For each noise-sensitive property where the certificate holder relies on a noise  
16 waiver to demonstrate compliance in accordance with OAR 340-035-  
17 0035(1)(b)(B)(iii)(III), a copy of the legally effective easement or real covenant  
18 pursuant to which the owner of the property authorizes the certificate holder's  
19 operation of the facility to increase ambient statistical noise levels L<sub>10</sub> and L<sub>50</sub> by  
20 more than 10 dBA at the appropriate measurement point. The legally effective  
21 easement or real covenant must: include a legal description of the burdened  
22 property (the noise sensitive property); be recorded in the real property records of  
23 the county; expressly benefit the property on which the wind energy facility is  
24 located; expressly run with the land and bind all future owners, lessees or holders of  
25 any interest in the burdened property; and not be subject to revocation without the  
26 certificate holder's written approval.

27 [Final Order on ASC]

28  
29 **Certificate Holder Proposed Amended Noise Control Condition 3 (OPR-NC-01):**

30 ~~During operation of the facility, the certificate holder shall only operate the facility in~~  
31 ~~the NRO mode that is identified prior to construction pursuant to Noise Control~~  
32 ~~Condition 2. After beginning operation of the facility, the certificate holder shall~~  
33 ~~include a certification in its annual Compliance Report that the NRO mode turbines~~  
34 ~~identified in the preconstruction analysis required by Noise Control Condition 2 are~~  
35 ~~operating at or below the identified dBA reduction level.~~

36 [Final Order on ASC]

37  
38 In order to maintain flexibility and approval of previously evaluated wind turbines and layouts,  
39 Council rejects the certificate holder's requested condition amendments. Council amends the  
40 conditions, as recommended in the draft proposed order to provide clarification and impose  
41 the NRO mode if required, based on final design layout, to satisfy the maximum allowable

1 decibel threshold of 50 dBA, as follows:<sup>66</sup>

2  
3 **Noise Control Condition 2 (PRE-NC-01), as amended:** Prior to construction, the certificate  
4 holder shall provide to the department:

- 5 A. Information that identifies the final design locations of all facility components to be  
6 built at the facility;
- 7 B. The maximum sound power level for the facility components and the maximum  
8 sound power level and octave band data for the turbine type(s) and transformers  
9 selected for the facility based on manufacturers' warranties or confirmed by other  
10 means acceptable to the department;
- 11 C. The results of the noise analysis of the final facility design performed in a manner  
12 consistent with the requirements of OAR 340-035-0035(1)(b)(B) (iii)(IV) and (VI). The  
13 analysis must demonstrate to the satisfaction of the department that the total noise  
14 generated by the facility (including turbines and transformers) would meet the  
15 ambient noise degradation test and maximum allowable test at the appropriate  
16 measurement point for all potentially-affected noise sensitive properties, or that the  
17 certificate holder has obtained the legally effective easement or real covenant for  
18 expected exceedances of the ambient noise degradation test described (d) below.  
19 The analysis must also identify the noise reduction operation (NRO) mode approach  
20 that will be used during facility operation and include a figure that depicts the  
21 turbines that will be operating in NRO mode and the associated dBA reduction level,  
22 if required to meet the maximum allowable decibel threshold of 50 dBA; and,
- 23 D. For each noise-sensitive property where the certificate holder relies on a noise  
24 waiver to demonstrate compliance in accordance with OAR 340-035-  
25 0035(1)(b)(B)(iii)(III), a copy of the legally effective easement or real covenant  
26 pursuant to which the owner of the property authorizes the certificate holder's  
27 operation of the facility to increase ambient statistical noise levels L<sub>10</sub> and L<sub>50</sub> by  
28 more than 10 dBA at the appropriate measurement point. The legally effective  
29 easement or real covenant must: include a legal description of the burdened  
30 property (the noise sensitive property); be recorded in the real property records of  
31 the county; expressly benefit the property on which the wind energy facility is  
32 located; expressly run with the land and bind all future owners, lessees or holders of  
33 any interest in the burdened property; and not be subject to revocation without the  
34 certificate holder's written approval.

35 [Final Order on ASC; AMD3]

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<sup>66</sup> WRWAMD3Doc14. DPO Comments Certificate Holder. 2018-10-16. On the record of the draft proposed order, the certificate holder requested changes to Recommended Amended Noise Control Conditions 2 and 3, including removal of reference to the Noise Reduced Operating (NRO) Mode and replacing with "noise reduction measure." The Department intended for the recommended amended language, as presented in the draft proposed order, to provide such flexibility, by confirming that NRO mode was only required if necessary to meet the maximum allowable decibel threshold of 50 dBA. Because the analysis of previously approved wind turbines utilized NRO mode in the "worst-case" modeling approach, and because the noise reducing mode was considered mitigation, the Department recommends Council not make changes to the conditions referencing general noise reduction measures, which has not been evaluated or described in RFA3.

1  
2 **Noise Control Condition 3 (OPR-NC-01), as amended**:-During operation of the  
3 facility, if required to meet the maximum allowable decibel threshold of 50 dBA, the  
4 certificate holder shall only operate the facility in the NRO mode that is identified  
5 prior to construction pursuant to Noise Control Condition 2. After beginning  
6 operation of the facility, the certificate holder shall include a certification in its  
7 annual Compliance Report that the NRO mode turbines identified in the  
8 preconstruction analysis required by Noise Control Condition 2 are operating at or  
9 below the identified dBA reduction level.

10 [Final Order on ASC; AMD3]

11  
12 **Conclusions of Law**

13  
14 Based on the foregoing findings, the Council finds that based upon compliance with existing and  
15 amended conditions the facility, with proposed changes, would continue to comply with the  
16 Noise Control Regulations in OAR 340-035-0035(1)(b)(B).

17  
18 **III.Q.2. Removal-Fill**

19  
20 The Oregon Removal-Fill Law (ORS 196.795 through 196.990) and Department of State Lands  
21 (DSL) regulations (OAR 141-085-0500 through 141-085-0785) require a removal-fill permit if 50  
22 cubic yards or more of material is removed, filled, or altered within any “waters of the state.”<sup>67</sup>  
23 The Council, in consultation with DSL, must determine whether a removal-fill permit is needed  
24 and if so, whether a removal-fill permit should be issued.

25  
26 The analysis area for potential impacts to wetlands and other waters of the state, as defined in  
27 the project order, is the area within the site boundary.

28  
29 **Findings of Fact**

30  
31 The proposed change in wind turbine dimensions would not result in changes to the previously  
32 approved micrositing corridor or site boundary. In RFA3, the certificate holder describes that  
33 the facility, with proposed changes, would not result in temporary or permanent impacts to  
34 waters of the state, and confirms that a removal-fill permit would not be needed. During the  
35 review of the ASC, DSL reviewed the wetland delineation report and on July 1, 2015 provided a  
36 concurrence letter, in which DSL agreed with the wetland delineation and classifications. The  
37 concurrence letter is valid through July 1, 2020. Therefore, the Council finds that the facility,  
38 with proposed changes, would continue to satisfy the requirements of the removal-fill law and  
39 that the certificate holder is not required to obtain a removal-fill permit.

40  
41  
42  

---

<sup>67</sup> ORS 196.800(15) defines “Waters of this state.” The term includes wetlands and certain other waterbodies.



1 **Conclusions of Law**

2

3 Based on the foregoing findings of fact and conclusions, the Council finds that a removal-fill  
4 permit is not needed for the facility, with proposed changes.

5

1        III.Q.3. Water Rights  
2

3        Under ORS Chapters 537 and 540 and OAR Chapter 690, the Oregon Water Resources  
4        Department (OWRD) administers water rights for appropriation and use of the water resources  
5        of the state. Under OAR 345-022-0000(1)(b), the Council must determine whether the facility  
6        would comply with these statutes and administrative rules. OAR 345-021-0010(1)(o)(F) requires  
7        that if a facility needs a groundwater permit, surface water permit, or water right transfer, that  
8        a decision on authorizing such a permit rests with the Council.  
9

10       Findings of Fact  
11

12       OAR 690 establishes the procedures and standards which shall be applied by the OWRD in the  
13       evaluation of applications for a permit to appropriate surface water, ground water, to construct  
14       a reservoir and store water, to use reserved water, or to use water stored in a reservoir.  
15

16       Construction and operation of the proposed larger wind turbines would not necessitate a  
17       groundwater permit, a surface water permit, or a water rights transfer. The certificate holder  
18       confirms that construction-related water, as described in ASC Exhibit O, would be obtained  
19       from municipal sources near the facility, including Hermiston Public Works, Stanfield Public  
20       Works, Boardman Public Works, or Port of Morrow. In RFA3, the certificate holder states that  
21       the Port of Morrow alone has stated that it can provide up to 6.5 million gallons of water per  
22       month, more than the certificate holder anticipates needing during a “worst case” facility  
23       demand for water. Based on the source of construction water, as described by the certificate  
24       holder, the facility, with proposed changes, would not need a groundwater permit, surface  
25       water permit, or water right transfer.  
26

27       Water used during operations would include uses at the previously approved O&M buildings, to  
28       be served by onsite permit-exempt wells, and would not change as a result of the proposed  
29       larger wind turbines. Council previously imposed Public Services Condition 2 (OPR-PS-02)  
30       requiring that, pursuant to ORS 537.765, the certificate holder demonstrate that water  
31       withdrawal would not exceed 5,000-gallons per day. Therefore, the Council finds that the  
32       facility, with proposed changes, would continue to satisfy the requirements of the Ground  
33       Water Act of 1955 or Water Resources Department rules.  
34

35       Conclusions of Law  
36

37       Based on the foregoing findings of fact, the Council concludes that the facility, with proposed  
38       changes, does not need a groundwater permit, surface water permit, or water right transfer.  
39

1 **IV. GENERAL CONCLUSIONS AND FINAL ORDER**

2  
3 Based on the findings and conclusions included in this order, the Council makes the following  
4 findings:

- 5  
6 1. The proposed facility modifications included in Request for Amendment 3 of the  
7 Wheatridge Wind Energy Facility site certificate complies with the requirements of  
8 the Oregon Energy Facility Siting Statutes, ORS 469.300 to 469.520.  
9  
10 2. The proposed facility modifications included in Request for Amendment 3 of the  
11 Wheatridge Wind Energy Facility site certificate complies with the standards  
12 adopted by the Council pursuant to ORS 469.501.  
13  
14 3. The proposed facility modifications included in Request for Amendment 3 of the  
15 Wheatridge Wind Energy Facility site certificate complies with all other Oregon  
16 statutes and administrative rules identified in the project order as applicable to the  
17 issuance of a site certificate for the proposed facility.  
18

19 Accordingly, the Council finds that the proposed facility modifications included in Request for  
20 Amendment 3 of the Wheatridge Wind Energy Facility site certificate complies with the General  
21 Standard of Review (OAR 345-022-0000). The Council finds, based on a preponderance of the  
22 evidence on the record, that the site certificate may be amended as requested.  
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1 **Final Order**

2

3 The Council approves Amendment 3 of the Wheatridge Wind Energy Facility site certificate.

4

**Issued this 16<sup>th</sup> day of November, 2018**

**The OREGON DEPARTMENT OF ENERGY**

By:   
\_\_\_\_\_  
**Barry Beyeler, Chair**  
**Energy Facility Siting Council**

5 **Attachments:**

6 Attachment A: Amended Site Certificate

7 Attachment B: Reviewing Agency Comments on preliminary Request for Amendment 3

8 Attachment C: Draft Proposed Order Comments and Index

9 Attachment D: Draft Habitat Mitigation Plan

10 Attachment E: Draft Revegetation Plan

11 Attachment F: Wildlife Monitoring and Mitigation Plan

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1 **Notice of the Right to Appeal**

2  
3 The right to appeal this order approving an amendment to a site certificate is provided in ORS  
4 469.403. Only those persons, including the certificate holder, who provided written comment  
5 on the record of the draft proposed order may seek judicial review as provided by OAR 345-  
6 027-0072(5). Issues eligible for judicial review are limited to the issues raised in that person’s  
7 written comments.

8  
9 To appeal you must file a petition for judicial review with the Supreme Court within 60 days  
10 from the day this order was served on you. If this order was personally delivered to you, the  
11 date of service is the date you received this order. If this order was mailed to you, the date of  
12 service is the date it was mailed, not the date you received it. If you do not file a petition for  
13 judicial review within the 60-day time period, you lose your right to appeal.

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**Attachment A: Amended Site Certificate**

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

**Second 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>

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# WHEATRIDGE WIND ENERGY FACILITY SITE CERTIFICATE

## **Attachments**

Attachment A            Facility Site Boundary Map

## **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; and *Final Order on Request for Amendment 3* issued on November 16, 2018. 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 3*; (2) *Final Order on Request for Amendment 1* (3) the *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 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 acres of privately owned land: 2,956 acres in Wheatridge East, 8,515 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, and 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.

## **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 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**

<b>Specification</b>	<b>Maximum (ft)</b>
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.	

#### 3.2 Related or Supporting Facilities

The facility includes the following related or supporting facilities described below and in greater detail in the *Final Order on the Application*:

- Electrical collection system (includes up to 88 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)

### Electrical Collection System

The electrical collection system includes up to 88 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 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 microsite 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-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
  - 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
  - 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-foot (30-meters) in diameter of temporary land disturbance per tower and approximately 32-foot (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, 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.

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.

## 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	The certificate holder shall begin construction of the facility within three years after the effective date of the site certificate. Under OAR 345-015-0085(9), the site certificate is effective upon execution by the Council chair and the applicant.[Final Order on ASC, General Standard Condition 1]
GEN-GS-02	The certificate holder shall complete construction of the facility within six years after the effective date of the site certificate.[Final Order on ASC, General Standard Condition 2]
GEN-GS-03	The certificate holder shall design, construct, operate, and retire the facility: <ul 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> </ul> [Final Order on ASC, Mandatory Condition 2] [OAR 345-027-0020(3)]
GEN-GS-04	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 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. [Final Order on ASC, Mandatory Condition 3] [OAR 345-027-0020(5)]
GEN-GS-05	If the certificate holder becomes aware of a significant environmental change or impact attributable to the facility, the certificate holder shall, as soon as possible, submit a written report to the department describing the impact on the facility and any affected site certificate conditions. [Final Order on ASC, Mandatory Condition 4] [OAR 345-027-0020(6)]
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 345-027-0020(10)]

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, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement and 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.</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>
<p><b>STANDARD: ORGANIZATIONAL EXPERTISE (OE) [OAR 345-022-0010]</b></p>	
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> <p>[Final Order on ASC, Organizational Expertise Condition 5]</p>

GEN-OE-02	<p>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.</p> <p>[Final Order on ASC, Organizational Expertise Condition 6]</p>
GEN-OE-03	<p>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.</p> <p>[Amendment #1 , Organizational Expertise Condition 9]</p>
<b>STANDARD: STRUCTURAL (SS) [OAR 345-022-0020]</b>	
GEN-SS-01	<p>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.</p> <p>[Final Order on ASC, Structural Standard Condition 2]</p>

**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> <ul 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></ul> <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> <ul 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></ul> <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> <ul style="list-style-type: none"><li>a. Paint the towers in alternating bands of white and red or aviation orange; and</li><li>b. Install aviation lighting as recommended by the Federal Aviation Administration.</li></ul> <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> <ul 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></ul> <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> <ol style="list-style-type: none"> <li>a. Outdoor night lighting at the collector substations and Operations and Maintenance Buildings must be <ol 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> </ol> </li> </ol> <p>[Final Order on ASC, Scenic Resources Condition 1]</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 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 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]</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>
<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 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:</p> <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, 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> <p>[Final Order on ASC, Structural Standard Condition 1]</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 facility construction. The SPCC plan shall include the measures described in Exhibit I of ASC and in the final order approving the site certificate.</p> <p>[Final Order on ASC, Soil Protection Condition 3]</p>
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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 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> </ol> <p>[Final Order on ASC, Land Use Condition 3]</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 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. [Final Order on ASC, Land Use Condition 15]</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. [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. [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. [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 \$18.1 million dollars (Q1 2015 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 Q1 2015 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 first quarter 2015 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 first quarter 2015 dollars 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]

**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 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 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]**

PRE-TE-01	<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>
PRE-TE-02	<p>In accordance with Fish and Wildlife Condition 3, 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>
PRE-TE-03	<p>To avoid potential impacts to Laurent’s milkvetch, the certificate holder must:</p> <ol style="list-style-type: none"><li data-bbox="293 1556 1437 1808">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 data-bbox="293 1808 1323 1869">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>a. Construction vehicles shall use previously disturbed areas including existing roadways and tracks.</li> <li>b. Temporary construction yards and laydown areas shall be located within the future footprint of permanent structures to the extent practicable.</li> <li>c. 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>d. 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.</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. 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> <table border="1" data-bbox="362 405 1438 621"> <thead> <tr> <th data-bbox="362 405 756 485"><u>Nesting Species</u></th> <th data-bbox="756 405 1078 485"><u>Buffer Size (Radius Around Nest Site):</u></th> <th data-bbox="1078 405 1438 485"><u>Avoidance Buffers in Effect from:</u></th> </tr> </thead> <tbody> <tr> <td data-bbox="362 485 756 531"><u>Western burrowing owl</u></td> <td data-bbox="756 485 1078 531"><u>0.25 mile</u></td> <td data-bbox="1078 485 1438 531"><u>April 1 to August 15</u></td> </tr> <tr> <td data-bbox="362 531 756 577"><u>Ferruginous hawk</u></td> <td data-bbox="756 531 1078 577"><u>0.25 mile</u></td> <td data-bbox="1078 531 1438 577"><u>March 15 to August 15</u></td> </tr> <tr> <td data-bbox="362 577 756 621"><u>Swainson's hawk</u></td> <td data-bbox="756 577 1078 621"><u>0.25 mile</u></td> <td data-bbox="1078 577 1438 621"><u>April 1 to August 15</u></td> </tr> </tbody> </table> <p>[Final Order on ASC; AMD3 Fish and Wildlife Habitat Condition 5]</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>
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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>												
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>												
<b>STANDARD: HISTORIC, CULTURAL, AND ARCHAEOLOGICAL RESOURCES (HC) [OAR 345-022-0090]</b>													
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>												

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 a DEQ-approved operational SPCC plan, if determined to be required by DEQ. If an SPCC plan is not required by DEQ, 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 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</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> </ul> <p>Reporting procedures in case of an accidental spill or release [Final Order on ASC, Soil Protection Condition 5]</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. [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 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>



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PRO-PS-03	<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.</p> <p>[Final Order on ASC, Public Services Condition 22</p>
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## 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 345-025-0006(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>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>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>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 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 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: 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. [Final Order on ASC, Public Services Condition 2]</p>

OPR-PS-03	<p>During operation, the certificate holder shall implement a waste management plan that includes but is not limited to the following measures:</p> <ol style="list-style-type: none"> <li>a. Training employees to minimize and recycle solid waste.</li> <li>b. Recycling paper products, metals, glass, and plastics.</li> <li>c. Recycling used oil and hydraulic fluid.</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, non-recyclable 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> </ol> <p>[Final Order on ASC, Public Services Condition 4]</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 is 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]</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>
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<p>OPR-NC-02</p>	<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>
<p>OPR-NC-03</p>	<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>The certificate holder is obligated to retire the facility upon permanent cessation of construction or operation. If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council 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 OAR 345-027-0020(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>

## **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: 11/14/2018

**WHEATRIDGE WIND ENERGY, LLC**

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

Date: November 29, 2018

Attachment A  
Facility Site Boundary Map  
(ASC Exhibit C, Figure C-2)

Wheatridge Wind Energy



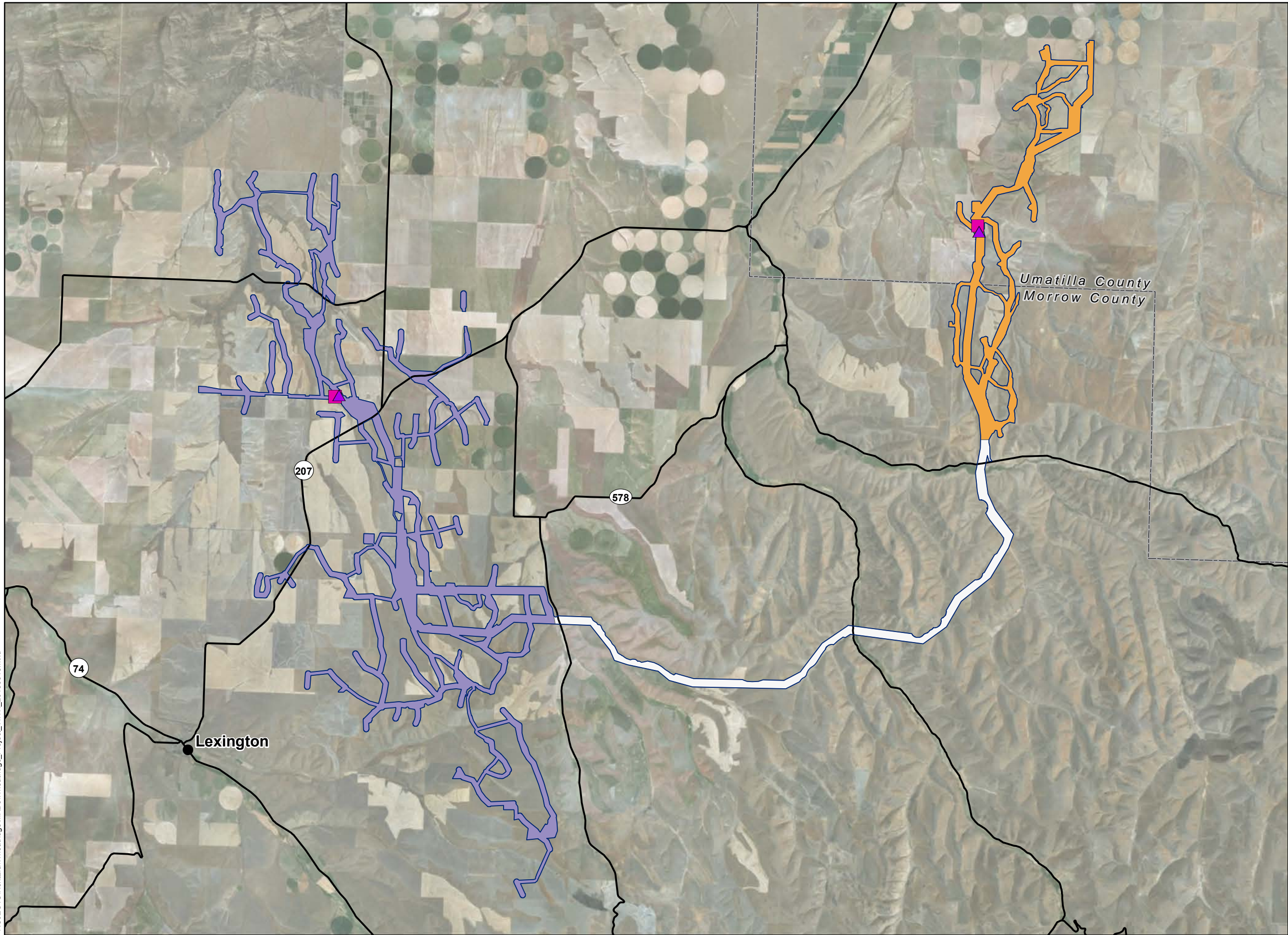
Figure 1  
Site Boundary and  
Energy Storage Sites

MORROW AND UMATILLA COUNTIES, OR

- EFSC Site Boundary
- Wheatridge East
- Intraconnection Line Corridor
- Wheatridge West
- Substation
- Proposed Energy Storage
- City/Town
- County Boundary
- Secondary Road



Reference Map



P:\GIS\_PROJECTS\NextEra\Wheatridge\MXD\Wheatridge\_Project\_11171\_20180518.mxd

1:130,000 WGS 1984 UTM Zone 11N

0 0.5 1 2 3 4 Miles

**Attachment B: Reviewing Agency Comments on  
preliminary Request for Amendment 3**

## ESTERSON Sarah \* ODOE

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**From:** CAINES Jeff <Jeff.CAINES@aviation.state.or.us>  
**Sent:** Wednesday, June 20, 2018 4:40 PM  
**To:** ESTERSON Sarah \* ODOE  
**Cc:** WOODS Maxwell \* ODOE; Sandra Pointer (Lexington Airport)  
**Subject:** RE: Wheatridge Wind Energy Facility - Preliminary Request for Amendment 2 of Site Certificate - Proposed Larger Turbines - Request for ODA Review/Comment

Sarah:

Thank you for allowing ODA to comment on the proposed changes to the Wheatridge Wind Energy Facility.

It is my understanding that the Wheatridge project removed approximately 4-5 proposed turbines that could have an effect on the Lexington airport. I have contacted the airport sponsor and did confirm that turbines were removed and that there would be no adverse impacts to the Lexington airport.

ODA does not regulate private use airports, i.e., West Buttercreek airport, in the same manner as Lexington. However, I understand that the West Buttercreek airport is approximately 4 miles away from the proposed energy site, therefore this project should not pose an impact to the operational use of the airport.

Any planes flying in the area for agricultural use (i.e., crop dusting) should be aware that turbines are in the area and needs to work with the land owner(s) to identify the location of the proposed structures.

ODA would request that the applicant submit updated FAA forms 7460-1 if the determinations are older than 18 months, as specified by 14 CFR Part 77. ODA will defer to the FAA for their determination since the structures are over 200 feet in height, knowing that no impact to the Lexington airport will take place.

Thank you again for allowing ODA to comment. Please feel free to contact me if you or the applicant have any questions.

Jeff

**JEFF CAINES, AICP**  
OREGON DEPARTMENT OF AVIATION  
AVIATION PLANNER / SCIP COORDINATOR



**OFFICE** 503-378-2529  
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**WEBSITE** [www.oregon.gov/aviation](http://www.oregon.gov/aviation)

3040 25th Street SE, Salem, OR 97302

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**From:** ESTERSON Sarah \* ODOE [mailto:Sarah.Esterson@oregon.gov]  
**Sent:** Friday, June 15, 2018 12:17 PM  
**To:** CAINES Jeff  
**Cc:** WOODS Maxwell \* ODOE  
**Subject:** Wheatridge Wind Energy Facility - Preliminary Request for Amendment 2 of Site Certificate - Proposed Larger Turbines - Request for ODA Review/Comment

Jeff,

This email is to inform the Oregon Department of Aviation of the Oregon Department of Energy's receipt of the preliminary Request for Amendment 2 (pAMD2) for the Wheatridge Wind Energy Facility Site Certificate. The Wheatridge Wind Energy Facility is an approved but not yet constructed wind energy facility, to be located in Morrow and Umatilla counties, with up to 292 wind turbines and a maximum capacity of 500 megawatts..

The pAMD2 requests Council approval to construct and operate larger wind turbines and two battery storage systems.

The proposed larger wind turbines would change the previously approved turbine dimensions including: increase turbine hub height (278 to 291.3 feet), increase maximum blade tip height (476 to 499.7 feet), increase maximum blade length (197 to 204.1 feet), lower the minimum ground clearance (83 to 70.5 feet), and increase rotor diameter (393 to 416.7 feet).

The proposed battery storage systems would consist of lithium-ion batteries contained in a building or series of modular containers and would include approximately 18 inverters and associated step-up transformers, as well as interconnecting facilities (control house, protective device and power transformer). The proposed battery storage systems may include ground-level cooling equipment, power conditioning systems, distribution and auxiliary transformers. The proposed battery storage systems would be located adjacent to the previously approved substation and operation and maintenance building sites and would each result in up to 5 acres of new permanent disturbance. One of these sites would be located within Umatilla County.

The Department has already requested additional information from the certificate holder, and the certificate has provided responses specific to the proposed larger turbines. Specifically, please see the information request and response below:

**A. Response to RAI-25.**

*Public Health and Safety Standards for Wind Energy Facilities does not address whether or how the increase in total maximum blade tip length from 476 to 499.7-ft could impact the certificate holder's ability to design, construct and operate the turbines to exclude members of the public, specifically users of airspace associated with Lexington and West Buttercreek airports and private airstrips from close proximity to turbine blades. Describe the potential impacts and identify how those impacts would not impact the certificate holders' ability to operate the facility in a manner that would exclude members of the public from close proximity to turbine blades.*

Response: Because the turbines are greater than 200 feet in height, the certificate holder is required to submit a Notice of Proposed Construction or Alteration form (known as FAA Form 7460-1) to both the Federal Aviation Administration (FAA) and the Oregon Department of Aviation (ODA), in order for the FAA and ODA to assess potential hazards to air safety and air navigation. In 2016, the FAA determined that the turbines proposed at that time, at a height of 499 feet about ground level, were in compliance with federal aviation safety standards and subsequently issued favorable Determinations of No Hazard to Air Navigation. Subsequent to that determination, Wheatridge micro-sited 63 turbines, resulting in the need for new aeronautical studies. Per Public Services Condition No. 9, the certificate holder will secure new aeronautical studies for these new locations. Although the certificate holder does not anticipate any issues, should the FAA find that the impact of one or more of these turbines exceeds an acceptable threshold of impact, mitigation options are available and will be implemented.

My questions are:

- Should we request that the certificate holder describe both the acceptable threshold of impact and potential mitigation options?
- The certificate holder references Determinations of No Hazard for 499' turbines.
  - o Does ODA have these on file?

- Would a new 7460 evaluation be needed for a 499.7' turbine, or just those that represent a new location?

Let me know if you have availability next week to discuss.

Thanks,  
Sarah

**Sarah T. Esterson**

Energy Facility Siting Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
P:(503) 373-7945  
C: (503) 385-6128

[Oregon.gov/energy](http://Oregon.gov/energy)



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**From:** Marshall, Jesse [mailto:JESSE.MARSHALL@nexteraenergy.com]

**Sent:** Monday, June 11, 2018 4:02 PM

**To:** ESTERSON Sarah \* ODOE <Sarah.Esterson@oregon.gov>

**Cc:** Castro, Scott <Scott.Castro@nexteraenergy.com>; Carrie Konkol (carrie.konkol@tetrattech.com) <carrie.konkol@tetrattech.com>; Curtiss, Sarah Stauffer (sarah.curtiss@stoel.com) <sarah.curtiss@stoel.com>; Filippi, David (david.filippi@stoel.com) <david.filippi@stoel.com>; Solsby, Anneke (Anneke.Solsby@tetrattech.com) <Anneke.Solsby@tetrattech.com>; WOODS Maxwell \* ODOE <Maxwell.Woods@oregon.gov>; RATCLIFFE Jesse D <Jesse.D.RATCLIFFE@state.or.us>; CORNETT Todd \* ODOE <Todd.Cornett@oregon.gov>; ROWE Patrick G <Patrick.G.ROWE@state.or.us>; Pappalardo, Mike <MIKE.PAPPALARDO@nexteraenergy.com>

**Subject:** RE: Department Response to Wheatridge Wind Energy, LLC's Amendment Determination Request and pRFA2 Determination and RAIs

Ms. Esterson:

Thank you for forwarding along the Oregon Department of Energy's ("Department") Determination on Wheatridge Wind Energy, LLC's ("Wheatridge") Amendment Determination Request, as well as the Department's requests for additional information ("RAIs") on Request for Amendment 2 ("RFA2"). This is to confirm receipt of those materials. As requested, the Wheatridge team will assemble the information requested in the RAIs and submit to the Department by June 29, 2018.

In addition, in light of the RAIs and given that the Department is still re-evaluating whether Type B review is the appropriate procedural process for RFA2, we wanted to provide clarification on several issues that may inform the Department's determination on the appropriate review path. Specifically, given that there are only a few RAIs related to modified range of turbine specifications, we are providing advance responses on those RAIs. (Note that we will include these in the full RAI response table later this month).

Although we continue to believe that the Type B review process is appropriate for both the modified range of turbine specifications and the addition of battery storage for the reasons outlined in our May 18, 2018 submittal, we request that you make separate review path determinations on each proposed change. That way, Wheatridge may evaluate whether it would be advantageous to separate the proposed modifications into two separate requests for amendment.

**A. Responses to RAI-5.**

*Confirm whether larger cranes would be needed during wind turbine installation. If larger cranes would be needed, confirm whether a wider crane path would be needed than was previously evaluated (at 39 feet).*

Response: Larger cranes will not be needed during wind turbine installation. Cranes will operate within the crane path that was previously evaluated.

*Confirm whether larger cranes would be needed during routine operations and maintenance activities, such as blade repair and blade replacement, and whether the previously evaluated permanent turbine pad impact area (65-ft diameter circle) would continue to provide adequate space for the necessary equipment.*

Response: Larger cranes will not be needed during routine operations and maintenance activities. The previously evaluated permanent turbine pad impact area will continue to provide adequate space for the necessary equipment.

*Describe frequency of anticipated routine operations and maintenance (O&M) activities, such as blade repair or replacement, and whether this differs from the frequency of O&M activities associated with the previously evaluated turbines.*

Response: The frequency of anticipated routine operations and maintenance activities, such as blade repair or replacement, will remain the same as those associated with the previously evaluated turbines.

*Evaluate whether the previously provided construction schedule (ASC Exhibit B: 18-month duration, phased) continues to represent the construction schedule for the proposed larger turbines and battery storage systems.*

Response: The previously provided construction schedule continues to represent the construction schedule for the proposed larger turbines and battery storage systems.

*Describe whether the previously evaluated peak number of workers needed during construction would continue to represent a worst-case scenario related to impacts to public services.*

Response: The previously evaluated peak number of workers needed during construction will continue to represent a worst-case scenario related to impacts to public services.

**B. Response to RAI-24.**

*Public Health and Safety Standards for Wind Energy Facilities does not address whether or how the lowering of the wind turbine minimum blade tip clearance could impact the certificate holder's ability to design, construct and operate the turbines to exclude members of the public from close proximity to the turbine blades. Describe the potential impacts to public health and safety from lowering of the minimum blade tip clearance; describe how the certificate holder would continue to be able to operate the facility to exclude members of the public from close proximity to blades; and, identify whether any new or amended conditions are necessary to satisfy the standard.*

Response: The lowering of the wind turbine minimum blade tip clearance will not impact the certificate holder's ability to design, construct and operate the turbines to exclude members of the public from close proximity to the turbine blades. As outlined in the Final Order, (1) the facility is located entirely on private property which will restrict public access to turbine and other facility component locations; (2) access roads improved or developed for proposed facility construction and operation will be gated or locked, when not actively in use, to limit accessibility; and (3) pad-mounted step-up transformers will be enclosed in steel boxes. In addition, substations and the proposed battery storage area will be within fenced and locked areas, and all turbine towers will be located within the minimum safety setbacks of 110 percent of the maximum blade tip height from public roads, and 100 percent from non-participating landowners. With these measures in place, no new or amended conditions are necessary to ensure that the certificate holder can design,



construct and operate the facility to exclude members of the public from close proximity to the turbine blades and electrical equipment

**C. Response to RAI-25.**

*Public Health and Safety Standards for Wind Energy Facilities does not address whether or how the increase in total maximum blade tip length from 476 to 499.7-ft could impact the certificate holder's ability to design, construct and operate the turbines to exclude members of the public, specifically users of airspace associated with Lexington and West Buttercreek airports and private airstrips from close proximity to turbine blades. Describe the potential impacts and identify how those impacts would not impact the certificate holders' ability to operate the facility in a manner that would exclude members of the public from close proximity to turbine blades.*

Response: Because the turbines are greater than 200 feet in height, the certificate holder is required to submit a Notice of Proposed Construction or Alteration form (known as FAA Form 7460-1) to both the Federal Aviation Administration (FAA) and the Oregon Department of Aviation (ODA), in order for the FAA and ODA to assess potential hazards to air safety and air navigation. In 2016, the FAA determined that the turbines proposed at that time, at a height of 499 feet about ground level, were in compliance with federal aviation safety standards and subsequently issued favorable Determinations of No Hazard to Air Navigation. Subsequent to that determination, Wheatridge micro-sited 63 turbines, resulting in the need for new aeronautical studies. Per Public Services Condition No. 9, the certificate holder will secure new aeronautical studies for these new locations. Although the certificate holder does not anticipate any issues, should the FAA find that the impact of one or more of these turbines exceeds an acceptable threshold of impact, mitigation options are available and will be implemented.

Thank you for your review of these advance responses.

Sincerely,  
Jesse Marshall

**Jesse Marshall**  
**NextEra Energy Resources**  
Project Director  
(760) 846-4421  
[jesse.marshall@nee.com](mailto:jesse.marshall@nee.com)

---

**From:** ESTERSON Sarah \* ODOE [<mailto:Sarah.Esterson@oregon.gov>]

**Sent:** Friday, June 08, 2018 1:50 PM

**To:** Pappalardo, Mike

**Cc:** Marshall, Jesse; Castro, Scott; Carrie Konkol ([carrie.konkol@tetrattech.com](mailto:carrie.konkol@tetrattech.com)); Curtiss, Sarah Stauffer ([sarah.curtiss@stoel.com](mailto:sarah.curtiss@stoel.com)); Filippi, David ([david.filippi@stoel.com](mailto:david.filippi@stoel.com)); Solsby, Anneke ([Anneke.Solsby@tetrattech.com](mailto:Anneke.Solsby@tetrattech.com)); WOODS Maxwell \* ODOE; RATCLIFFE Jesse D; CORNETT Todd \* ODOE; ROWE Patrick G

**Subject:** Department Response to Wheatridge Wind Energy, LLC's Amendment Determination Request and pRFA2 Determination and RAIs

CAUTION - EXTERNAL EMAIL

Mike,

Per our discussion, please find the attached two Department determinations:

- ODOE ADR Determination: Department determines site certificate amendment is required for the proposed facility modifications based on evaluation of OAR 345-027-0050(4) criteria.
- Determination Letter and RAIs: Department determines preliminary Request for Amendment 2 (pRFA2) incomplete and requests additional information (RAI) to support the evaluation of compliance with Council

standards and evaluation of new or amended conditions. (Note: Word Version of RAI table provided for ease of review/response).

If requested, NextEra may refer the Department's amendment determination to Council for concurrence, modification or rejection. In order to be included on the June 29, 2018 Council agenda, please let us know by June 12, 2018 if NextEra chooses to refer the Department amendment determination to Council.

In addition, please provide responses to the pRFA2 request for additional information by June 29, 2018. Please let us know if additional time is needed to respond.

The Department intends to provide its determination on the re-evaluation of the Type B review ADR next week.

Please do not hesitate to contact myself, Todd or Max with questions or comments.

Thanks,  
Sarah

**Sarah T. Esterson**  
Energy Facility Siting Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
P:(503) 373-7945  
C: (503) 385-6128

[Oregon.gov/energy](http://Oregon.gov/energy)



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**From:** Pappalardo, Mike [<mailto:MIKE.PAPPALARDO@nexteraenergy.com>]  
**Sent:** Friday, May 18, 2018 3:30 PM  
**To:** ESTERSON Sarah \* ODOE <[Sarah.Esterson@oregon.gov](mailto:Sarah.Esterson@oregon.gov)>  
**Cc:** Marshall, Jesse <[JESSE.MARSHALL@nexteraenergy.com](mailto:JESSE.MARSHALL@nexteraenergy.com)>; Castro, Scott <[Scott.Castro@nexteraenergy.com](mailto:Scott.Castro@nexteraenergy.com)>; Carrie Konkol ([carrie.konkol@tetrattech.com](mailto:carrie.konkol@tetrattech.com)) <[carrie.konkol@tetrattech.com](mailto:carrie.konkol@tetrattech.com)>; Curtiss, Sarah Stauffer ([sarah.curtiss@stoel.com](mailto:sarah.curtiss@stoel.com)) <[sarah.curtiss@stoel.com](mailto:sarah.curtiss@stoel.com)>; Filippi, David ([david.filippi@stoel.com](mailto:david.filippi@stoel.com)) <[david.filippi@stoel.com](mailto:david.filippi@stoel.com)>; Solsby, Anneke ([Anneke.Solsby@tetrattech.com](mailto:Anneke.Solsby@tetrattech.com)) <[Anneke.Solsby@tetrattech.com](mailto:Anneke.Solsby@tetrattech.com)>; WOODS Maxwell \* ODOE <[Maxwell.Woods@oregon.gov](mailto:Maxwell.Woods@oregon.gov)>; RATCLIFFE Jesse D <[Jesse.D.RATCLIFFE@state.or.us](mailto:Jesse.D.RATCLIFFE@state.or.us)>; CORNETT Todd \* ODOE <[Todd.Cornett@oregon.gov](mailto:Todd.Cornett@oregon.gov)>  
**Subject:** Submittal of RFA 2 for Wheatridge Wind Energy Facility, and Request for Reconsideration for the Wheatridge Wind Energy, LLC's Amendment Determination Request

Dear Ms. Esterson:

Attached please find a second Request for Amendment ("RFA 2") for the Wheatridge Wind Energy, LLC ("Wheatridge"), Wheatridge Wind Energy Facility ("Project"). In RFA 2, Wheatridge seeks concurrence on a modified range of turbine specifications for use at the Project. In addition, Wheatridge seeks to add energy storage as a related and supporting facility. With this submittal, we are also formally requesting that the Oregon Department of Energy ("Department") reevaluate its April 25, 2018 determination ("Department Response") that RFA 2 should be subject to the Department's Type A amendment review process.

Please feel free to contact me at any time if you have any questions or concerns regarding this submittal.

Sincerely,

Mike Pappalardo | [Environmental Manager](#)

[NextEra Energy Resources](#) | 3256 Wintercreek Drive | Eugene, OR 97405

office: 541.302.1345 | cell: 541.206.1005 | email: [mike.pappalardo@nexteraenergy.com](mailto:mike.pappalardo@nexteraenergy.com)



## ESTERSON Sarah \* ODOE

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**From:** Steve Cherry <Steve.P.Cherry@state.or.us>  
**Sent:** Friday, June 22, 2018 9:25 AM  
**To:** ESTERSON Sarah \* ODOE; REIF Sarah J; CHERRY Steve P  
**Cc:** WOODS Maxwell \* ODOE  
**Subject:** RE: Wheatridge Wind Energy Facility - Preliminary Request for Amendment 2 of Site Certificate - ODFW Review Request

Sarah,

ODFW does not have any concerns about the current monitoring plan's effectiveness to determine mortality for this project with the proposed change in turbine size. The only comment I would make is that the mitigation and reveg plans need to be updated to include the permanent and temporary impacts from the change in the layout (i.e. battery storage systems, and potential for change in turbine layout due to turbine size). Please let me know if you have any more questions.

Steve

---

**From:** ESTERSON Sarah \* ODOE [mailto:Sarah.Esterson@oregon.gov]  
**Sent:** Friday, June 15, 2018 11:24 AM  
**To:** REIF Sarah J; CHERRY Steve P  
**Cc:** WOODS Maxwell \* ODOE  
**Subject:** Wheatridge Wind Energy Facility - Preliminary Request for Amendment 2 of Site Certificate - ODFW Review Request

Sarah and Steve,

On May 18, 2018, the Oregon Department of Energy received preliminary Request for Amendment 2 (pAMD5) for the Wheatridge Wind Energy Facility Site Certificate (link provided below). The Wheatridge Wind Energy Facility is an approved but not yet constructed wind energy facility, to be located in Morrow and Umatilla counties, with up to 292 wind turbines and a maximum capacity of 500 megawatts..

The pAMD2 requests Council approval to construct and operate larger wind turbines and two battery storage systems.

The proposed larger wind turbines would change the previously approved turbine dimensions including: increase turbine hub height (278 to 291.3 feet), increase maximum blade tip height (476 to 499.7 feet), increase maximum blade length (197 to 204.1 feet), lower the minimum ground clearance (83 to 70.5 feet), and increase rotor diameter (393 to 416.7 feet).

The proposed battery storage systems would consist of lithium-ion batteries contained in a building or series of modular containers and would include approximately 18 inverters and associated step-up transformers, as well as interconnecting facilities (control house, protective device and power transformer). The proposed battery storage systems may include ground-level cooling equipment, power conditioning systems, distribution and auxiliary transformers. The proposed battery storage systems would be located adjacent to the previously approved substation and operation and maintenance building sites and would each result in up to 5 acres of new permanent disturbance.

We would like to request ODFW review and comment on the amendment request by **June 29, 2018**. In particular, we have the following question:

- Does ODFW consider the fatality monitoring program sufficient (i.e. sample size of 50 turbines) to monitor/mitigate for potential bird/bat species during operation of the proposed larger turbines?

The amendment request is attached for reference, along with the WMMP as reviewed/approved in draft format during the application process.

Let me know if you have questions and whether the June 29, 2019 review timeline is feasible.

Thanks,  
Sarah

**Sarah T. Esterson**

Energy Facility Siting Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
P:(503) 373-7945  
C: (503) 385-6128

[Oregon.gov/energy](http://Oregon.gov/energy)



## ESTERSON Sarah \* ODOE

---

**From:** Carla McLane <cmclane@co.morrow.or.us>  
**Sent:** Monday, July 2, 2018 10:45 AM  
**To:** ESTERSON Sarah \* ODOE  
**Cc:** RUSSELL Don; Jim Doherty; Melissa Lindsay; WOODS Maxwell \* ODOE; Darrell Green; 'Marshall, Jesse'; Sandra Pointer  
**Subject:** RE: Wheatridge Wind Energy Facility - Preliminary Request for Amendment 2 of Site Certificate - Special Advisory Group Review Request by July 6, 2018  
**Attachments:** RFA2 Comment letter 07022018 signed.pdf

Sarah,  
Attached please find our comment letter for the WRW pAMD2.  
Let me know if you have any questions or follow up.

Have a great 4<sup>th</sup> of July!  
Carla

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**From:** ESTERSON Sarah \* ODOE [mailto:Sarah.Esterson@oregon.gov]  
**Sent:** Friday, June 15, 2018 11:44 AM  
**To:** Carla McLane <cmclane@co.morrow.or.us>  
**Cc:** Don Russell <drussell@co.morrow.or.us>; Jim Doherty <jdoherty@co.morrow.or.us>; Melissa Lindsay <mlindsay@co.morrow.or.us>; WOODS Maxwell \* ODOE <Maxwell.Woods@oregon.gov>  
**Subject:** Wheatridge Wind Energy Facility - Preliminary Request for Amendment 2 of Site Certificate - Special Advisory Group Review Request by July 6, 2018

Carla and Morrow County Board of Commissioners,

This email is to inform the Morrow County Planning Department and Morrow County Board of Commissioners of the Oregon Department of Energy's receipt of the preliminary Request for Amendment 2 (pAMD2) for the Wheatridge Wind Energy Facility Site Certificate. The Wheatridge Wind Energy Facility is an approved but not yet constructed wind energy facility, to be located in Morrow and Umatilla counties, with up to 292 wind turbines and a maximum capacity of 500 megawatts..

The pAMD2 requests Council approval to construct and operate larger wind turbines and two battery storage systems.

The proposed larger wind turbines would change the previously approved turbine dimensions including: increase turbine hub height (278 to 291.3 feet), increase maximum blade tip height (476 to 499.7 feet), increase maximum blade length (197 to 204.1 feet), lower the minimum ground clearance (83 to 70.5 feet), and increase rotor diameter (393 to 416.7 feet).

The proposed battery storage systems would consist of lithium-ion batteries contained in a building or series of modular containers and would include approximately 18 inverters and associated step-up transformers, as well as interconnecting facilities (control house, protective device and power transformer). The proposed battery storage systems may include ground-level cooling equipment, power conditioning systems, distribution and auxiliary transformers. The proposed battery storage systems would be located adjacent to the previously approved substation and operation and maintenance building sites and would each result in up to 5 acres of new permanent disturbance. One of these sites would be located within Morrow County.

We would like to request your review and comment on the amendment request by **July 6, 2018**. In particular, we have the following questions:

- Has the county adopted any changes to county code provisions (e.g. setback requirements, etc) that could apply to the proposed larger turbines?
- The Department has already completed initial consultation with Carla regarding applicability of the County's Solid Waste Management Ordinance and Solid Waste Management Program for solid waste management during operation of the proposed battery storage systems. Please confirm whether the above-provided description, as obtained from the amendment request, would trigger applicability of any other county code provisions that necessarily should be evaluated through the site certificate amendment process.

The amendment request is attached for reference.

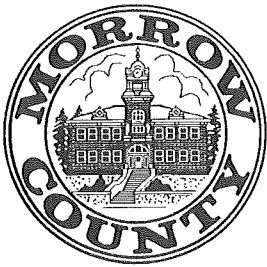
Let me know if you have questions and whether the July 6, 2019 review timeline is feasible.

Thanks,  
Sarah

**Sarah T. Esterson**  
Energy Facility Siting Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
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## PLANNING DEPARTMENT

P. O. Box 40 • Irrigon, Oregon 97844  
(541) 922-4624 or (541) 676-9061 x 5503  
FAX: (541) 922-3472

July 2, 2018

Sarah Esterson, Energy Facility Siting Analyst  
Oregon Department of Energy  
550 Capitol Street NE, 1<sup>st</sup> Floor  
Salem, OR 97301

RE: Wheatridge Wind Energy Facility - Request for Amendment 2

Dear Ms. Esterson:

The following comments are on behalf of the Morrow County Board of Commissioners serving as a Special Advisory Group for this project. The purpose of this letter is to address the preliminary Request for Amendment 2 (pAMD2) and more specifically to address the questions posed in your June 15, 2018, email to myself.

Since the original application by the developers of the Wheatridge Wind Energy Facility was submitted, Morrow County has updated portions of our Zoning Ordinance. The portion applicable to this action is the Exclusive Farm Use (EFU) zone. The Morrow County update brought the EFU zone into compliance with both Oregon Revised Statute and Oregon Administrative Rule, incorporating the required standards for development of wind energy facilities. There is nothing in the Morrow County update of our EFU zone that should affect or impact the Energy Facility Siting Council decision or be applicable to the pAMD2.

As to the discussion we previously had concerning the applicability of the Morrow County Solid Waste Management Plan and Ordinance I would find it to still be applicable, but would not find that it should unduly hold up the amendment process. Our previously submitted and included Solid Waste Management Ordinance provisions are still applicable, including Section 5.000 Public Responsibilities 5.030 Responsibility for Proper Disposal of Hazardous Waste. Those are analyzed in Exhibit V Solid Waste and Waste Water, specifically on page 6. There is also discussion of hazardous waste in Exhibit G Materials Analysis. Within the pAMD2 the applicant has placed the discussion concerning the battery storage relative to waste within the Waste Minimization standard, which Morrow County would agree is appropriate. In reviewing those portions of the original application and the pAMD2 Morrow County would find that the Oregon Department of Energy (ODOE) review and Energy Facility Siting Council (EFSC) imposed Conditions found in the Final Order under Waste Minimization address solid and hazardous wastes appropriately. As part of the Waste Minimization discussion within the Final Order ODOE staff state the following, "The applicant stated that any hazardous waste generated during construction *or operation* of the facility would be removed, transported, and disposed by a qualified and licensed contractor. No hazardous solid wastes shall be dumped, deposited, buried, or otherwise disposed on or under the ground at the facility." Morrow County would find this statement satisfactory when coupled with the statements and assertions found within both the original application and the pAMD2.

Wheatridge Wind Energy Facility  
Request for Amendment 2

Page 1 of 2



Thanks again for the opportunity to comment to the Wheatridge Wind Energy Facility Request for Amendment 2. It has been a pleasure working with you and other Department staff to date, and I anticipate that will continue. Should you have any questions about this comment letter, previous comment letters, or need additional information, please do not hesitate to contact me.

Cordially,

A handwritten signature in cursive script, appearing to read 'Carla McLane', written in black ink.

Carla McLane  
Planning Director

cc: Jesse Marshall  
Morrow County Board of Commissioners  
Sandra Pointer, Morrow County Public Works

## ESTERSON Sarah \* ODOE

---

**From:** Robert Waldher <robert.waldher@umatillacounty.net>  
**Sent:** Tuesday, July 3, 2018 4:32 PM  
**To:** ESTERSON Sarah \* ODOE  
**Cc:** GIVENS Larry; George Murdock; ELFERING Bill; WOODS Maxwell \* ODOE  
**Subject:** Re: Wheatridge Wind Energy Facility - Preliminary Request for Amendment 2 of Site Certificate - Special Advisory Group Review Request by July 6, 2018  
**Attachments:** image001.jpg

Hello Sarah - Thank you for the inquiry regarding the Wheatridge amendment.

Here is a response to your questions...

1. Our Development Code provisions have not changed beyond what was considered in the original Wheatridge application. We would process a battery storage system similar to how we would permit a substation on EFU...Utility Facility Necessary for Public Service.
2. I have reviewed other County ordinances and I am not aware of additional ordinances that would apply.

Thank you for explaining to me a little more about the battery storage facilities. I am guessing we will see more of these as more renewable projects come online. Please let me know if you have additional questions or comments. Thank you!

Bob

On Fri, Jun 15, 2018 at 11:50 AM ESTERSON Sarah \* ODOE <[Sarah.Esterson@oregon.gov](mailto:Sarah.Esterson@oregon.gov)> wrote:

Bob and Umatilla County Board of Commissioners,

This email is to inform the Umatilla County Planning Department and Umatilla County Board of Commissioners of the Oregon Department of Energy's receipt of the preliminary Request for Amendment 2 (pAMD2) for the Wheatridge Wind Energy Facility Site Certificate. The Wheatridge Wind Energy Facility is an approved but not yet constructed wind energy facility, to be located in Morrow and Umatilla counties, with up to 292 wind turbines and a maximum capacity of 500 megawatts..

The pAMD2 requests Council approval to construct and operate larger wind turbines and two battery storage systems.

The proposed larger wind turbines would change the previously approved turbine dimensions including: increase turbine hub height (278 to 291.3 feet), increase maximum blade tip height (476 to 499.7 feet), increase maximum blade length (197 to 204.1 feet), lower the minimum ground clearance (83 to 70.5 feet), and increase rotor diameter (393 to 416.7 feet).

The proposed battery storage systems would consist of lithium-ion batteries contained in a building or series of modular containers and would include approximately 18 inverters and associated step-up transformers, as well as interconnecting facilities (control house, protective device and power transformer). The proposed battery storage systems may include ground-level cooling equipment, power conditioning systems, distribution and auxiliary transformers. The proposed battery storage systems would be located adjacent to the previously approved substation and operation and maintenance building sites and would each result in up to 5 acres of new permanent disturbance. One of these sites would be located within Umatilla County.

We would like to request your review and comment on the amendment request by **July 6, 2018**. In particular, we have the following questions:

- Has the county adopted any changes to county code provisions (e.g. setback requirements, etc) that could apply to the proposed larger turbines?
- Please confirm whether the above-provided description of the proposed battery storage systems, as obtained from the amendment request, would trigger applicability of any county code provisions (e.g. hazardous waste/materials management, fire safety, etc) that necessarily should be evaluated through the site certificate amendment process.

The amendment request is attached for reference.

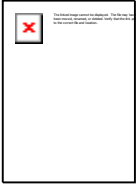
Let me know if you have questions and whether the July 6, 2019 review timeline is feasible.

Thanks,

Sarah

**Sarah T. Esterson**  
Energy Facility Siting Analyst  
Oregon Department of Energy  
550 Capitol St NE, 1<sup>st</sup> Floor  
Salem, OR 97301  
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C: (503) 385-6128

[Oregon.gov/energy](http://Oregon.gov/energy)



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**Bob Waldher, RLA**

***Director***

Umatilla County Department of Land Use Planning

216 SE 4th ST | Pendleton, OR 97801

Phone: [541-278-6251](tel:541-278-6251) | Fax: [541-278-5480](tel:541-278-5480)

<http://www.umatillacounty.net/planning> - Visit our website for copies of planning documents, permit applications and other helpful information.

*Please Be Aware* - Documents such as emails, letters, maps, reports, etc. sent from or received by the Umatilla County Department of Land Use Planning are subject to Oregon Public Records law and are NOT CONFIDENTIAL. All such documents are available to the public upon request; costs for copies may be collected. This includes materials that may contain sensitive data or other information, and Umatilla County will not be held liable for its distribution.

**Attachment C: Draft Proposed Order Comments/Index**

**Wheatridge Wind Energy Facility:  
Draft Proposed Order on Request for Amendment 3 – Comment Index**

**\*If you provided comments on the record of the draft proposed order, this table is intended to support review of changes made in the proposed order in response to issues raised with sufficient specificity. Changes included in the proposed order, resulting from comments received during the draft proposed order comment period (Sept 28 – Oct 29, 2018) are presented in both hi-lite and track changes.**

Date Comment Received	Unique Record ID	Commenter Identification			Analysis of Comments	Changes in Proposed Order*
		Last Name	First Name	Organization		
10/16/2018	WRWAMD3Doc14	Marshall	Jesse	NextEra Energy Resources, LLC Certificate Holder	Section III.A. General Standard of Review, III.J. Threatened and Endangered Species, and Section III.Q.1. Noise Control Regulation of proposed order addresses comments	Material change recommended in Condition PRE-TE-03
10/23/2018	WRWAMD3Doc15	Cherry	Steve	Oregon Department of Fish and Wildlife	Section III.H Fish and Wildlife Habitat of the proposed order addresses this comment	No recommended changes to findings or conditions in proposed order
10/25/2018	WRWAMD3Doc16	Waldher	Robert	Umatilla County Planning Department	Section III.E. Land Use section of the proposed order addressed comment	No recommended changes to findings or conditions in proposed order
10/27/2018	WRWAMD3Doc17	McLane	Carla	Morrow County Board of Commissioners	Section III.E. Land Use section of the proposed order addressed comment	No recommended changes to findings or conditions in proposed order

## ESTERSON Sarah \* ODOE

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**From:** Konkol, Carrie <Carrie.Konkol@tetrattech.com>  
**Sent:** Tuesday, October 16, 2018 5:06 PM  
**To:** ESTERSON Sarah \* ODOE  
**Cc:** WOODS Maxwell \* ODOE; CORNETT Todd \* ODOE; ROWE Patrick G; Solsby, Anneke; Curtiss, Sarah Stauffer (sarah.curtiss@stoel.com); Pappalardo, Mike; Marshall, Jesse; Castro, Scott  
**Subject:** WRWAMD 2 and 3 - Comments on DPO's  
**Attachments:** WRWAMD2\_3\_DPOComments\_2018.10.16.pdf

Hello Sarah,

Attached please find NextEra's comments with respect to the Draft Proposed Orders for Request for Amendments 2 and 3.

Please contact me with any questions.

Thank you,  
Carrie

**Carrie Konkol** | Senior Project Manager  
[Carrie.Konkol@tetrattech.com](mailto:Carrie.Konkol@tetrattech.com)

**Tetra Tech | Portland**  
1750 SW Harbor Way, Suite 400 | Portland, OR 97201  
Direct: 503.721.7225 | Fax: 503.227.1287 | Cell: 503.830.8587

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



October 16, 2018

Ms. Sarah Esterson  
 Siting Analyst  
 Oregon Department of Energy  
 550 Capitol St. NE, 1st Floor  
 Salem, OR 97301

Subject: WRWAMD2 and 3 – Comments on Draft Proposed Orders

Dear Ms. Esterson:

NextEra Energy Resources, LLC (NextEra), on behalf of Wheatridge Wind Energy, LLC (certificate holder), has the following comments with respect to the Draft Proposed Orders for Request for Amendments 2 and 3. The comments are followed by the proposed changes in red to the applicable Site Certificate location or condition.

1. The certificate holder requests that Table 1. reflect the proposed turbine maximum blade to tip height of 499.7 feet. Additionally, the certificate holder requests that the stipulation to require turbines types with the maximum dimensions be equipped with Low Noise Trailing Edge blades be removed. As discussed below, there are a variety of technologies, modes and measures to ensure that (1) the turbines and the Facility meet the DEQ noise standard and (2) the noise impacts are ~~be~~ in the range of noise impacts previously analyzed and reviewed by the Oregon Department of Energy for the Facility.

**Table 1: Proposed Wind Turbine Specification Range**

Specification	Maximum
<del>Turbine Generating Capacity (Individual)</del>	<del>2.5</del> MW
Blade Length	<del>197</del> <u>204.1</u> ft.
Hub Height	<del>278</del> <u>291.3</u> ft.
Rotor Diameter	<del>393</del> <u>416.7</u> ft.
<del>Total Height</del> <u>Blade Tip Height</u> (tower height plus blade length)	<del>476</del> <u>525</u> <u>499.7</u> ft.
Aboveground Blade Tip Clearance	<u>70.5</u> ft.
<u>Wind turbine types with the maximum dimension specifications shall be equipped with Low Noise Trailing Edge blades.</u>	

2. The certificate holder requests that the proposed change to Condition PRE-TE-03 to provide pre construction survey areas for Laurent’s milkvetch be revised to include a purposeful survey area consisting of the temporary and permanent disturbance areas. Direct impacts (i.e., removing the plant) are the primary concern for this species, and a survey of the impact area



itself would likely yield all the information needed to avoid direct impacts to these plants. Although initial surveys used a wider buffer, this was likely in consideration of micro-siting corridor refinement.

**Amended Threatened and Endangered Species Condition 3 (PRE-TE-03):** To avoid potential impacts to Laurent's milkvetch, the certificate holder must:

- i. Conduct preconstruction plant surveys in suitable habitat for Laurent's milkvetch within 1,000-foot-of areas of temporary and permanent disturbance, and within the project boundary, from the 230-kV intraconnection transmission line; and, within 500 feet of temporary and permanent disturbance from for all other facility components. 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.
- ii. Ensure that any plant protection zone established under (a) above is included on construction plans showing the final design locations.
- 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, Threatened and Endangered Species Condition 3; Amended in Final Order on AMD2]

3. As noted above, there are various turbine designs, operational modes, and measures that can be employed to comply with DEQ noise requirements including the maximum 50dBA allowable threshold at noise sensitive receivers. The Site Certificate conditions were developed in consideration of micro-siting which allows for flexibility in turbine selection and turbine placement. With that in mind, the certificate holder requests the below changes to Site Certificate Conditions PRE-NC-01 and OPR-NC-01.

**Recommended Amended Noise Control Condition 2 (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 any~~ noise reduction ~~operation (NRO) mode approach measure~~ that will be used during facility operation and include a figure that depicts the turbines that will ~~be operating in NRO mode use a noise reduction measure~~ 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]

**Certificate Holder Proposed Amended Noise Control Condition 3 (OPR-NC-01):**-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~~ noise reduction manner 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 requiring noise reduction measures identified in the preconstruction analysis required by Noise Control Condition 2 are operating at or below the identified dBA reduction level.

[Final Order on ASC; AMD3]

Thank you for your consideration.

Best regards,



Jesse Marshall  
Project Director  
NextEra Energy Resources  
(760) 846-4421  
jesse.marshall@nee.com

**ESTERSON Sarah \* ODOE**

---

**From:** Steve Cherry <Steve.P.Cherry@state.or.us>  
**Sent:** Tuesday, October 23, 2018 4:11 PM  
**To:** ESTERSON Sarah \* ODOE  
**Cc:** REIF Sarah J  
**Subject:** ODFW comments on Wheatridge amendment 3  
**Attachments:** MEMO turbine size Wheatridge 10-23-18.pdf

Sarah,  
Here are ODFW's comments on the proposed amendment to increase the turbine size for the Wheatridge project. Please let me know if you have any questions.

Steve Cherry  
District Wildlife Biologist  
Oregon Department of Fish and Wildlife  
Heppner District  
PO Box 363  
54173 Hwy 74  
Heppner, OR 97836  
(541) 676-5230

## MEMORANDUM

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TO: Sarah Esterson  
Oregon Department of Energy

FROM: Steve Cherry, District Wildlife Biologist  
Oregon Department of Fish and Wildlife  
PO Box 363 Heppner, OR 97836  
(541) 676-5230  
[Steve.p.cherry@state.or.us](mailto:Steve.p.cherry@state.or.us)

DATE: October 23, 2018

RE: Oregon Department of Fish and Wildlife (ODFW) Comments on the Complete Request for Amendment 3 of the Site Certificate for the Wheatridge Wind Power Facility

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GENERAL COMMENTS: ODFW appreciates the opportunity to review this project according to the Energy Facility Siting Standard for Fish and Wildlife Habitat, as well as the Threatened and Endangered Species Standard.

ODFW recognizes that the proposed amendment to reduce the blade-to-ground distance has the potential for different mortality effects on birds and bats. However, ODFW is not able to find published information that describes the mortality effects of these larger turbines on avian and bat species. Given the lack of available information demonstrating an increased risk to wildlife beyond what has already been assumed in the existing facility design and mitigation plan, ODFW assumes the existing avoidance and mitigation strategies remain adequate. Therefore ODFW does not have any additional measures or practices beyond those established in the existing Site Certificate, with one exception as outlined below in our specific comments.

SPECIFIC COMMENTS: ODFW would recommend that if multiple sizes of turbines are used on the project area that the post construction monitoring include monitoring of all of the different sized turbines. ODFW would recommend that the monitoring of the different turbine sizes be completed with enough statistical rigor so that different turbine sizes could be compared for mortality effects on the Wheatridge project.

ODFW has no further comments on this amendment at this time. Please contact Steve Cherry (District Wildlife Biologist) or Sarah Reif (Energy Coordinator) with any questions.

**ESTERSON Sarah \* ODOE**

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**From:** Robert Waldher <robert.waldher@umatillacounty.net>  
**Sent:** Thursday, October 25, 2018 1:17 PM  
**To:** ESTERSON Sarah \* ODOE  
**Subject:** Wheatridge RFA2 and RFA 3

Hello Sarah -

I have reviewed both Wheatridge amendments for consistency with Umatilla County's land use standards. I do not have any comments on RFA2.

I do have one comment on RFA3...

**Page 15, Line 10** includes requirements for setbacks from "City of Umatilla's Urban Growth Boundary." I believe this would apply to any UGB in Umatilla County, not just the City of Umatilla. In fact, there are other UGB's located closer to the project than City of Umatilla's. I would like to see this corrected on page 15 and also reflected in Condition **Gen-LU-06**.

Unfortunately I will not be able to attend the hearing tonight because we have a Planning Commission Work Session. Please let me know if you have any questions after the meeting. Thank you!

Kind Regards -

Bob  
--

**Bob Waldher**, RLA

*Director*

Umatilla County Department of Land Use Planning

216 SE 4th ST | Pendleton, OR 97801

Phone: [541-278-6251](tel:541-278-6251) | Fax: [541-278-5480](tel:541-278-5480)

<http://www.umatillacounty.net/planning> - Visit our website for copies of planning documents, permit applications and other helpful information.

*Please Be Aware* - Documents such as emails, letters, maps, reports, etc. sent from or received by the Umatilla County Department of Land Use Planning are subject to Oregon Public Records law and are NOT CONFIDENTIAL. All such documents are available to the public upon request; costs for copies may be collected. This includes materials that may contain sensitive data or other information, and Umatilla County will not be held liable for its distribution.

## ESTERSON Sarah \* ODOE

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**From:** Carla McLane <cmclane@co.morrow.or.us>  
**Sent:** Sunday, October 28, 2018 5:29 PM  
**To:** ESTERSON Sarah \* ODOE  
**Cc:** 'Marshall, Jesse'; Pappalardo, Mike; RUSSELL Don; Jim Doherty; Melissa Lindsay; Darrell Green; Roberta Lutcher; Curtiss, Sarah Stauffer; Konkol, Carrie  
**Subject:** Wheatridge Wind Energy Facility - RFA3 - Morrow County Comment  
**Attachments:** RFA3 Comment letter 10292018 signed.pdf

Sarah,  
Please find our comment letter attached for RFA3.  
It was great to see you last week!  
Do take care,  
Carla

Carla McLane, MBA  
Morrow County Planning Director  
205 Third Street NE  
Post Office Box 40  
Irrigon, Oregon 97844  
541-922-4624  
[cmclane@co.morrow.or.us](mailto:cmclane@co.morrow.or.us)



## PLANNING DEPARTMENT

PO Box 40 • 205 Third Street NE  
Irrigon, Oregon 97844  
(541) 922-4624

October 29, 2018

Sarah Esterson, Senior Siting Analyst  
Oregon Department of Energy  
550 Capitol Street NE, 1<sup>st</sup> Floor  
Salem, OR 97301

RE: Wheatridge Wind Energy Facility - Request for Amendment 3

Dear Ms. Esterson:

The following comments are on behalf of the Morrow County Board of Commissioners serving as a Special Advisory Group for this project. The purpose of this letter is to address the Request for Amendment 3 (AMD3) which is a request to change wind turbine dimension specifications that would increase blade tip height, increase blade length, increase hub height, increase rotor diameter and reduce minimum aboveground blade tip clearance as outlined in the applicant submitted Request for Amendment.

Morrow County has no concerns with this requested change to the project and can support the Oregon Department of Energy (ODOE) staff generated findings and Amended Site Certificate. Morrow County does state that should the Energy Facility Siting Council (EFSC) approve this amendment the applicant needs to make application to amend the Morrow County issued Conditional Use Permit (CUP) specifically addressing these changes. Without an amendment to the local CUP there will be inconsistencies between the EFSC Site Certificate and the local CUP. For clarity Morrow County is not anticipating multiple local CUP amendments, but wants to assure that a fully up-to-date amended CUP is in place prior to construction of the project.

The opportunity to comment is much appreciated. It has been a pleasure working with you and other Department staff to date, and I anticipate that will continue. Should you have any questions about this comment letter, previous comment letters, or need additional information, please do not hesitate to contact me.

Cordially,

A handwritten signature in cursive script, appearing to read "Carla McLane".

Carla McLane  
Planning Director

cc: Jesse Marshall, NextERA  
Mike Pappalardo, NextERA  
Morrow County Board of Commissioners

Wheatridge Wind Energy Facility  
Request for Amendment 3

October 29, 2018  
Page 1 of 1

**Attachment D: Draft Habitat Mitigation Plan**



# **Wheatridge Wind Energy Project**

## **Habitat Mitigation Plan (Draft Concepts)**

*Prepared for:*

**Wheatridge Wind Energy, LLC**  
245 W. Main Street, Suite 200  
Ione, Oregon 97843

*Prepared by:*

Rick Gerhardt

**Northwest Wildlife Consultants, Inc.**  
815 NW 4<sup>th</sup> St.  
Pendleton, Oregon 97801



April 2015

## **I. Introduction**

This document has been prepared for the Wheatridge Wind Energy Project (Project) Site Certificate Application (SCA) submitted to the Oregon Department of Energy (ODOE). It provides primary concepts for meeting Project development habitat mitigation needs and will be finalized into a formal Habitat Mitigation Plan (HMP). The proposed concepts were discussed with personnel from the Oregon Department of Fish and Wildlife (ODFW) on August 20, 2012 and on July 11, 2014.

The Wheatridge Wind Energy Project is located in Morrow and Umatilla Counties, Oregon. As part of the SCA (Exhibits P and Q), Northwest Wildlife Consultants, Inc. (NWC) completed habitat mapping and quality assessment of the Project area, and conducted site-specific biological studies that included rare plant surveys, avian use surveys, special status vertebrate wildlife species surveys, golden eagle and other raptor nest surveys, an inventory of bat species, and big game observations, as well as reviews for potential occurrence of or records of special status species. No wetlands, perennial streams or other aquatic habitats are addressed in this document because at the time of preparation (August 2014) no facilities are planned for these habitat types. Project impact estimates were provided by Wheatridge Wind Energy, LLC and their SCA contractor, Tetra Tech. Based on a combination of the results of the multi-year biological studies, experience with such mitigation, and knowledge of the wildlife and habitats impacted by wind and natural gas energy development in the Columbia Plateau since 1992, NWC offers the concepts in this document as recommendations for inclusion in the Project's final Habitat Mitigation Plan. Details on habitat types, subtypes, and Categories 1–6 can be found in the SCA, Exhibit P and in the Wheatridge ecological investigations report (Gerhardt and Anderson, 2014). The Applicant is reducing and eliminating the impact of the proposed Project over time by preserving and maintaining in-kind habitat in the Columbia Basin ecoregion to achieve a net benefit to Category 2 habitat and no net loss of Category 3, and 4, Details are discussed in this document.

## **II. Description of Project Impacts Addressed by the Plan**

As presently designed (as of November 13, 2014), the Wheatridge Wind Energy Facility (Project) will be constructed within a landscape of approximately 13,100 acres of privately-owned land and will have a generating capacity of up to 500 megawatts and use an array of up to 292 wind turbines. The Project consists of two groups of wind turbines, 'Wheatridge West' and 'Wheatridge East,' and a connecting 230-kilovolt overhead transmission line (the 'Intraconnection Line'); each of these involve other supporting facilities such as roads and underground electrical lines.

Oregon Administrative Rule (OAR) 635-415-0025, the Wildlife Habitat Mitigation Policy, defines habitats based on type, quality, availability, and usefulness/importance to wildlife, and establishes mitigation goals and implementation standards for each. As further described in the SCA Exhibit P, Category 1 habitat, which is defined as irreplaceable, essential, and limited, includes habitat within 785 feet of documented Washington ground squirrels. The Project was designed and micro-sited to avoid all mapped Category 1 upland

habitat, and based on that information, no Project facilities or activities will impact such habitat.

Category 2 habitat is defined by OAR 635-415-0025 as essential and limited, and NWC identified small amounts of such habitat within the Project area based on these criteria and the value of such lands to wildlife generally and, in particular, to species of special state or federal status. The OAR specifies net benefit be achieved for Category 2 impacts and defines this as “an increase in overall in-proximity habitat quality or quantity after a development action and any subsequent mitigation measures have been completed and monitored.”

In 2013, ODFW began to consider all land (except developed and agriculture such as cropland) that lies within designated big game winter range as Category 2. This leads to the inclusion of additional Category 2 habitat in the Project impacts. For habitat impacts (permanent and temporary) associated with this (big game) Category 2, the mitigation described in this plan will be coupled with minimization best practices during construction to attain the goal of no net loss and a net benefit.

Most of the Project’s footprint (area to be covered by permanent facilities) will occupy dryland agriculture, which is Category 6 habitat. The rest of the footprint will occupy Category 2, Category 3 (Revegetated Grassland, Native Perennial Grassland, Basin Big Sagebrush Shrub-steppe, or Rabbitbrush/Buckwheat Shrub-steppe) or Category 4 (Exotic Annual Grassland) habitats.

In addition to the permanent impacts mentioned above, construction of the Project will entail temporary impacts to the same types and categories of habitat. Temporary impacts are summarized as follows: no Category 1 impacts, a small amount of impact to Category 2 habitat (based on ground assessment and definitions in OAR 635-415-0025), additional impacts to Category 2 (based on location within big game winter range), some Category 3 and Category 4 impacts, and mostly Category 6 impacts. Grassland habitats (Category 3 and 4) are expected to require three to five years after disturbance from construction activities to recover to a mature state of grassland cover. Native forbs in perennial grasslands (as well as in shrub-steppe) may not recover to pre-construction diversity or will take longer to recolonize the restored areas. Shrub-steppe habitats (Category 2 and 3) may take much longer to achieve the shrub species maturity and height that existed prior to construction (ten to fifty years).

### **III. Calculation of the Size of the Mitigation Area**

The Habitat Mitigation Area (HMA) must be large enough and have the characteristics to meet the standards set in OAR 635-415-0025. These standards include “no net loss” and a “net benefit” in habitat quality and quantity for Category 2 habitats, and “no net loss” of habitat for Categories 3 and 4. Mitigation standards for Category 6 involve minimizing direct habitat loss and avoiding impacts to off-site habitat.

For the purposes of this discussion, the acreages of impact are the current estimate of the maximum affected area (the permanent and temporary impacts). The actual areas of

disturbance will be determined based on the final design layout of the Project. It is anticipated that ODOE and ODFW will require that they be provided with the final design layout and the associated impact acreages prior to the beginning of Project construction.

The following tables delineate current maximum habitat impact acreage estimates of each of the three components of the Wheatridge Wind Energy Project.

### **Wheatridge West**

<u>Habitat Category</u>	<u>Permanent Impacts</u>	<u>Temporary Impacts</u>
Category 2	3.6	19.7
Category 2 (big game)	21.3	135.8
Category 3	13.5	91.5
Category 4	1.8	11.6
Category 6*	88.6	534.3
Total Impacted Acres	128.9	792.9

\* no mitigation required

### **Wheatridge East**

<u>Habitat Category</u>	<u>Permanent Impacts</u>	<u>Temporary Impacts</u>
Category 2	5.6	33.6
Category 2 (big game)	0.4	3.1
Category 3	3.8	26.4
Category 4	1.8	11.7
Category 6*	29.9	185.7
Total Impacted Acres	41.5	260.5

\* no mitigation required

### **Transmission Intraconnection Line**

<u>Habitat Category</u>	<u>Permanent Impacts</u>	<u>Temporary Impacts</u>
Category 2	0.0	4.1
Category 2 (big game)	0.4	62.6
Category 3	0.1	16.8
Category 4	0.0	2.5
Category 6*	0.4	58.0
Total Impacted Acres	0.9	144.0

\* no mitigation required

Based on these impact estimates, calculation of the mitigation area required (under the maximum layout) are as follows:

## Wheatridge West

### Category 2

Footprint: 3.6 acres (2:1 ratio)

Temporary impacts: 19.7 acres (>1:1 ratio)

Mitigation area required:  $(3.6 \times 2) + (>19.7) = >26.9$

### Category 2 (Big Game)

Footprint: 21.3 acres (>1:1 ratio)

Temporary impacts: \* revegetated grassland 91.5 (1:1); exotic annual grassland 12.5 (1:1); native perennial grassland 31.8 (1:1)

Mitigation area required:  $> 21.3 + (91.5 + 12.5 + 31.8) = >157.2$  acres

### Category 3

Footprint: 13.5 acres (1:1 ratio)

Temporary impacts: revegetated grassland 60.7 (0:1); native perennial grassland 28.7 (0.5:1 ratio); shrub-steppe 2.1 (0.5:1)

Mitigation area required:  $13.5 \text{ acres} + (0.0 + 14.4 + 1.0) = 28.9$  acres

### Category 4

Footprint: 1.8 acres (1:1 ratio)

Mitigation area required: 1.8 acres

## **Total mitigation area required (Wheatridge West, to nearest whole acre): >215**

\* For temporary habitat loss within designated deer winter range, mitigation will be coupled with impact minimization and revegetation efforts to attain the goal of no net loss and a net benefit.

## Wheatridge East

### Category 2

Footprint: 5.6 acres (2:1 ratio)

Temporary impacts: 33.6 acres (>1:1 ratio)

Mitigation area required:  $(5.6 \times 2) + (>33.6 \times 1) = >44.8$  acres

### Category 2 (Big Game)

Footprint: 0.4 acres (>1:1 ratio)

Temporary impacts: exotic annual grassland 0.8 (1:1); native perennial grassland 2.3 (1:1)

Mitigation area required:  $>(0.4 + (0.8 + 2.3)) = >3.5$  acres

### Category 3

Footprint: 3.8 acres (1:1 ratio)

Temporary impacts: revegetated grassland 0.0 (0:1); native perennial grassland and shrub-steppe 26.4 (0.5:1 ratio)

Mitigation area required:  $3.8 \text{ acres} + (0.0 + 13.2) = 17.0$  acres

### Category 4

Footprint: 1.8 acres (1:1 ratio)

Mitigation area required: 1.8 acres

**Total mitigation area required (Wheatridge East, to nearest whole acre): >67**

### **Transmission Intraconnection Line**

#### Category 2

Footprint: 0.0 acres (2:1 ratio)

Temporary impacts: 4.1 acres (>1:1 ratio)

Mitigation area required:  $(0.0 \times 2) + (>4.1 \times 1) = >4.1$  acres

#### Category 2 (Big Game)

Footprint: 0.4 acres (>1:1 ratio)

Temporary impacts: \* revegetated grassland 11.5 (1:1); exotic annual grassland 1.4 (1:1); native perennial grassland 35.5 (1:1); shrub-steppe 14.2 (1:1)

Mitigation area required:  $> 0.4 + (11.5 + 1.4 + 35.5 + 14.2) = > 63.0$  acres

#### Category 3

Footprint: 0.1 acres (1:1 ratio)

Temporary impacts: revegetated grassland 7.2 (0:1); native perennial grassland and shrub-steppe 9.6 (0.5:1 ratio)

Mitigation area required:  $0.1$  acres +  $(0.0 + 4.8) = 4.9$  acres

#### Category 4

Footprint: 0.0 acres (1:1 ratio)

Mitigation area required: 0.0 acres

**Total mitigation area required (Transmission Intraconnection, to nearest whole acre): >72**

\* For temporary habitat loss within designated deer winter range, mitigation will be coupled with impact minimization and revegetation efforts to attain the goal of no net loss and a net benefit.

**Total mitigation area required (all three Project components): >354 acres**

## **IV. Description of the Habitat Mitigation Area (HMA)**

According to ODFW standards, areas appropriate for mitigation of Category 2 and Category 3 habitat impacts must be "in proximity" to the Project and have potential for habitat enhancement. The applicant has identified more than 360 acres of suitable habitat for consideration by ODFW and ODOE (map submitted separately). These include Native Perennial Grassland, Revegetated Grassland, Basin Big Sagebrush Shrub-steppe, Rabbitbrush/Buckwheat Shrub-steppe, and Exotic Annual Grassland habitats of varying quality. There are opportunities for implementing habitat enhancement actions, as needed for the final habitat mitigation compliance. NWC has confirmed that the parcels under current consideration have adequate potential for mitigating the habitat loss expected to occur and for providing benefit for the wildlife species that use the habitats impacted by habitat loss associated with the Project, including big game. All of the habitat proposed for use as mitigation lies within designated deer winter range. The referenced acreages for mitigation will be discussed with ODFW.

## **V. Habitat Enhancement Actions**

Habitat designated for mitigation will be conserved and protected from alteration for the life of the Project. Besides such legal protection to insure no development, actions that are proposed for enhancement of the mitigation area include

- Livestock grazing will be restricted from the HMA to ensure that habitat is maximally useful to wildlife;
- The holder of the Site Certificate will work with the landowner to control or eradicate noxious weeds.
- Revegetation with native plants—sagebrush and bunch grasses—will occur in proportion to the acres of sagebrush and native grassland habitats lost through Project construction.
- A plan for fire response and control will be in place and applied to the HMA.
- Where old barbed wire fence on the HMA presents potential problems for wildlife, the holder of the Site Certificate will work with the landowner to remove such fencing.
- Habitat protection will involve restricting any uses of the mitigation area that would be inconsistent with the goals of no net loss of habitats in Categories 2, 3, and 4 and a net benefit to Category 2 habitat quantity or quality.

Enhancement activities are expected to apply specifically to the approximately 80 acres of the HMA required as compensation for those habitat impacts outside of deer winter range. The other 226 acres are deemed sufficient compensation for the big game Category 2 habitat impacts. The habitat within the HMA is currently of superior quality to most of the habitat to be impacted within deer winter range. Moreover, the majority of those impacted acres (those with temporary impacts) will be restored within three to five years to better condition than they were prior to construction, as required as part of the Revegetation Plan.

## **VI. Monitoring**

### **1. Procedures**

The holder of the Site Certificate will hire a qualified, independent investigator (wildlife biologist, botanist, or revegetation specialist) to conduct a comprehensive program of monitoring the HMA and the success of its protection and (within applicable acres) enhancements. Annual monitoring will include assessments of:

- Amount and quality of vegetation
- Success of weed control measures
- Degree of recovery of native grasses and forbs
- Success of revegetation measures (where applicable)
- Special status species present

Methods and results of all monitoring will be reported to ODOE and ODFW on an annual basis, along with a report of the mitigation/enhancement measures undertaken that year.

## **2. Success Criteria**

The goal of the habitat mitigation described herein is to protect and enhance a sufficient quantity of habitat to meet ODFW standards of no net loss of habitat Category 3 and Category 4 and a net gain in habitat quantity and quality of Category 2. Habitat protection alone—apart from enhancement—will not be deemed to meet the net-benefit criterion for Category 2 habitat. The minimum amount of habitat protection and enhancement required will be calculated as in Section 3 above using the impact acreages associated with the final Project design. If sufficient high-quality habitat is not available for protection, habitat mitigation goals can be achieved by enhancing the required amount of habitat to bring it up to the higher category. Criteria for assessing such a category improvement will include density and quality of native vegetation of the appropriate types (desirable forbs and bunchgrasses, e.g.) success of weed control, and increased use of the area by native bird or mammal species with special status. If the holder of the Site Certificate desires to base habitat improvement on increased avian or other wildlife use, then baseline studies will need to be conducted on the habitat mitigation area in the spring of Year 1 or Year 2.

Habitat protection and enhancement must endure for the life of the Project. That is, even after habitat protection and enhancement has been achieved, periodic monitoring must take place to assess whether protection and enhancement persists at levels commensurate with mitigation goals. Should habitat quality fall below that prescribed by the Habitat Management Plan, the holder of the Site Certificate will, in consultation with ODFW and ODOE, propose remedial actions for compensating for such a failure to meet mitigation goals.

## **VII. Amendment of the Plan**

This Habitat Mitigation Plan may be amended by agreement of the holder of the Site Certificate and the Oregon Energy Facility Siting Council. Amendments to this Plan will not require an amendment of the Site Certificate.



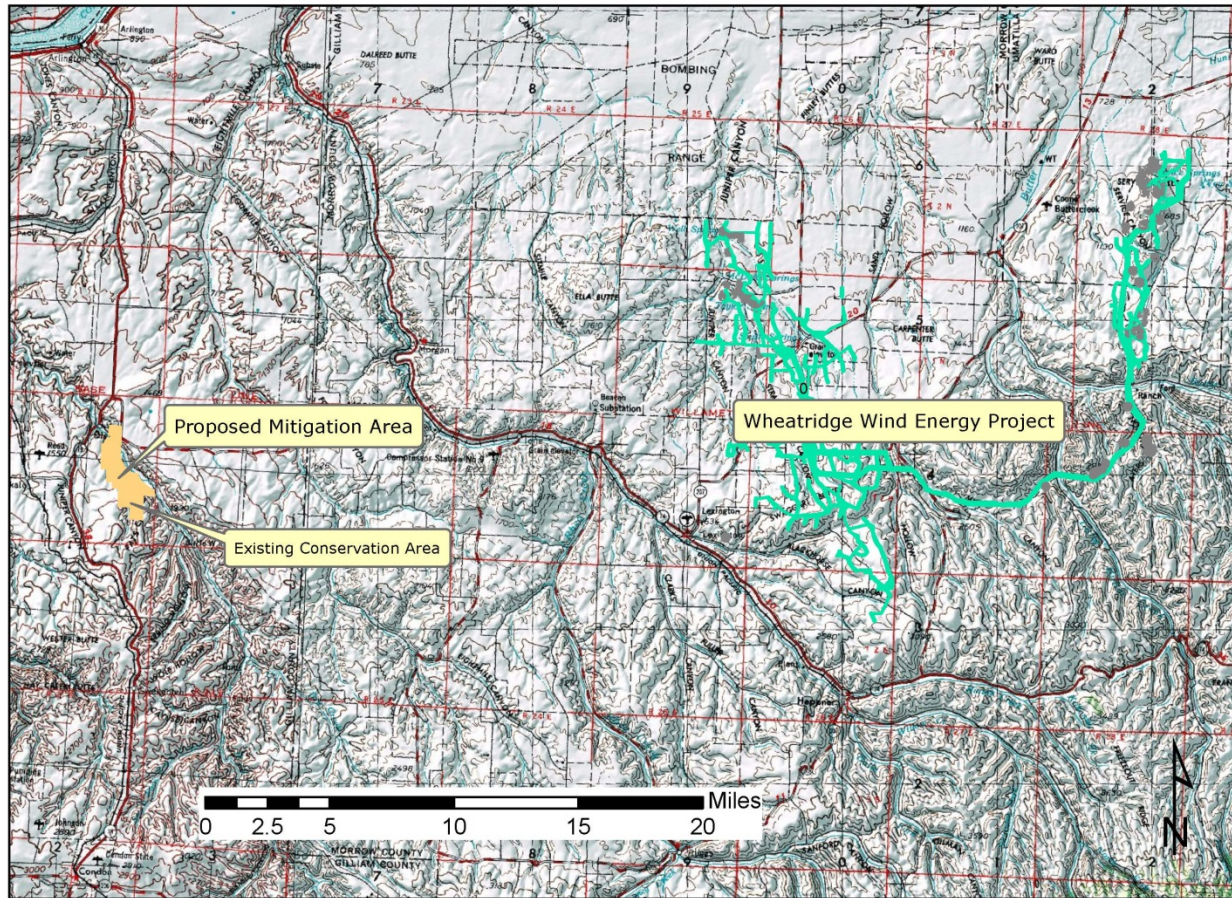


Figure 1. Overview Map: Habitat Mitigation Area for the Wheatridge Wind Energy Project.

**Attachment E: Draft Revegetation Plan**

# **Wheatridge Wind Energy Facility**

## **Revegetation Plan (Draft Concepts)**

*Prepared for:*

### **Wheatridge Wind Energy, LLC**

245 W. Main Street, Suite 200  
Ione, Oregon 97843

*Prepared by:*

Rick Gerhardt

### **Northwest Wildlife Consultants, Inc.**

815 NW 4<sup>th</sup> Street  
Pendleton, Oregon 97801



April 2015

## **I. Introduction**

This document has been prepared for the Wheatridge Wind Energy Facility (Wheatridge, WWEF, or Project) Site Certificate Application (SCA) submitted to the Oregon Department of Energy (ODOE). It provides primary concepts for meeting the needs for revegetation following Project construction and will be finalized (by ODOE) into a formal Revegetation Plan, authored by the ODOE before issuance of the Site Certificate. The concepts provided here are consistent with approved plans in place for other Oregon wind projects in similar habitats, in particular those that are permitted through the State process and the Oregon Energy Facility Siting Council (OEFSC or the Council). The Leaning Juniper II, Stateline, and Montague Revegetation Plans, and available revegetation monitoring reports for wind and natural gas energy projects served as models for the Wheatridge concepts.

The WWEF Revegetation Plan, which has been developed in consultation with personnel from the Oregon Department of Fish and Wildlife, delineates practices and standards for restoring to preconstruction conditions or better those areas temporarily disturbed during construction of the Project; it does not apply to areas permanently occupied by Project facilities. Such restoration is a requirement of the Site Certificate.

The amounts and types of habitats expected to be disturbed during Project construction are described in Exhibit P of the Site Certificate Application; they are also described in Attachment P-3, the Draft Habitat Mitigation Plan. These will include agricultural and other developed lands (collectively referred to as cropland) and grassland, shrub-steppe, and other habitats (collectively referred to as wildlife habitat). This plan addresses both restoration of croplands and restoration of wildlife habitat. For wildlife habitat in particular, it describes planting methods, monitoring requirements, success criteria, and remedial actions (in case success criteria are not met).

Throughout Project construction and revegetation activities, the Developer will take appropriate actions to prevent the spread of noxious weeds (as identified in Morrow County Ordinance No. MC-C-3-90 and No. MC-C-2-99 Appendices A and B). Where appropriate, and pursuant to consultation with the county weed control managers, monitoring of the establishment of noxious weeds and of the effectiveness of weed control or eradication may be performed in concert with the revegetation monitoring described in this document.

## **II. Project Site Description**

The Project is located primarily in Morrow County, with a small portion in Umatilla County, Oregon. It lies within the Columbia Plateau Ecoregion, entirely on public land and primarily in agricultural land used for growing dryland wheat. Native vegetation has been modified by historical and current livestock grazing, by changes in fire regimes, and by the presence of exotic grasses and other vegetation.

Primary soil types include Mikkalo, Willis, Ritzville, and Warden, and land cover types are Developed (Dryland Wheat, Revegetated Grassland, and Other Developed), Grassland (Exotic Annual and Native Perennial), and Shrub-steppe (Basin Big Sagebrush and Snakeweed/Rabbitbrush).

### **III. Revegetation Methods**

Revegetation will begin as soon as feasible after completion of construction, and seeding and planting will be done in a timely manner and in the appropriate season. Agricultural land restoration methods will likely be designed in consultation with the landowner. Soil preparation will involve standard, commonly-used methods, and will take into account all relevant site-specific factors, including slope, size of area, and erosion potential. Topsoil will be restored to the preconstruction condition or better. Mulching and other erosion control measures will be used throughout construction and during revegetation efforts. Preconstruction land use, soil, and vegetation type will dictate the seed mix used for each area to be restored; the wildlife habitat seed mixes used will be finalized in consultation with ODFW and will comply with the Oregon Seed Law.

#### **1. Seed Planting Methods**

Methods and timing of planting will be appropriate to the seed mix, weather conditions, and site conditions (including area size, slope, and erosion potential). Preparation of disturbed ground may include replacing lost topsoil and/or chemical or mechanical weed control. Two common application methods for non-cropland are described below.

##### **a) Broadcasting**

In this method, the seed mix will be broadcast at specified application rates. Broadcasting should not be utilized when winds exceed five miles per hour. If feasible, half of the seed mix will be broadcast in one direction, with the other half broadcast perpendicular to the first half. A tracking dye may be added to facilitate uniform application. Certified weed-free straw will be applied at a rate of two tons per acre immediately after seeding; straw may either be crimped into the ground or applied with a tackifier.

##### **b) Drilling**

In this method, seed will be planted using an agricultural or range seed drill according to application rates recommended by the seed supplier.

### **IV. Restoration of Cropland**

It is expected that croplands will be reseeded with the appropriate crop or maintained as fallow in consultation with the landowner or farm operator. The holder of the Site Certificate will also consult with the landowner or farm operator to determine seed mix and application methods and rates for seed and fertilizer. Success of cropland revegetation will have been achieved when production of the revegetated area is comparable to that of adjacent non-disturbed croplands. Success determination will involve consultation with the landowner or farm operator, and the holder of the Site Certificate will report to ODOE on the success of cropland restoration efforts.

### **V. Restoration of Wildlife Habitat**

All disturbed grassland, shrub-steppe, and other wildlife habitat will be reseeded with a mix of native or native-like grasses, forbs, and shrubs characteristic of the area prior to construction disturbance. Seed mix and application rates will be determined in consultation

with the landowner and ODFW, and will take into consideration soil types, erosion potential, and growing conditions. The seed mix will be approved by ODOE, and seeds will be obtained from a reputable supplier in compliance with the Oregon Seed Law.

## **VI. Monitoring**

### **1. Revegetation Record**

Records will be kept of revegetation efforts, both for croplands and for wildlife habitat; records will include:

- Date construction was completed
- Description of the affected area
- Date revegetation was initiated
- Description of the revegetation effort

The holder of the Site Certificate will update these records periodically as revegetation work occurs, and will provide ODOE with copies of these records with submission of the annual report required by the Site Certificate.

### **2. Monitoring Procedures**

Monitoring of the revegetation effort will be conducted by an independent botanist or revegetation specialist; this monitoring will be done during the first growing season after planting (Year 1), and again in Years 3 and 5. Nearby reference sites (approximating pre-construction conditions) will be selected as targets toward which revegetation will aim. Monitoring will not be required for areas that have been converted by the landowner to land uses that preclude meeting revegetation success criteria.

#### *Weed Control*

A qualified investigator will be employed to annually assess weed growth during the first five years of revegetation work and to make recommendations on weed control measures. Reports will be submitted to the holder of the Site Certificate, to ODOE, and to ODFW following each annual inspection. These reports will identify areas and describe extent of weed growth and describe the success of control measures. At the time of the year-5 report, the investigator will consult with ODOE, ODFW, and the holder of the Site Certificate to design an appropriate plan for subsequent weed control.

#### *Wildlife Habitat Recovery*

In the first growing season after planting of areas to be revegetated, a qualified independent investigator (botanist or revegetation specialist) will inspect each wildlife habitat revegetation area to assess the success of revegetation measures. These assessments will be repeated in Year 3 and Year 5. Annual reports will be submitted to the holder of the Site Certificate, to ODOE, and to ODFW. Assessments will address whether each wildlife habitat revegetation area is trending toward meeting the success criteria described below.

In consultation with ODFW, reference sites—areas of habitat and quality similar to those found prior to disturbance at the areas to be revegetated—will be established to represent target conditions for revegetation areas. During each assessment, revegetated areas will be compared to reference sites with regard to:

- Presence and density of weeds
- Degree of erosion
- Vegetative density
- Proportion of desirable vegetation
- Species diversity and structural stage of desirable vegetation

Reference sites will be chosen with consideration to land use patterns, soil types, terrain, and presence of noxious weeds. It is expected that a variety of reference sites will be required to represent the range of disturbed areas for which revegetation is required. New reference sites may be chosen if land use changes, wildfire, or other disturbance makes a chosen reference site no longer representative of target conditions.

Based on the Year 5 assessment, the holder of the Site Certificate will consult with ODOE and ODFW to design an action plan for subsequent years. The holder of the Site Certificate may propose remedial actions and/or additional monitoring for areas that have not met the success criteria. Alternatively, revegetation efforts may in some cases be deemed to have failed, and mitigation may be proposed in such cases to compensate for habitat loss.

### **3. Success Criteria**

Each annual report will involve an assessment of the progress toward revegetation objectives of each area of wildlife habitat disturbed during Project construction. The overarching metric for success is when the habitat quality is equal to or better than the quality at the relevant reference site according to the conditions described above. Final determination of whether the holder of the Site Certificate has met the revegetation obligations will be made by ODOE.

### **4. Remedial Action**

Remedial action options will be identified in cases where success criteria are not met, whether due to wildfire subsequent to Project construction or because of lower than expected rates of germination or survival. Remedial actions may include reseeding or other measures. The investigator will make recommendations for remedial actions after each monitoring visit, and the holder of the Site Certificate will take appropriate measures to meet the restoration objectives. The holder of the Site Certificate will annually report the investigator's recommendations for remedial actions and the measures taken. ODOE may require reseeding or other remedial actions in cases where revegetation objectives have not been met.

## **VII. Plan Amendment**

It is expected that the completed Revegetation Plan will make provision for an amendment process that would depend upon the agreement of all concerned parties. In particular, this Plan may be amended—without requiring an amendment to the Site Certificate—by agreement between the Oregon Energy Facility Siting Council (OEFSC) and the holder of the Site Certificate.

## **Attachment F: Wildlife Monitoring and Mitigation Plan**



**Wheatridge Wind Energy Project**  
**Proposed Concepts for**  
**Wildlife Monitoring and Mitigation Plan**

*Prepared for:*

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December 14, 2014 Amended TBD

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## Introduction

This document has been prepared for the Wheatridge Wind Energy Facility (WWEF or Project) Site Certificate Application (SCA) submitted to the Oregon Department of Energy (ODOE). It provides primary concepts for meeting the operations phase wildlife monitoring and mitigation needs and will be finalized (by ODOE) into a formal Wildlife Monitoring and Mitigation Plan (WMMP), taking into account the objectives for such monitoring of the Oregon Department of Fish and Wildlife (ODFW) and the United States Fish and Wildlife Service (USFWS).

The concepts provided herein are consistent with approved plans in place for other Oregon wind projects, in particular those that are permitted through the State process and the Energy Facility Siting Council. For most such plans in the Oregon Columbia Plateau, the objective has been to provide information useful for determining the impacts of construction and operation of wind energy facilities on wildlife in general—and on birds and bats in particular. As a result of such studies, a wealth of information is available, and the species and relative proportions of birds and bats impacted by wind development in the Oregon Columbia Plateau is now well established.

For this reason, and because multiple-species monitoring has often led to a suboptimal understanding of impacts to particular species of special conservation concern, the USFWS has established guidelines (USFWS, 2012) to facilitate the identifying and addressing such species and the potential impacts to them. For the Wheatridge Wind Energy Facility, pre-construction information reviews and field investigations (Gerhardt et al., 2014) followed those guidelines, as did subsequent siting and micrositing of facilities (Exhibits P and Q of the Wheatridge Site Certificate Application). The conclusion of this process led to discussions with USFWS centering on the potential risk of the Project to golden eagle, discussions that likely will lead to an Eagle Conservation Plan and an Eagle Take Permit. In that case, the methods described in this Plan (especially fatality monitoring and mitigation) may—prior to the beginning of construction of the Project—be tailored specifically to golden eagles and other large raptors.

Wheatridge Wind Energy, LLC (Wheatridge) proposes to construct the Wheatridge Wind Energy Facility on portions of approximately 13,100 acres of privately-owned land in Morrow and Umatilla Counties, Oregon. The Project will have a generating capacity of up to 500 megawatts (MW), using an array of up to 292 wind turbines. The Project consists of two groups of wind turbines, called 'Wheatridge West' and 'Wheatridge East,' and an intraconnection corridor connecting the Wheatridge West and Wheatridge East wind turbine groups with one or two 230 kilovolt (kV) overhead transmission lines. A detailed Project description can be found in Exhibit B of the Wheatridge Site Certificate Application, and detailed maps of the Project site boundary and Project facilities can be found in Exhibit C.

This plan describes wildlife monitoring that the certificate holder shall conduct during operation of the Project. Monitoring objectives of the formal study are to determine whether the facility causes significant fatalities of birds and bats and to determine whether the facility results in a loss of habitat quality. Objectives of continued recording, handling and

reporting of incidentally discovered injured or dead wildlife are to meet the standards specified in any other requirement (federal, state, county) for understanding and documenting species found over time.

For the formal study, the certificate holder shall use experienced and properly trained personnel (the "investigators") to conduct the monitoring required under this plan. The professional qualifications of the investigators are subject to approval by the Oregon Department of Energy. For all components of this plan except the life-of-project Wildlife Reporting and Handling System, the certificate holder shall hire independent third party investigators (not employees of the certificate holder) to perform monitoring tasks.

The *Wildlife Monitoring and Mitigation Plan* for the WWEF has the following components:

- 1) Fatality monitoring program including:
  - a) Removal trials
  - b) Searcher efficiency trials
  - c) Fatality search protocol
  - d) Statistical analysis
- 2) Raptor nesting surveys
- 3) Wildlife Reporting and Handling System

Component #1 is of shorter duration whereas #2 is periodic for a longer period and #3 if for the life of the project. Based on the results of the monitoring program, mitigation of significant impacts may be required. The selection of the mitigation actions should allow for flexibility in creating appropriate responses to monitoring results that cannot be known in advance. If the Department determines that mitigation is needed, the certificate holder shall propose appropriate mitigation actions to ODOE and shall carry out mitigation actions approved by ODOE, subject to review by the Oregon Energy Facility Council (Council).

## 1. Fatality Monitoring

- (a) Definitions and Methods

### Seasons

This plan uses the following dates for defining seasons:

Season	Dates
Spring Migration	March 16 to May 15
Summer/Breeding	May 16 to August 15
Fall Migration	August 16 to October 31
Winter	November 1 to March 15

### Search Plots

The investigators shall conduct fatality monitoring within search plots. The certificate holder, in consultation with the Oregon Department of Fish and Wildlife, shall select search plots based on a systematic sampling design that ensures that the selected search plots are representative of the habitat conditions in different parts of the site. Each search plot will

contain one turbine. Search plots will be square or circular. Circular search plots will be centered on the turbine location; radius will be determined with regard to maximum blade tip height and species of concern. Square search plots will be of sufficient size to contain a circular search plot as described above. The certificate holder shall provide maps of the search plots to ODOE before beginning fatality monitoring at the facility. The certificate holder shall use the same search plots for each search conducted during a monitoring year.

Scheduling

Fatality monitoring will begin one month after commencement of commercial operation of the facility. Subsequent monitoring years will follow the same schedule (beginning in the same calendar month in the subsequent monitoring year).

In each monitoring year, the investigators shall conduct fatality monitoring searches at the rates of frequency shown below. Over the course of one monitoring year, the investigators will conduct 16 searches, as follows:

<b>Season</b>	<b>Frequency</b>
Spring Migration	2 searches per month (4 searches)
Summer/Breeding	1 search per month (3 searches)
Fall Migration	2 searches per month (5 searches)
Winter	1 search per month (4 searches)

Sample Size

The sample size for fatality monitoring is the number of turbines searched per monitoring year. The investigators shall conduct fatality monitoring during each monitoring year in search plots at one-third of the turbines that are built or 50 turbines, whichever is greater. If fewer than 50 turbines are built, the certificate holder shall search all turbines.

If the final design includes more than one wind turbine model, then the certificate holder shall, before beginning fatality monitoring, consult with an independent expert with experience in statistical analysis of avian fatality data to determine whether it would be possible to design a 50-turbine sample with a sufficient number of turbines in each size class to allow statistical comparison of fatality rates for all birds as a group. The certificate holder shall submit the expert’s written analysis to the Department. If the analysis shows that a comparison study is possible and if the Department approves, the certificate holder shall sample the appropriate number of turbines in each class and conduct the comparison study. The certificate holder may choose to sample more than 50 turbines in a each monitoring year, if a larger sample size would allow the comparison study to be done; however, the monitored turbines shall include representation from each turbine model option used at the facility in order to compare, as possible, fatalities between turbine models.

Duration of Fatality Monitoring

The investigators shall perform one complete monitoring cycle during the first full year of facility operation (Year 1). At the end of the first year of monitoring, the certificate holder will report the results for joint evaluation by ODOE, the certificate holder, and ODFW. In the

evaluation, the certificate holder shall compare the results for the WWEF with the thresholds of concern described in Section 1(g) of this plan and with comparable data from other wind power facilities in the Columbia Basin, as available. If the fatality rates for the first year of monitoring at the WWEF do not exceed any of the thresholds of concern and are within the range of the fatality rates found at other wind power facilities in the region, then the investigators will perform a second year of monitoring in Year 5 of operations.

If fatality rates for the first year of monitoring at the WWEF materially exceed any of the thresholds of concern or the range of fatality rates found at other wind power facilities in the region, the certificate holder shall propose additional mitigation for ODOE and ODFW review within 6 months after reporting the fatality rates to the ODOE. Alternatively, the certificate holder may opt to conduct a second year of fatality monitoring immediately if the certificate

holder believes that the results of Year 1 monitoring were anomalous. If the certificate holder takes this option, the investigators still must perform the monitoring in Year 5 of operations as described above.

(b) Removal Trials

The objective of the removal trials is to estimate the length of time avian and bat carcasses remain in the search area. Estimates of carcass removal rates will be used to adjust carcass counts for removal bias. "Carcass removal" is the disappearance of a carcass from the search area due to predation, scavenging, or other means, such as farming activity.

The investigators shall conduct carcass removal trials within each of the seasons defined above during the first year of fatality monitoring. For each trial, the investigators shall use 10 to 15 carcasses of small- and large-bodied species. Trial carcasses shall be distributed within habitat categories and subtypes in proportion to their amounts within search plots.

After the first year of fatality monitoring, the investigators may reduce the number of removal trials and the number of removal trial carcasses during any subsequent year of fatality monitoring, subject to the approval of the Department. The investigators must show that the reduction is justified based on a comparison of the first year removal data with published removal data from nearby wind energy facilities.

The investigators shall use game birds or other legal sources of avian species as test carcasses for the removal trials, and the investigators may use carcasses found in fatality monitoring searches. The investigators shall select species with the same coloration and size attributes as species found within the site boundary. If suitable trial carcasses are available, trials during the fall season will include several small brown birds to simulate bat carcasses. Legally obtained bat carcasses will be used if available.

Trial carcasses will be marked discreetly for recognition by searchers and other personnel. Carcasses will be placed in a variety of postures to simulate a range of conditions. For example, birds will be: (1) placed in an exposed posture (e.g., thrown over the shoulder), (2) hidden to simulate a crippled bird (e.g., placed beneath a shrub or tuft of grass) or (3) partially hidden. The trial carcasses will be placed randomly within the carcass removal trial plots. Trial carcasses will be left in place until the end of the carcass removal trial.

An approximate schedule for assessing removal status is once daily for the first 4 days, and on days 7, 10, 14, 21, 28 and 35. This schedule may be adjusted depending on actual carcass removal rates, weather conditions and coordination with the other survey work. The condition of scavenged carcasses will be documented during each assessment, and at the end of the trial all traces of the carcasses will be removed from the site. Scavenger or other activity could result in complete removal of all traces of a carcass in a location or distribution of feathers and carcass parts to several locations. This distribution will not constitute removal if evidence of the carcass remains within an area similar in size to a search plot and if the evidence would be discernable to a searcher during a normal survey.

Before beginning removal trials for any subsequent year of fatality monitoring, the certificate holder shall report the results of the first year removal trials to ODOE and ODFW. In the report, the certificate holder shall analyze whether four removal trials per year, as

described above, provide sufficient data to accurately estimate adjustment factors for carcass removal. The number of removal trials may be adjusted up or down, subject to the approval of ODOE.

### (c) Searcher Efficiency Trials

The objective of searcher efficiency trials is to estimate the percentage of bird and bat fatalities that searchers are able to find. The investigators shall conduct searcher efficiency trials on the fatality monitoring search plots in both grassland/shrub-steppe and cultivated agriculture habitat types. A pooled estimate of searcher efficiency may be used—if sample sizes are too small for some habitat types—to adjust carcass counts for detection bias.

The investigators shall conduct searcher efficiency trials within each of the seasons defined above during the years in which the fatality monitoring occurs. Each trial will involve approximately 4 to 15 carcasses. The searchers will not be notified of carcass placement or test dates. The investigators shall vary the number of trials per season and the number of carcasses per trial so that the searchers will not know the total number of trial carcasses being used in any trial. In total, approximately 80 carcasses will be used per year, or approximately 15 to 25 per season.

For each trial, the investigators shall use small- and large-bodied species. The investigators shall use game birds or other legal sources of avian species as test carcasses for the efficiency trials, and the investigators may use carcasses found in fatality monitoring searches. The investigators shall select species with the same coloration and size attributes as species found within the site boundary. If suitable test carcasses are available, trials during the fall season will include several small brown birds to simulate bat carcasses. Legally obtained bat carcasses will be used if available. The investigators shall mark the test carcasses to differentiate them from other carcasses that might be found within the search plot and shall use methods similar to those used to mark removal test carcasses as long as the procedure is sufficiently discreet and does not increase carcass visibility.

The certificate holder shall distribute trial carcasses in varied habitat in rough proportion to the habitat types within the facility site. On the day of a standardized fatality monitoring search (described below) but before the beginning of the search, investigators will place efficiency trial carcasses randomly within search plots (one to three trial carcasses per search plot) within areas to be searched. If scavengers appear attracted by placement of carcasses, the carcasses will be distributed before dawn.

Efficiency trials will be spread over the entire season to incorporate effects of varying weather and vegetation growth. Carcasses will be placed in a variety of postures to simulate a range of conditions. For example, birds will be: (1) placed in an exposed posture (thrown over the shoulder), (2) hidden to simulate a crippled bird or (3) partially hidden.

The number and location of the efficiency trial carcasses found during the carcass search will be recorded. The number of efficiency trial carcasses available for detection during each trial will be determined immediately after the trial by the person responsible for distributing the carcasses. Following plot searches, all traces of test carcasses will be removed from the site.



If new searchers are brought into the search team, additional searcher efficiency trials will be conducted to ensure that detection rates incorporate searcher differences. The certificate holder shall include a discussion of any changes in search personnel and any additional detection trials in the reporting required under Section 4 of this plan.

Before beginning searcher efficiency trials for any subsequent year of fatality monitoring, the certificate holder shall report the results of the first year efficiency trials to ODOE and ODFW. In the report, the certificate holder shall analyze whether the efficiency trials as described above provide sufficient data to accurately estimate adjustment factors for searcher efficiency. The number of searcher efficiency trials for any subsequent year of fatality monitoring may be adjusted up or down, subject to the approval of ODOE.

(d) Fatality Monitoring Search Protocol

The objective fatality monitoring is to estimate the number of bird and bat fatalities that are attributable to facility operation as an indicator of the impact of the facility on habitat quality. The goal of bird and bat fatality monitoring is to estimate fatality rates and associated variances. The investigators shall perform fatality monitoring using standardized carcass searches according to the schedule described above.

Personnel trained in proper search techniques (“the searchers”) will conduct the carcass searches by walking concentric or parallel transects (with transect width determined by the species of concern) within search plots. Search area and speed may be adjusted by habitat type after evaluation of the first searcher efficiency trial.

Searchers shall flag all avian or bat carcasses discovered. Carcasses are defined as a complete carcass or body part, 10 or more feathers or three or more primary feathers in one location. When parts of carcasses and feathers from the same species are found within a search plot, searchers shall make note of the relative positions and assess whether or not these are from the same fatality.

All carcasses (avian and bat) found during the standardized carcass searches will be photographed, recorded and labeled with a unique number. Searchers shall make note of the nearest two or three structures (turbine, power pole, fence, building or overhead line) and the approximate distance from the carcass to these structures. The species and age of the carcass will be determined when possible. Searchers shall note the extent to which the carcass is intact and estimate time since death. Searchers shall describe all evidence that might assist in determination of cause of death, such as evidence of electrocution, vehicular strike, wire strike, predation or disease. When assessment of the carcass is complete, all traces of it will be removed from the site.

Each carcass will be bagged and frozen for future reference and possible necropsy or (if the carcass is fresh and whole) for use in trials. A copy of the data sheet for each carcass will be kept with the carcass at all times. For each carcass found, searchers will record species, sex and age when possible, date and time collected, location, condition (e.g., intact, scavenged, feather spot) and any comments that may indicate cause of death. Searchers will photograph each carcass as found and will map the find on a detailed map of the search area showing the location of the wind turbines and associated facilities. The certificate

holder shall coordinate collection of state endangered, threatened, sensitive or other state protected species with ODFW. The certificate holder shall coordinate collection of federally listed endangered or threatened species and Migratory Bird Treaty Act protected avian species with the U.S. Fish and Wildlife Service. The certificate holder shall obtain appropriate collection permits from ODFW and USFWS.

The investigators shall calculate fatality rates using the statistical methods described in Section (f), except that the investigators may use different notation or methods that are mathematically equivalent with prior approval of ODOE. In making these calculations, the investigators may exclude carcass data from the first search of each turbine plot (to eliminate possible counting of carcasses that were present before the turbine was operating).

The investigators shall estimate the number of avian and bat fatalities attributable to operation of the facility based on the number of avian and bat fatalities found at the facility site. All carcasses located within areas surveyed, regardless of species, will be recorded and, if possible, a cause of death determined based on blind necropsy results. If a different cause of death is not apparent, the fatality will be attributed to facility operation. The total number of avian and bat fatalities will be estimated by adjusting for removal and searcher efficiency bias.

On an annual basis, the certificate holder shall report an estimate of fatalities in eight categories: (1) all birds, (2) small birds, (3) large birds, (4) raptors, (5) grassland birds, (6) nocturnal migrants, (7) state and federally listed threatened and endangered species and State Sensitive Species listed under OAR 635-100-0040 and (8) bats. The certificate holder shall report annual fatality rates on both a per-MW and per-turbine basis.

(e) Incidental Finds and Injured Birds

The searchers might discover carcasses incidental to formal carcass searches (e.g., while driving within the project area). For each incidentally discovered carcass, the searcher shall identify, photograph, record data and collect the carcass as would be done for carcasses within the formal search sample during scheduled searches. If the incidentally discovered carcass is found within a formal search plot, the fatality data will be included in the calculation of fatality rates. If the incidentally discovered carcass is found outside a formal search plot, the data will be reported separately. The certificate holder shall coordinate collection of incidentally discovered state endangered, threatened, sensitive or other state protected species with ODFW. The certificate holder shall coordinate collection of incidentally discovered federally-listed endangered or threatened species and Migratory Bird Treaty Act protected avian species with the USFWS.

The certificate holder shall develop and follow a protocol for handling injured birds. Any injured native birds found on the facility site will be carefully captured by a trained project biologist or technician and transported to a qualified rehabilitation specialist approved by ODOE.<sup>1</sup> The certificate holder shall pay costs, if any, charged for time and expenses related

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<sup>1</sup> Approved specialists include Lynn Tompkins (wildlife rehabilitator) of Blue Mountain Wildlife, a wildlife rehabilitation center in Pendleton, and the Audubon Bird Care Center in Portland. The certificate holder must obtain

to care and rehabilitation of injured native birds found on the site, unless the cause of injury is clearly demonstrated to be unrelated to the facility operations.

(f) Statistical Methods for Fatality Estimates (Shoenfeld Estimator)

The estimate of the total number of wind facility-related fatalities is based on:

- (1) The observed number of carcasses found during standardized searches during the two monitoring years for which the cause of death is attributed to the facility.<sup>2</sup>
- (2) Searcher efficiency expressed as the proportion of planted carcasses found by searchers.
- (3) Removal rates expressed as the estimated average probability a carcass is expected to remain in the study area and be available for detection by the searchers during the entire survey period.

**Definition of Variables**

The following variables are used in the equations below:

- |           |  |
|-----------|--|
| $c_i$     | the number of carcasses detected at plot $i$ for the study period of interest (e.g., one year) for which the cause of death is either unknown or is attributed to the facility   |
| $n$       | the number of search plots   |
| $k$       | the number of turbines searched (includes the turbines centered within each search plot and a proportion of the number of turbines adjacent to search plots to account for the effect of adjacent turbines on the search plot buffer area) |
| $\bar{c}$ | the average number of carcasses observed per turbine per year  |
| $s$       | the number of carcasses used in removal trials   |
| $s_c$     | the number of carcasses in removal trials that remain in the study area after 35 days  |
| $se$      | standard error (square of the sample variance of the mean)   |
| $t_i$     | the time (days) a carcass remains in the study area before it is removed   |
| $\bar{t}$ | the average time (days) a carcass remains in the study area before it is removed   |
| $d$       | the total number of carcasses placed in searcher efficiency trials   |
| $p$       | the estimated proportion of detectable carcasses found by searchers  |

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ODOE approval before using other specialists.

<sup>2</sup> If a different cause of death is not apparent, the fatality will be attributed to facility operation.

- $I$  the average interval between searches in days
- $\hat{\pi}$  the estimated probability that a carcass is both available to be found during a search and is found
- $m_t$  the estimated annual average number of fatalities per turbine per year, adjusted for removal and observer detection bias
- $C$  nameplate energy output of turbine in megawatts (MW)

### Observed Number of Carcasses

The estimated average number of carcasses ( $\bar{c}$ ) observed per turbine per year is:

$$\bar{c} = \frac{\sum_{i=1}^n c_i}{k}. \quad (1)$$

### Estimation of Carcass Removal

Estimates of carcass removal are used to adjust carcass counts for removal bias. Mean carcass removal time ( $\bar{t}$ ) is the average length of time a carcass remains at the site before it is removed:

$$\bar{t} = \frac{\sum_{i=1}^s t_i}{s - s_c}. \quad (2)$$

This estimator is the maximum likelihood estimator assuming the removal times follow an exponential distribution and there is right-censoring of data. Any trial carcasses still remaining at 35 days are collected, yielding censored observations at 35 days. If all trial carcasses are removed before the end of the trial, then  $s_c$  is 0, and  $\bar{t}$  is just the arithmetic average of the removal times. Removal rates will be estimated by carcass size (small and large), habitat type and season.

### Estimation of Observer Detection Rates

Observer detection rates (i.e., searcher efficiency rates) are expressed as  $p$ , the proportion of trial carcasses that are detected by searchers. Observer detection rates will be estimated by carcass size, habitat type and season.

### Estimation of Facility-Related Fatality Rates

The estimated per turbine annual fatality rate ( $m_t$ ) is calculated by:

$$m_t = \frac{c}{\hat{\pi}}, \quad (3)$$

where  $\hat{\pi}$  includes adjustments for both carcass removal (from scavenging and other means) and observer detection bias assuming that the carcass removal times  $t_i$  follow an exponential distribution. Under these assumptions, this detection probability is estimated by:

$$\hat{\pi} = \frac{t + p}{I} \cdot \frac{\left[ \exp\left(\frac{I}{t}\right) - 1 \right]}{\left[ \exp\left(\frac{I}{t}\right) - 1 + p \right]} \quad (4)$$

The estimated per MW annual fatality rate ( $m$ ) is calculated by:

$$m = \frac{m_i}{C} \quad (5)$$

The final reported estimates of  $m$ , associated standard errors and 90% confidence intervals will be calculated using bootstrapping (Manly 1997). Bootstrapping is a computer simulation technique that is useful for calculating point estimates, variances and confidence intervals for complicated test statistics. For each iteration of the bootstrap, the plots will be sampled with replacement, trial carcasses will be sampled with replacement, and  $\bar{c}$ ,  $t^-$ ,  $p$ ,  $\hat{\pi}$  and  $m$  will be calculated. A total of 5,000 bootstrap iterations will be used. The reported estimates will be the means of the 5,000 bootstrap estimates. The standard deviation of the bootstrap estimates is the estimated standard error. The lower 5<sup>th</sup> and upper 95<sup>th</sup> percentiles of the 5000 bootstrap estimates are estimates of the lower limit and upper limit of 90% confidence intervals.

### Nocturnal Migrant and Bat Fatalities

Differences in observed nocturnal migrant and bat fatality rates for lit turbines, unlit turbines that are adjacent to lit turbines and unlit turbines that are not adjacent to lit turbines will be compared graphically and statistically.

#### (g) Mitigation

The certificate holder shall use a worst-case analysis to resolve any uncertainty in the results and to determine whether the data indicate that additional mitigation should be considered. ODOE may require additional, targeted monitoring if the data indicate the potential for significant impacts that cannot be addressed by worst-case analysis and appropriate mitigation.

Mitigation may be appropriate if fatality rates exceed a “threshold of concern.”<sup>3</sup> For the purpose of determining whether a threshold has been exceeded, the certificate holder shall calculate the average annual fatality rates for species groups after each year of monitoring. Based on current knowledge of the species that are likely to use the habitat in the area of the facility, the following thresholds apply to the WWEF:

<b>Species Group</b>	<b>Threshold of Concern</b> (fatalities per MW)
Raptors (All eagles, hawks, falcons and owls, including burrowing owls.)	0.09
Raptor species of special concern (Swainson’s hawk, ferruginous hawk, peregrine falcon, golden eagle, bald eagle, burrowing owl.)	0.06
Grassland species (All native bird species that rely on grassland habitat and are either resident species occurring year round or species that nest in the area, excluding horned lark, burrowing owl and northern harrier.)	0.59
State sensitive avian species listed under OAR 635-100-0040 (Excluding raptors listed above.)	0.2
Bat species as a group	2.5

If the data show that a threshold of concern for an avian species group has been exceeded, the certificate holder shall implement mitigation if ODOE determines that mitigation is appropriate based on analysis of the data, consultation with ODFW, and consideration of any other significant information available at the time. In addition, ODOE may determine that mitigation is appropriate if fatality rates for individual avian or bat species (especially State Sensitive Species) are higher than expected and at a level of biological concern. If ODOE determines that mitigation is appropriate, the certificate holder, in consultation with ODOE and ODFW, shall propose mitigation measures designed to benefit the affected species. This may take into consideration whether the mitigation required or provided in conjunction with raptor nest monitoring, habitat mitigation, or other components of the *Wildlife Monitoring and Mitigation Plan* or *Habitat Mitigation Plan*, would also benefit the affected species.

The certificate holder shall implement mitigation as approved by ODOE, subject to review by the Council. ODOE may recommend additional, targeted data collection if the need for

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<sup>3</sup> The Council adopted “thresholds of concern” for raptors, grassland species, and state sensitive avian species in the Final Order on the Application for the Klondike III Wind Project (June 30, 2006) and for bats in the Final Order on the Application for the Biglow Canyon Wind Farm (June 30, 2006). As explained in the Klondike III order: “Although the threshold numbers provide a rough measure for deciding whether the Council should be concerned about observed fatality rates, the thresholds have a very limited scientific basis. The exceeding of a threshold, by itself, would not be a scientific indicator that operation of the facility would result in range-wide population level declines of any of the species affected. The thresholds are provided in the Wildlife Monitoring and Mitigation Plan to guide consideration of additional mitigation based on two years of monitoring data.”

mitigation is unclear based on the information available at the time. The certificate holder shall implement such data collection as approved by the Council.

The certificate holder shall design mitigation to benefit the affected species group. Mitigation may include, but is not limited to, protection of nesting habitat for the affected group of native species through a conservation easement or similar agreement. Tracts of land that are intact and functional for wildlife are preferable to degraded habitat areas. Preference should be given to protection of land that would otherwise be subject to development or use that would diminish the wildlife value of the land. In addition, mitigation measures might include: enhancement of the protected tract by weed removal and control; increasing the diversity of native grasses and forbs; planting sagebrush or other shrubs; constructing and maintaining artificial nest structures for raptors; improving wildfire response; and conducting or making a contribution to research that will aid in understanding more about the affected species and its conservation needs in the region.

If the data show that the threshold of concern for bat species as a group has been exceeded, the certificate holder shall implement mitigation if ODOE determines that mitigation is appropriate based on analysis of the data, consultation with ODFW, and consideration of any other significant information available at the time. For example, if the threshold for bat species as a group is exceeded, the certificate holder may contribute to Bat Conservation International or to a Pacific Northwest bat conservation group to fund new or ongoing research in the Pacific Northwest to better understand wind facility impacts to bat species and to develop possible ways to reduce impacts to the affected species.

## **2. Raptor Nest Surveys**

The objectives of raptor nest surveys are: (1) to estimate the size of the local breeding populations of raptor species that nest on the ground or aboveground in trees or other aboveground nest locations in the vicinity of the facility; and (2) to determine whether there are noticeable changes in nesting activity or nesting success in the local populations of the following raptor species: Swainson's hawk, golden eagle, ferruginous hawk and burrowing owl.

The certificate holder shall conduct short-term and long-term monitoring. The investigators will use aerial and ground surveys to evaluate nest success by gathering data on active nests, on nests with young, and on young fledged.

### **(a) Short-Term Monitoring**

Short-term monitoring will be done in two monitoring seasons. The first monitoring season will be in the first raptor nesting season after completion of construction of the facility. The second monitoring season will be in the fourth year after construction is completed. The certificate holder shall provide a summary of the first-year results in the monitoring report described in Section 4. After the second monitoring season, the investigators will analyze two years of data compared to the baseline data.

During each monitoring season, the investigators will conduct a minimum of one aerial and one ground survey for raptor nests in late May or early June and additional surveys as described in this section. The survey area is the area within the facility site and a 2-mile

buffer zone around the site. For the ground surveys while checking for nesting *success* (conducted within the facility site and up to a maximum of ½ mile from the facility site), nests outside the leased project boundary will be checked from an appropriate distance where feasible, depending on permission from the landowner for access.

All nests discovered during pre-construction surveys and any nests discovered during post-construction surveys, whether active or inactive, will be given identification numbers. Global positioning system (GPS) coordinates will be recorded for each nest. Locations of inactive nests will be recorded because they could become occupied during future years.

Determining nest *occupancy* may require one or two visits to each nest. Aerial surveys for nest occupancy will be conducted within the facility site and a 2-mile buffer. For occupied nests, the certificate holder will determine nesting *success* by a minimum of one ground visit to determine the species, number of young and young fledged within the facility site and up to ½ mile from the facility site. "Nesting success" means that the young have successfully fledged (the young are independent of the core nest site).

#### (b) Long-Term Monitoring

In addition to the two years of post-construction raptor nest surveys described in Section 2(a), the investigators shall conduct long-term raptor nest surveys at 5-year intervals for the life of the facility.<sup>4</sup> Investigators will conduct the first long-term raptor nest survey in the raptor nesting season of the ninth year after construction is completed and will repeat the survey at 5-year intervals thereafter. In conducting long-term surveys, the investigators will follow the same survey protocols as described above in Section 2(a) unless the investigators propose alternative protocols that are approved by ODOE. In developing an alternative protocol, the investigators will consult with ODFW and will take into consideration other raptor nest monitoring conducted in adjacent areas. The investigators will analyze the data—as a way of determining trends in the number of raptor breeding attempts the facility supports and the success of those attempts—and will submit a report after each year of long-term raptor nest surveys.

### **3. Wildlife Reporting and Handling System**

The Wildlife Reporting and Handling System (WRHS) is a monitoring program to search for and handle avian and bat casualties found by maintenance personnel during operation of the facility. Maintenance personnel will be trained in the methods needed to carry out this program. This monitoring program includes the initial response, handling and reporting of bird and bat carcasses discovered incidental to maintenance operations ("incidental finds").

All avian and bat carcasses discovered by maintenance personnel will be photographed and data will be recorded as would be done for carcasses within the formal search sample during scheduled searches. If maintenance personnel discover incidental finds, the maintenance personnel will notify a project biologist. The Project biologist (or the Project biologist's experienced wildlife technician) will collect the carcass or will instruct maintenance

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<sup>4</sup> As used in this plan, "life of the facility" means continuously until the facility site is restored and the site certificate is terminated in accordance with OAR 345-027-0110.



personnel to have an on-site carcass handling permittee collect the carcass. The certificate holder's on-site carcass handling permittee must be a person who is listed on state and federal scientific or salvage collection permits and who is available to process (collect) the find on the day it is discovered. The find must be processed on the same day as it is discovered.

During the years in which fatality monitoring occurs, if maintenance personnel discover incidental finds outside the search plots for the fatality monitoring searches, the data will be reported separately from fatality monitoring data. If maintenance personnel discover carcasses within search plots, the data will be included in the calculation of fatality rates. The maintenance personnel will notify a project biologist. The Project biologist will collect the carcass or will instruct maintenance personnel to have an on-site carcass handling permittee collect the carcass. As stated above, the on-site permittee must be available to process the find on the day it is discovered. The certificate holder shall coordinate collection of state endangered, threatened, sensitive or other state protected species with ODFW. The certificate holder shall coordinate collection of federally-listed endangered or threatened species and Migratory Bird Treaty Act protected avian species with the USFWS.

#### **4. Data Reporting**

The certificate holder will report wildlife monitoring data and analysis to the ODOE for each calendar year in which wildlife monitoring occurs. Monitoring data include fatality monitoring program data, raptor nest survey data, and WRHS data. The certificate holder may include the reporting of wildlife monitoring data and analysis in the annual report required under OAR 345-026-0080 or submit this information as a separate document at the same time the annual report is submitted. In addition, the certificate holder shall provide to ODOE any data or record generated in carrying out this monitoring plan upon request by ODOE.

The certificate holder shall notify USFWS and ODFW immediately if any federal or state endangered or threatened species are killed or injured on the facility site.

#### **5. Amendment of the Plan**

This *Wildlife Monitoring and Mitigation Plan* may be amended from time to time by agreement of the certificate holder and the Council. Such amendments may be made without amendment of the site certificate. The Council authorizes ODOE to agree to amendments to this plan and to mitigation actions that may be required under this plan. ODOE shall notify the Council of all amendments and mitigation actions, and the Council retains the authority to approve, reject or modify any amendment of this plan or mitigation action agreed to by ODOE.