

## Shepherds Flat North Request for Amendment 2: Draft Proposed Order

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**To:** Oregon Energy Facility Siting Council  
**From:** Chase McVeigh-Walker, Senior Siting Analyst  
**Date:** November 22, 2019  
**Re:** Draft Proposed Order on Request for Amendment 2

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**Certificate Holder:** North Hurlburt Wind, LLC, a wholly owned subsidiary of Caithness Energy, LLC, a subsidiary of Caithness Equities Corporation.

**Approved Facility:** Operational wind energy generation facility with 106 wind turbines and a maximum generating capacity of 265 megawatts (MW). The facility is located within a site boundary of approximately 9,264 acres in Gilliam county.

**Proposed Amendment:** Remove and replace turbine blades and nacelles (repower) on up to 106 wind turbines, lowering minimum aboveground blade tip clearance from 25 to 21.5 meters.

**Proposed Location:** Gilliam County (within approved site boundary)

**Staff Recommendation:** Approval of Request for Amendment 2 of Site Certificate

## **Summary**

To issue an amended site certificate, the Energy Facility Siting Council (EFSC or the Council) must find that a request for amendment to the site certificate demonstrates that the facility, with proposed changes, satisfies, or with conditions can satisfy, each of the applicable EFSC Siting Standards set forth in Oregon Administrative Rule (OAR) Chapter 345, Divisions 22 through 24, as well as all other Oregon statutes and administrative rules applicable to the facility with proposed changes.

The amendment request is being reviewed under the Type B review process (OAR Chapter 345 Division 27). As staff to EFSC, the Oregon Department of Energy (the Department) reviewed Request for Amendment 2 to the Shepherds Flat North site certificate, in consultation with specifically identified state and local reviewing agencies. The proposed amendment would allow the certificate holder to modify turbine components and install longer turbine blades on the existing towers (proposed RFA2 facility repower). Based upon its review of the amendment request, the Department recommends Council issue a second amended site certificate for the facility, subject to the existing operational and recommended new pre-construction and construction conditions set forth in this order. The analysis and recommendations contained in this draft proposed order are not a final determination.

A public comment period is now open on the draft proposed order and complete amendment request. The comment deadline for written comments to be submitted to the Department is December 13, 2019 by 5:00 p.m. PST. Section II.C., *Amendment Review Process* of the draft proposed order contains additional information regarding the site certificate amendment review process. The public notice associated with the release of this draft proposed order also contains additional information regarding the comment period and next steps in the EFSC review process.

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

In the Matter of Request for Amendment 2 for the  
Shepherds Flat North Site Certificate

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DRAFT PROPOSED ORDER ON  
REQUEST FOR AMENDMENT 2 TO  
THE SITE CERTIFICATE

November 22, 2019

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13 Attachment B: Reviewing Agency Comments on preliminary RFA2

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16 Attachment E: Wildlife Monitoring and Mitigation Plan

17 Attachment F: Habitat Mitigation Plan

18

19

1 **I. INTRODUCTION**

2  
3 The Oregon Department of Energy (Department) issues this draft proposed order, in  
4 accordance with Oregon Revised Statute (ORS) 469.405(1) and Oregon Administrative Rule  
5 (OAR) 345-027-0365, based on its review of Request for Amendment 2 (RFA2) to the Shepherds  
6 Flat North site certificate, as well as comments and recommendations received by specific state  
7 agencies and local governments during review of the preliminary amendment request. The  
8 certificate holder for the facility is North Hurlburt Wind, LLC (certificate holder), a wholly owned  
9 subsidiary of Caithness Energy, LLC, a subsidiary of Caithness Equities Corporation.

10  
11 The certificate holder requests that the Council approve changes to the site certificate to:

- 12
- 13 • Upgrade (or repower) the existing facility wind turbines by replacing blades for longer  
14 and lighter blades and associated machinery on the existing turbine towers;
  - 15 • Construct temporary access road, temporary access road improvement and laydown  
16 areas; and,
  - 17 • Amend a site certificate condition (Existing Condition 26).<sup>1</sup>
- 18

19 Based upon review of this amendment request, in conjunction with comments and  
20 recommendations received by state agencies and local government entities, the Department  
21 recommends that the Council approve and grant an amendment to the Shepherds Flat North  
22 site certificate subject to the existing operational and recommended new pre-construction and  
23 construction conditions set forth in this order.

24  
25 **I.A. Name and Address of Certificate Holder**

26  
27 North Hurlburt Wind, LLC  
28 565 Fifth Avenue, 29th Floor  
29 New York, NY 10017

30  
31 ***Parent Company of the Certificate Holder***

32  
33 Caithness Energy, LLC  
34 565 Fifth Avenue, 29th Floor  
35 New York, NY 10017

36

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<sup>1</sup> The proposed upgrade or repower of the existing wind turbines would result in a change in wind turbine blade tip height from 135 to 150 meters. However, existing site certificate Condition 26 authorizes a maximum blade tip height of 150 meters, based on representations in the Application for Site Certificate (ASC); therefore, Council previously reviewed and authorized these impacts in the 2008 Final Order on ASC and therefore are not re-evaluated in this order.

1 ***Certificate Holder Contact***

2

3 Vandana Gupta  
4 North Hurlburt Wind, LLC  
5 c/o Caithness Energy, LLC  
6 565 Fifth Avenue, 29th Floor  
7 New York, NY 10017

8

9 **I.B. Description of the Approved Facility and Facility Location**

10

11 Shepherds Flat North is a wind energy facility with approximately 106 wind turbines and a  
12 maximum generating capacity of 265 megawatts (MW). The facility includes a 34.5 kilovolt (kV)  
13 electrical collection system, a collector substation, a 230 kV interconnection transmission line,  
14 two meteorological towers, a field workshop, supervisory control and data acquisition system  
15 (SCADA), access roads, and temporary construction areas.

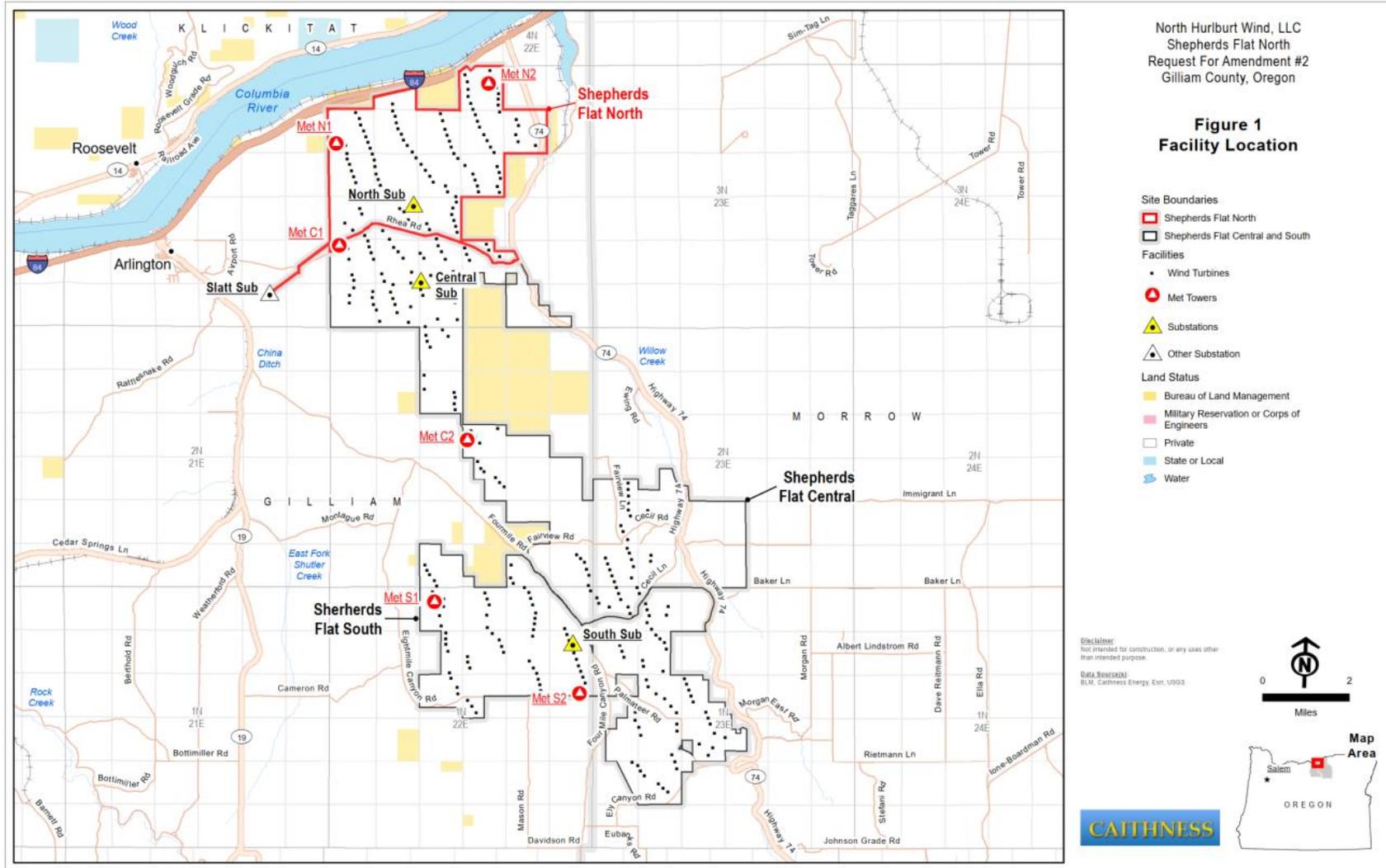
16

17 As presented in Figure 1: *Facility Regional Location* below, the facility is located within a site  
18 boundary of approximately 9,264 acres, south of Interstate Highway 84, east of Arlington, in  
19 Gilliam County. The amendment request would not change the site boundary.

20

21

1 **Figure 1: Facility Regional Location**



2 Z:\2019\Shepherds Flat\Reports\FIG 1\FIG 1 Facility Location\_NORTH.mxd 9/23/2019

1 **I.C. Procedural History**  
2

3 The Council approved a site certificate for the Shepherds Flat Wind Facility on July 25, 2008,  
4 authorizing construction and operation of a 909 MW wind energy generation facility. The  
5 Council issued the First Amended Site Certificate on March 12, 2010, authorizing an expansion  
6 of the site boundary to accommodate an alternative route for the transmission line, and also  
7 divided and transferred the Shepherds Flat Wind Facility into three independent facilities -  
8 Shepherds Flat North, Shepherds Flat Central, and Shepherds Flat South.  
9

10 The procedural history of Request for Amendment 2 (RFA2 or amendment request) is described  
11 in Section II.C. *Amendment Review Process* of this order.  
12

13 **II. AMENDMENT PROCESS**  
14

15 **II.A. Requested Amendment**  
16

17 *Wind Turbine Repower*  
18

19 The certificate holder requests Council approval to upgrade (or repower) 106 existing wind  
20 turbines to current technology by replacing existing blades for longer turbine blades and  
21 associated wind turbine components on existing turbine towers. Wind turbine repowering  
22 would require trucks, small cranes or telehandlers, and a track mounted crane. The trucks  
23 would both deliver the new wind turbine components to the existing wind turbine pad sites,  
24 and transport the old components offsite for proper disposal or recycling at a licensed facility.  
25

26 Once the new wind turbines components are delivered via truck to each pad site, smaller  
27 cranes or telehandlers would unload and stage the components. A track mounted crane would  
28 then mobilize to the turbine pad area, setting up on the access road adjacent the turbine, and  
29 would lower the old rotor down to the pad site for disassembly, followed by the old gearbox.  
30 Once disassembled, the old components would be staged for truck removal. The track mounted  
31 crane would then lift the new gearbox and rotor into place. Once, complete, the track mounted  
32 crane would advance to the next wind turbine, and the process would repeat.  
33

34 The proposed RFA2 facility repower would not: increase the site boundary, result in permanent  
35 disturbance, or increase maximum blade tip height from the maximum authorized in the site  
36 certificate. The Department notes that the longer turbine blades would increase the blade-tip  
37 height and rotor diameter of the turbines within the parameters allowed by the site certificate.<sup>2</sup>  
38 The proposed RFA2 facility repower would allow each wind turbine to generate more electricity  
39 without increasing the permanent footprint of the facility. The authorized peak generating  
40 capacity of the facility would remain the same (265 MW). Replacing old turbine components

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<sup>2</sup> Condition 26 authorizes a maximum blade tip height of 150 meters, based on representations in the Application for Site Certificate (ASC); therefore, Council previously reviewed and authorized these impacts in the 2008 Final Order on ASC and therefore are not further evaluated in this order.

1 with modern, more technologically advanced equipment would increase the capacity and  
2 efficiency of the facility by allowing the turbines to process low velocity winds that they  
3 currently cannot do as effectively.

4  
5 *Temporary Disturbance Impacts*

6  
7 The proposed RFA2 facility repower would include temporary laydown areas used to stage and  
8 store construction equipment, improvements to existing access roads and turbine pad areas,  
9 and temporary turnaround areas, resulting in approximately 109.3 acres of temporary  
10 disturbance.<sup>3</sup>

11  
12 *Amendment to a Site Certificate Condition*

13  
14 As a result of the proposed RFA2 facility repower, the certificate holder requests to amend  
15 Condition 26, to decrease the minimum blade tip clearance from 25 to 21.5 meters.

16  
17 **II.B. Recommended Amended Site Certificate Format**

18  
19 The existing site certificate, as amended in March 2010, contains two separate sections of  
20 conditions; the first section applying generally to the facility during design, construction,  
21 operation and retirement (Mandatory Conditions, Site Specific Conditions, and Construction  
22 and Operation Rules for Facilities), and the second section that applies specifically to the  
23 Shepherds Flat North facility. To minimize duplicity in the site certificate, the Department  
24 recommends that Council delete the OAR rule reference that prefaces each of the conditions in  
25 the first section of site certificate conditions.

26  
27 Based on the potential impacts from the proposed RFA2 facility repower, and for clarification  
28 during condition compliance, the Department recommends that Council impose specific  
29 conditions that would apply prior to and during construction of the proposed RFA2 facility  
30 modifications. Previously imposed operational and retirement conditions would continue to  
31 apply to the facility, with proposed changes, in their entirety. The recommended new pre-  
32 construction and construction conditions are presented in Section V of the draft amended site  
33 certificate, provided as Attachment A to this order.

34  
35 **II.C. Amendment Review Process**

36  
37 Council rules describe the processes for transfers, Type A, Type B, and Type C review of a  
38 request for amendment at OAR 345-027-0351. The Type A review is the standard or “default”  
39 site certificate amendment process for changes that require an amendment. Type C review  
40 process is associated with construction-related changes. The key procedural difference  
41 between the Type A and Type B review is that the Type A review includes a public hearing on

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<sup>3</sup> SFNAM2 Complete RFA 2019-11-21. The certificate holder represents that temporary disturbance would occur within areas previously disturbed during facility construction.

1 the draft proposed order and an opportunity for a contested case proceeding. The primary  
2 timing differences between Type A and Type B review are the maximum allowed timelines for  
3 the Department’s determination of completeness of the preliminary request for amendment,  
4 as well as the issuance of the draft proposed order, and proposed order. It is important to note  
5 that Council rules authorize the Department to adjust the timelines for these specific  
6 procedural requirements, if necessary.

7  
8 A certificate holder may submit an amendment determination request to the Department for a  
9 written determination of whether a request for amendment justifies review under the Type B  
10 review process. The certificate holder has the burden of justifying the appropriateness of the  
11 Type B review process as described in OAR 345-027-0351(3). The Department may consider,  
12 but is not limited to, the factors identified in OAR 345-027-0357(8) when determining whether  
13 to process an amendment request under Type B review.

14  
15 On May 21, 2019, the certificate holder submitted a Type B Review amendment determination  
16 request (Type B Review ADR), requesting the Department’s review and determination of  
17 whether, based on evaluation of the OAR 345-027-0357(8) factors, the amendment request  
18 could be reviewed under the Type B review process. On June 17, 2019 the Department  
19 responded to the certificate holder that there was insufficient supporting evidence or analysis  
20 to justify a Type B Review. On October 7, 2019, the certificate holder submitted their  
21 preliminary request for amendment 2 (pRFA2). On October 23, 2019, the Department  
22 determined that Request for Amendment 2 of the Shepherds Flat North Site Certificate justifies  
23 Type B review, based on the low level of complexity, the limited level of interest in the  
24 proposed changes anticipated by the Department, and the low likelihood of significant adverse  
25 impacts or additional mitigation from the proposed change.

26  
27 Pursuant to OAR 345-027-0363(2), on October 28, 2019, the Department determined pRFA2 to  
28 be incomplete and issued requests for additional information.<sup>4</sup> The certificate holder provided  
29 responses to the information request on November 8, 2019. After reviewing the responses to  
30 its information request, on November 21, 2019, the Department determined the RFA to be  
31 complete. Under OAR 345-027-0363(5), an RFA is complete when the Department finds that a  
32 certificate holder has submitted information adequate for the Council to make findings or  
33 impose conditions for all applicable laws and Council standards. The certificate holder  
34 submitted a complete RFA2 on November 21, 2019, which was then posted on November 22,  
35 2019 to the Department’s project website with an announcement notifying the public that the  
36 complete RFA had been received and is available for viewing.

37  
38 *Reviewing Agency Comments on Preliminary Request for Amendment 2*

39  
40 As presented in Attachment B of this order, the Department received comments on pRFA2  
41 from:

- 42
- Oregon Department of Fish and Wildlife (ODFW)

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<sup>4</sup> SFNAM2 Completeness Letter and RAI Table 2019-10-28.

- Oregon Department of Aviation (ODA)
- Gilliam County Planning Department

#### **II.D. Council Review Process**

On November 22, 2019, the Department issued this draft proposed order, and a notice of comment period on RFA2 and the draft proposed order (notice). The notice was distributed to all persons on the Council’s general mailing list, to the special mailing list established for the facility, to an updated list of property owners supplied by the certificate holder, and to a list of reviewing agencies as defined in OAR 345-001-0010(52).

To raise an issue on the record of the draft proposed order, a person must raise the issue in a written comment submitted after the date of the notice of the draft proposed order received by the Department before the written comment deadline. The Council will not accept or consider public comments on RFA2 or on the draft proposed order after the written comment deadline, listed above, that closes the record on the draft proposed order. After the Department considers all comments received before the comment deadline for the draft proposed order, but not more than 21 days after the comment deadline, the Department will issue a proposed order. The proposed order shall recommend approval, modification, or denial of the second amended site certificate. Upon issuance of the proposed order, the Department will issue a notice of the proposed order.

The Council, may adopt, modify or reject the proposed order based on the considerations described in OAR 345-027-0375. In a written final order, the Council shall either grant or deny issuance of an amended site certificate. In making a decision to grant or deny issuance of an amended site certificate, the Council shall apply the applicable laws and Council standards required under OAR 345-027-0375 and in effect on the dates described in OAR 345-027-0375 (3). The Council’s final order is subject to judicial review by the Oregon Supreme Court as provided in ORS 469.403.

#### **II.E. Applicable Division 27 Rule Requirements**

A site certificate amendment is necessary under OAR 345-027-0350(4) because the certificate holder requests to design, construct, and operate the facility in a manner different from the description in the site certificate, and the proposed change would impair the certificate holder’s ability to comply with a site certificate condition, and would require new conditions or modification to existing conditions in the site certificate.

The Type B amendment review process (consisting of rules 345-027-0359, -0360, -0363, -0365, -0368, -0372, and -0375) shall apply to the Council’s review of a request for amendment that the Department or the Council approves for Type B review under 345-027-0357.

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>5</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 This draft proposed order includes the Department’s initial analysis of whether the changes  
14 proposed in RFA2, meet each applicable Council Standard (with mitigation and subject to  
15 compliance with recommended conditions, as applicable), based on the information in the  
16 record. Following the written comment period on the draft proposed order, the Department  
17 will issue its proposed order, which will include the Department’s consideration of the  
18 comments and any additional evidence received on the record of the draft proposed order.  
19

20 **III.A. Standards Potentially Impacted by Request for Amendment 2**  
21

22 **III.A.1 General Standard of Review: OAR 345-022-0000**  
23

24 *(1) To issue a site certificate for a proposed facility or to amend a site certificate, the*  
25 *Council shall determine that the preponderance of evidence on the record supports the*  
26 *following conclusions:*  
27

28 *(a) The facility complies with the requirements of the Oregon Energy Facility Siting*  
29 *statutes, ORS 469.300 to ORS 469.570 and 469.590 to 469.619, and the standards*  
30 *adopted by the Council pursuant to ORS 469.501 or the overall public benefits of the*  
31 *facility outweigh the damage to the resources protected by the standards the facility*  
32 *does not meet as described in section (2);*  
33

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

---

<sup>5</sup> ORS 469.401(2).

1                   \* \* \*

2                   (4) *In making determinations regarding compliance with statutes, rules and ordinances*  
3                   *normally administered by other agencies or compliance with requirement of the Council*  
4                   *statutes if other agencies have special expertise, the Department of Energy shall consult*  
5                   *such other agencies during the notice of intent, site certificate application and site*  
6                   *certificate amendment processes. Nothing in these rules is intended to interfere with the*  
7                   *state's implementation of programs delegated to it by the federal government.*

8  
9                   **Findings of Fact**

10  
11                   OAR 345-022-0000 provides the Council's General Standard of Review and requires the Council  
12                   to find that a preponderance of evidence on the record supports the conclusion that the  
13                   proposed facility modifications comply with the requirements of EFSC statutes and the siting  
14                   standards adopted by the Council and that the proposed facility modifications comply with all  
15                   other Oregon statutes and administrative rules applicable to the issuance of an amended site  
16                   certificate for the facility, with proposed changes. OAR 345-022-0000(2) and (3) apply to RFAs  
17                   where a certificate holder has shown that the proposed facility modifications cannot meet  
18                   Council standards or has shown that there is no reasonable way to meet the Council standards  
19                   through mitigation or avoidance of the damage to protected resources; and, for those  
20                   instances, establish criteria for the Council to evaluate in making a balancing determination. In  
21                   RFA2, the certificate holder has not represented that the proposed amendments cannot meet  
22                   an applicable Council standard. Therefore, OAR 345-022- 0000(2) and (3) would not apply to  
23                   this review.

24  
25                   The requirements of OAR 345-022-0000 are discussed in the sections that follow. The  
26                   Department consulted with other state agencies and the Gilliam County Planning Department  
27                   on behalf of the Gilliam County Board of Commissioners (Special Advisory Group) during review  
28                   of pRFA2 to aid in the evaluation of whether the proposed RFA2 facility repower would  
29                   maintain compliance with statutes, rules and ordinances otherwise administered by other  
30                   agencies. Additionally, in many circumstances the Department and Council rely upon these  
31                   reviewing agencies' special expertise in evaluating compliance with the requirements of Council  
32                   standards.

33  
34                   *Mandatory and Site-Specific Conditions in Site Certificates [OAR 345-025-0006 and OAR 345-*  
35                   *025-0010]*

36  
37                   OAR 345-025-0006 lists certain mandatory conditions that the Council must adopt in every site  
38                   certificate. Council rulemaking moved the mandatory conditions from Division 27 to Division  
39                   25. As such, the Department recommends Council impose new mandatory conditions for the  
40                   proposed RFA2 facility modifications, using the language and citations consistent with the  
41                   current Division 25 rules, as presented in draft amended site certificate and provided in  
42                   Attachment A of this order. The Department also recommends that the Council remove the rule  
43                   reference from the beginning of each of the mandatory conditions to improve readability and  
44                   avoid duplication.

1 Council previously imposed Condition 26 to align with OAR 345-025-0006(3)(a), which requires  
2 that the certificate holder design, construct, operate, and retire the facility substantially as  
3 described in the ASC. In this condition, Council previously established wind turbine dimension  
4 specifications associated with an impact evaluated under a Council standard, such as maximum  
5 blade tip height, and minimum aboveground blade tip clearance. As described in Section II.A.  
6 *Requested Amendment*, the certificate holder requests Council’s approval to amend Condition  
7 26 to authorize a lower minimum aboveground blade tip clearance, from 25 to 21.5 meters.  
8 This is further evaluated below in Section III.A.10.1 *Public Health and Safety Standards for Wind*  
9 *Energy Facilities* of this order.

10  
11 *Certificate Expiration [OAR 345-027-0013]*  
12

13 A site certificate, or amended site certificate, becomes effective upon execution by the Council  
14 Chair and the certificate holder. A site certificate, or amended site certificate, expires if  
15 construction has not commenced on or before the construction commencement deadline, as  
16 established in the site certificate and statutorily required under ORS 469.401(2).  
17

18 The Department’s recommendation for the imposition of construction deadlines in the  
19 amended site certificate should reflect a balance between any concern regarding potential  
20 circumstantial changes (regulatory and environmental) and the individual circumstances of the  
21 amendment request. In addition, the Department acknowledges that there are a number of  
22 unforeseen factors that can delay a certificate holder’s commencement of construction and  
23 completion, including but not limited to financial, economic, or technological changes. The  
24 Department notes that while each amendment request is evaluated on its own facts, historic  
25 Council decisions on construction and commencement deadlines were reviewed to inform this  
26 analysis. In most instances of decisions on Application for Site Certificates (ASCs), Council has  
27 required construction commencement and completion of wind energy facilities within three  
28 and six years, respectively, after the effective date of the site certificate and in some instances  
29 the completion deadline is established based on date of construction commencement and not  
30 effective date of site certificate.  
31

32 In RFA2 Section 6.13 *Public Services*, the certificate holder explains that proposed RFA2 facility  
33 repower activities would be completed on a rolling schedule, and are assumed to be completed  
34 within a duration of 6 months. The Department recommends Council grant a construction  
35 commencement and completion deadline based upon three years following the amended site  
36 certificate execution date and an additional three years following date of construction  
37 commencement. This timeframe would provide sufficient time for satisfying preconstruction  
38 condition requirements established in the amended site certificate, allow sufficient time to  
39 obtain required permits not governed by the site certificate, and would be consistent with past  
40 Council requirements.<sup>6</sup>

---

<sup>6</sup> SFNAMD2 Complete RFA 2019-11-21, Section 4.1 *Required Permits* indicates that an updated Notice of Proposed Construction or Alteration has been submitted to the Federal Aviation Administration for the

1 In accordance with OAR 345-025-0006(4), the Department recommends Council impose the  
2 following conditions:

3  
4 **Condition 104:** The certificate holder shall begin construction of the Shepherds Flat North  
5 facility modifications, as approved in the Second Amended Site Certificate, within three  
6 years after the effective date of the amended site certificate [TBD]. The certificate holder  
7 shall notify the Department when construction of the of the facility modifications, as  
8 approved in Request for Amendment 2, commences. Under OAR 345-015-0085(8), the  
9 amended site certificate is effective upon execution by the Council Chair and the  
10 certificate holder.

11 [Amendment 2]

12  
13 **Condition 105:** The certificate holder shall complete construction of the Shepherds Flat  
14 North facility modifications, as approved in the Second Amended Site Certificate, within  
15 three years following the date of construction commencement [TBD]. The certificate  
16 holder shall promptly notify the Department of the date of completion of construction of  
17 the Shepherds Flat North facility modifications, as approved in Request for Amendment 2.

18 [Amendment 2]

19  
20 *Construction and Operation Rules for Facilities [OAR Chapter 345, Division 26]*

21  
22 The Council has adopted rules at OAR Chapter 345, Division 26 to ensure that construction,  
23 operation, and retirement of facilities are accomplished in a manner consistent with the  
24 protection of the public health, safety, and welfare and protection of the environment. These  
25 rules include requirements for compliance plans, inspections, reporting and notification of  
26 incidents. Pursuant to OAR 345-026-0080, a certificate holder is obligated to report to the  
27 Department on facility status and operational experience.

28  
29 **Conclusions of Law**

30  
31 Based on the foregoing findings of fact and conclusions of law, and subject to compliance with  
32 the recommended conditions, the Department recommends that the Council find that the  
33 certificate holder would satisfy the requirements of OAR 345-022-0000.

34  
35 **III.A.2 Organizational Expertise: OAR 345-022-0010**

36  
37 *(1) To issue a site certificate, the Council must find that the applicant has the organizational*  
38 *expertise to construct, operate and retire the proposed facility in compliance with*  
39 *Council standards and conditions of the site certificate. To conclude that the applicant*  
40 *has this expertise, the Council must find that the applicant has demonstrated the ability*

---

turbine specification changes. The certificate holder also explains that if determined to be necessary, a National Pollutant Discharge Elimination System (NPDES) Storm Water Discharge General Permit 1200-C (per Condition 73) will be obtained, and that no other permits will be required.

1           to design, construct and operate the proposed facility in compliance with site certificate  
2           conditions and in a manner that protects public health and safety and has demonstrated  
3           the ability to restore the site to a useful, non-hazardous condition. The Council may  
4           consider the applicant's experience, the applicant's access to technical expertise and the  
5           applicant's past performance in constructing, operating and retiring other facilities,  
6           including, but not limited to, the number and severity of regulatory citations issued to  
7           the applicant.

8  
9           (2) The Council may base its findings under section (1) on a rebuttable presumption that an  
10          applicant has organizational, managerial and technical expertise, if the applicant has an  
11          ISO 9000 or ISO 14000 certified program and proposes to design, construct and operate  
12          the facility according to that program.

13  
14          (3) If the applicant does not itself obtain a state or local government permit or approval for  
15          which the Council would ordinarily determine compliance but instead relies on a permit  
16          or approval issued to a third party, the Council, to issue a site certificate, must find that  
17          the third party has, or has a reasonable likelihood of obtaining, the necessary permit or  
18          approval, and that the applicant has, or has a reasonable likelihood of entering into, a  
19          contractual or other arrangement with the third party for access to the resource or  
20          service secured by that permit or approval.

21  
22          (4) If the applicant relies on a permit or approval issued to a third party and the third party  
23          does not have the necessary permit or approval at the time the Council issues the site  
24          certificate, the Council may issue the site certificate subject to the condition that the  
25          applicant shall not commence construction or operation as appropriate until the third  
26          party has obtained the necessary permit or approval and the applicant has a contract or  
27          other arrangement for access to the resource or service secured by that permit or  
28          approval.

29  
30          **Findings of Fact**

31  
32          Subsections (1) and (2) of the Council's Organizational Expertise standard require that the  
33          applicant (certificate holder) demonstrate its ability to design, construct operate and retire the  
34          facility with proposed changes in compliance with Council standards and all site certificate  
35          conditions, and in a manner that protects public health and safety, as well as its ability to  
36          restore the facility site to a useful, non-hazardous condition. The Council may consider the  
37          certificate holder's experience and past performance in constructing, operating and retiring  
38          other facilities in determining compliance with the Council's Organizational Expertise standard.  
39          Subsections (3) and (4) address third party permits.

40  
41          *Compliance with Council Standards and Site Certificate Conditions*

42  
43          The Council may consider a certificate holder's past performance, including but not limited to  
44          the quantity or severity of any regulatory citations in the construction or operation a facility,

1 type of equipment, or process similar to the facility, in evaluating whether a proposed change  
2 may impact the certificate holder’s ability to design, construct and operate a facility, with  
3 proposed changes, in compliance with Council standards and site certificate conditions.<sup>7</sup>  
4

5 North Hurlbert Wind, LLC , as a wholly owned subsidiary of Caithness Energy, LLC (Caithness),  
6 relies upon the organizational expertise and experience of its parent company, Caithness. In  
7 RFA2, the certificate holder explains that Caithness and its subsidiaries have not received any  
8 regulatory citations in the course of constructing and operating wind energy facilities.  
9 Furthermore, the certificate holder describes Caithness’ direct and relevant experience to  
10 perform upgrading/repowering tasks at the facility through its experience in wind farm site  
11 development, wind farm operation and maintenance (O&M) activities, and staff wind farm  
12 repower experience. Caithness has experience developing and selling wind assets which  
13 required much larger construction activities than repowering. Provided in RFA2, the certificate  
14 holder explains that the Shepherds Flat Management team has industry experience in full  
15 repower construction, including the replacement of all turbine components including towers  
16 with new components at other wind facilities. Additionally, because the facility is currently  
17 operational, activities including turbine component replacement (including blades and nacelles)  
18 occur as part of routine operations and maintenance.  
19

20 Based on the compliance history of the certificate holder and its parent company, the  
21 Department recommends that Council finds that the proposed RFA2 facility repower would not  
22 impact the certificate holder’s ability to design, construct, operate and retire the facility in  
23 compliance with Council standards and site certificate conditions.  
24

### 25 *Public Health and Safety*

26

27 The proposed RFA2 facility repower could result in health and safety risks from blade failure,  
28 structural and reliability concerns, ice throw, risks to public and private providers of air  
29 transportation and agricultural services, and risks to public providers of fire service during  
30 tower rescue events. The Council’s evaluation of these risks is presented in Section III.A.8,  
31 *Public Services* and Section III.A.10.1, *Public Health and Safety Standards for Wind Facilities* of  
32 this order. Based on the reasoning and analysis provided in the sections described, the  
33 Department recommends that the Council find that the proposed RFA2 facility repower,  
34 including the change to minimum aboveground blade tip clearance would not impact the  
35 certificate holder’s ability to design, construct, and operate the facility in a manner that  
36 protects public health and safety.  
37  
38  
39  
40  
41

---

<sup>7</sup> OAR 345-021-0010(1)(d)(D)

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

2

3 As described in Table 4 of Section III.B, *Standards Not Likely to be Impacted by Request for*  
4 *Amendment 2*, the proposed RFA2 facility repower would not be expected to impact the  
5 certificate holder’s ability to restore the facility site to a useful, non-hazardous condition.

6

7 *ISO 900 or ISO 14000 Certified Program*

8

9 OAR 345-022-0010(2) is not applicable because the certificate holder has not proposed to  
10 design, construct or operate the amended facility according to an ISO 9000 or ISO 14000  
11 certified program.

12

13 *Third-Party Permits*

14

15 OAR 345-022-0010(3) addresses the requirements for potential third party permits. In RFA2,  
16 the certificate holder describes that the proposed RFA2 facility repower would not require  
17 any additional third-party permits that would normally be governed by the site certificate.

18

19 **Conclusions of Law**

20

21 Based on the evidence in the record, the Department recommends that the Council find that  
22 the certificate holder would continue to satisfy the requirements of the Council’s  
23 Organizational Expertise standard.

24

25 **III.A.3 Structural Standard: OAR 345-022-0020**

26

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

29

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

32

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

36

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

41

42 *(d) The applicant can design, engineer and construct the facility to avoid dangers to*  
43 *human safety and the environment presented by the hazards identified in*

1                    *subsection (c).*

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

8  
9                    (3) *The Council may not impose the Structural Standard in section (1) to deny an*  
10                    *application for a special criteria facility under OAR 345-015-0310. However, the*  
11                    *Council may, to the extent it determines appropriate, apply the requirements of*  
12                    *section (1) to impose conditions on a site certificate issued for such a facility.*

13  
14                    **Findings of Fact**

15  
16                    As provided in section (1) above, the Structural Standard generally requires the Council to  
17                    evaluate whether the applicant (certificate holder) has adequately characterized the potential  
18                    seismic, geological and soil hazards of the site, and that the applicant (certificate holder) can  
19                    design, engineer and construct the facility to avoid dangers to human safety from these  
20                    hazards.<sup>8</sup> Pursuant to OAR 345-022-0020(2), the Council may issue a site certificate for a wind  
21                    energy facility without making findings regarding compliance with the Structural Standard;  
22                    however, the Council may apply the requirements of the standard to impose site certificate  
23                    conditions. The analysis area for the Structural Standard is the area within the site boundary.

24  
25                    In accordance with the informational requirements established in OAR 345-021-0010(1)(g)(B),  
26                    the certificate holder completed consultation with the Oregon Department of Geology and  
27                    Mineral Industries (DOGAMI) on August 20, 2019 to discuss the scope of the repowering activity  
28                    and appropriate level of seismic and non-seismic impact evaluation. During consultation,  
29                    DOGAMI Resilience Engineer, Yumei Yang, P.E. , requested information on how seismic ground  
30                    motions that exceed the building code response spectrum would be addressed and requested  
31                    disaster resilience and future climate change be addressed.

32  
33                    *Potential Seismic, Geological and Soil Hazards*

34  
35                    In RFA2, in response to the DOGAMI consultation, the certificate holder explains that although  
36                    highly unlikely given the lack of recent activity, potential sources of long-period ground motions  
37                    could include a significant event at or near recent faults associated with the Arlington-Shulter  
38                    Butte faults and Columbia Hills structure as identified in the 2007 Seismic Hazard Assessment.  
39                    The Seismic Hazard Assessment was conducted as part of the original ASC (Shannon & Wilson,  
40                    Inc. 2007). Given adequate seismic design, the potential impacts of long-period ground motions  
41                    are not expected to impact the proposed RFA2 facility repower.

---

<sup>8</sup> OAR 345-022-0020(3) does not apply to the facility, with proposed changes, because it is a not a special criteria facility under OAR 345-015-0310.

1 *Design, Engineer and Construct Facility to Avoid Dangers to Human Safety from Seismic and*  
2 *Non-Seismic Hazards*

3  
4 The certificate holder has presented evidence in RFA2 that it can design, engineer, and  
5 construct the proposed RFA2 facility repower to avoid dangers to human safety and the  
6 environment in accordance with the Council’s Structural Standard. The proposed repowering  
7 activity would include the removal and replacement of existing turbine blades with longer  
8 blades, and the replacement and modification to associated machinery including the rotor  
9 upgrade (replacing the hub casting), modification to existing nacelles roof, and an installation of  
10 a new gearbox and bedplate.

11  
12 The existing turbine foundation and tower would remain in place. To demonstrate that the  
13 proposed RFA2 facility repower would be designed, engineered and constructed to avoid  
14 dangers to human safety from seismic and non-seismic hazards, in Section 6.3 of RFA2, the  
15 certificate holder explains that a foundation uprate analysis will be conducted on turbines  
16 within the Facility, to review the original foundation calculations with the new loading  
17 documents to verify whether the existing turbine foundations can support the newly proposed  
18 loading. Moreover, the evaluation will be conducted by a licensed engineer using current code  
19 requirements and state-of-practice methods and will be provided to the Department and  
20 DOGAMI. The findings and analysis of the upgrade analysis will be reviewed by the Caithness  
21 engineering staff, from which any necessary mitigation and remediation measures, or  
22 operational timing recommendations may be identified. Based on potential mitigation and  
23 remediation measures, or timing recommendations as a result of the foundation upright  
24 analysis, the Department recommends that the Council impose condition 106 as follows:

25  
26 **Recommended Condition 106:** Prior to RFA2 facility repower activities, the certificate  
27 holder shall provide the Department with the foundation uprate analysis on facility  
28 turbines. If the analysis results identify necessary mitigation and remediation measures,  
29 or operational timing recommendations, the certificate holder shall implement the  
30 identified measures and recommendations prior to beginning the repowering activities  
31 unless otherwise approved by the Department. [Amendment #2]

32  
33 Council previously imposed Condition 62, which requires the certificate holder to have an  
34 operational safety-monitoring program and shall inspect all turbine and turbine tower  
35 components on a regular basis. The certificate holder shall maintain or repair turbine and  
36 turbine tower components as necessary to protect public safety. In RFA2, the certificate holder  
37 proposes an amendment to Condition 62, to require an inspection of all turbine and turbine  
38 tower components within 6 months of being repowered, in an effort to focus the operational  
39 inspection process and procedures on the applicable proposed RFA2 facility repower  
40 components. As such, the Department recommends that Council amend Condition 62 as  
41 provided below:

42  
43 **Recommended Amended Condition 62:** The certificate holder shall have an operational  
44 safety-monitoring program and shall inspect all turbine and turbine tower components

1 on a regular basis. All turbine and turbine tower components will be inspected within 6  
2 months of being repowered. The certificate holder shall maintain or repair turbine and  
3 turbine tower components as necessary to protect public safety. [Amendment #2]

4  
5 *Integration of Disaster Resilience Design*

6  
7 In RFA2, the certificate holder explains that although disaster resilience and climate change  
8 impacts were not addressed in the original ASC, the facility has been in operation for 8 years,  
9 and during that time, climate change has not impacted the facility. Disasters such as those  
10 relating to greater-intensity rainfall events, fluctuations in typical annual snowpack (above or  
11 below normal), and warmer average annual temperatures, are not anticipated to have a  
12 major impact on the geologic, geotechnical, and seismic conditions at the Facility.  
13 Furthermore, sea level rise will not affect the Facility due to its location.

14  
15 Additionally, in RFA2, the certificate holder explains that GE Renewables, a contractor that  
16 performs O&M activities at the facility, maintains an Emergency Preparedness and Fire  
17 Prevention Plan that outlines the procedures to effectively respond to lightening and high  
18 winds, icing on blades or external equipment, cold weather work, and EMS coordination  
19 including on-site safety requirements and communication protocols. This Plan, which is  
20 updated on an annual basis was included as Attachment 4 of RFA2.

21  
22 Based upon compliance with both existing and proposed site certificate conditions, and  
23 because the proposed amendment would not result in the placement of facility components  
24 within geologic areas that have not been previously evaluated, the Department recommends  
25 that Council find that the proposed amendment would not affect the certificate holder's  
26 characterization of the site or seismic and non-seismic hazards, or its ability to design, engineer,  
27 and construct the facility to avoid dangers to human safety presented by seismic, geologic or  
28 soils hazards.

29  
30 **Conclusions of Law**

31  
32 Based on the foregoing analysis, subject to compliance with existing and recommended  
33 conditions, and in compliance with OAR 345-022-0020(2), the Department recommends that  
34 the Council find that the certificate holder would satisfy the requirements of the Council's  
35 Structural Standard.

1        III.A.4 Soil Protection: OAR 345-022-0022

2  
3            *To issue a site certificate, the Council must find that the design, construction and*  
4            *operation of the facility, taking into account mitigation, are not likely to result in a*  
5            *significant adverse impact to soils including, but not limited to, erosion and chemical*  
6            *factors such as salt deposition from cooling towers, land application of liquid effluent,*  
7            *and chemical spills.*

8  
9        **Findings of Fact**

10  
11        The Soil Protection standard requires the Council to find that the design, construction, and  
12        operation of a proposed facility, or facility with proposed changes, is not likely to result in  
13        significant adverse impacts to soils.

14  
15        The analysis area for the Soil Protection standard, as defined in the project order, includes the  
16        area within the site boundary.

17  
18        *Potential Significant Adverse Impacts to Soil*

19  
20        Potential impacts to soils within the analysis area (site boundary) could occur during  
21        construction and operation of the proposed RFA2 facility repower from spills or releases of  
22        chemicals or other liquid materials. The certificate holder explains that the RFA2 facility  
23        repower would temporarily impact approximately 109.3 acres, and that approximately 15 of  
24        the total 109.3 acres would require grading. In RFA2 Section 6.4 *Soil Protection*, the certificate  
25        holder explains that temporary disturbance would be minimized by utilizing previously  
26        disturbed areas, including roadways and turbine pads. To protect existing plant cover during  
27        construction, the certificate holder would avoid scraping vegetation from areas of temporary  
28        disturbance (per Condition 76). Additionally, existing best management practices (BMPs) would  
29        be implemented to control any dust that is generated by upgrading activities, such as applying  
30        water to roads and disturbed soil areas (Condition 75). Once the crane is removed from the  
31        site, the temporary, superficial disturbance would be revegetated according to Condition 77  
32        and 84, as is routinely done as part of O&M activities. The Revegetation Plan is included as  
33        Attachment D to this Order.

34  
35        Traffic impacts would be minimized and managed by restricting facility modification activities to  
36        areas previously approved for both temporary and permanent impacts, utilize a rolling  
37        construction schedule and applying additional measures including the use of flaggers, as  
38        needed, on roads (recommended Condition 108). The certificate holder states that the  
39        approximate 109 acres of temporary impact is less than 40 percent of the maximum temporary  
40        impacts previously approved in the Amendment #1. Council previously imposed Condition 74,  
41        which would continue to apply to the proposed RFA2 facility repower and would ensure that

1 truck traffic would be limited to designated existing and improved road surfaces to avoid soil  
2 compaction, to the extent practicable.

3  
4 As mentioned above in Section II.A. *Requested Amendment*, the certificate holder states that if  
5 determined to be necessary, a National Pollutant Discharge Elimination System (NPDES) Storm  
6 Water Discharge General Permit 1200-C would be obtained from the Oregon Department of  
7 Environmental Quality (DEQ). The NPDES Storm Water Discharge Permit #1200-C would include  
8 an approved Erosion Sediment Control Plan (ESCP). Council previously imposed Condition 73,  
9 which would continue to apply to the proposed repowering activities of RFA2, and would  
10 ensure that a DEQ-issued 1200-C NPDES permit is obtained prior to construction and that  
11 erosion control measures are implemented in accordance with the ESCP, if determined to be  
12 necessary. To ensure that the requirements of Condition 73 apply to the repowering activities  
13 associated with RFA2, the Department recommends Council amend the condition as follows:

14  
15 **Recommended Amended Condition 73:** The certificate holder shall conduct all  
16 construction work, including the repowering activities associated with RFA2, in compliance  
17 with an Erosion and Sediment Control Plan (ESCP) satisfactory to the Oregon Department  
18 of Environmental Quality and as required under the National Pollutant Discharge  
19 Elimination System (NPDES) Storm Water Discharge General Permit #1200-C. The  
20 certificate holder shall include in the ESCP any procedures necessary to meet local erosion  
21 and sediment control requirements or storm water management requirements.

22 [Amendment #2]

23  
24 Potential impacts to soils from spills could occur during the repowering activities, however,  
25 previously imposed Condition 50 will continue to apply to the proposed RFA2 facility  
26 repowering, and would ensure that hazardous materials present on site, are handled in a  
27 manner that protects public health, safety, and the environment, and that applicable  
28 environmental laws and regulations are complied with. Previously imposed Condition 51,

1 addressing the preparation for, and the response to spills and accidental releases of hazardous  
2 materials will also continue to apply to the repowering activities of RFA2.

3  
4 Based upon compliance with the existing site certificate conditions, the Council finds that the  
5 design, construction and operation of the proposed RFA2 facility repowering would not result in  
6 a significant adverse impact to soils.

7  
8 **Conclusions of Law**

9  
10 Based on the foregoing findings of fact and conclusions of law, and subject to compliance with  
11 existing site certificate conditions, the Department recommends the Council find that the  
12 proposed RFA2 repowering activities would comply with the Council’s Soil Protection standard.

13  
14 **III.A.5 Land Use: OAR 345-022-0030**

15  
16 *(1) To issue a site certificate, the Council must find that the proposed facility complies with*  
17 *the statewide planning goals adopted by the Land Conservation and Development*  
18 *Commission.*

19  
20 *(2) The Council shall find that a proposed facility complies with section (1) if:*

21  
22 *(a) The applicant elects to obtain local land use approvals under ORS 469.504(1)(a) and*  
23 *the Council finds that the facility has received local land use approval under the*  
24 *acknowledged comprehensive plan and land use regulations of the affected local*  
25 *government; or*

26  
27 *(b) The applicant elects to obtain a Council determination under ORS 469.504(1)(b) and*  
28 *the Council determines that:*

29  
30 *(A) The proposed facility complies with applicable substantive criteria as described in*  
31 *section (3) and the facility complies with any Land Conservation and*  
32 *Development Commission administrative rules and goals and any land use*  
33 *statutes directly applicable to the facility under ORS 197.646(3);*

34  
35 *(B) For a proposed facility that does not comply with one or more of the applicable*  
36 *substantive criteria as described in section (3), the facility otherwise complies*  
37 *with the statewide planning goals or an exception to any applicable statewide*  
38 *planning goal is justified under section (4); or*

39  
40 *(C) For a proposed facility that the Council decides, under sections (3) or (6), to*  
41 *evaluate against the statewide planning goals, the proposed facility complies*  
42 *with the applicable statewide planning goals or that an exception to any*  
43 *applicable statewide planning goal is justified under section (4).*

44 \*\*\*

1 **Findings of Fact**

2  
3 The Land Use standard requires the Council to find that the proposed RFA2 facility repower  
4 would continue to comply with local applicable substantive criteria, as well as the statewide  
5 planning goals adopted by the Land Conservation and Development Commission (LCDC).<sup>9</sup> Under  
6 ORS 469.504(1)(b)(A), the Council may find compliance with statewide planning goals if the  
7 Council finds that the proposed RFA2 facility repower, “complies with applicable substantive  
8 criteria from the affected local government’s acknowledged comprehensive plan and land use  
9 regulations that are required by the statewide planning goals and in effect on the date the  
10 application is submitted.” RFA2 was received on October 7, 2019.

11  
12 The analysis area for potential land use impacts, as defined in the project order, is the area  
13 within and extending ½-mile from the site boundary. The facility, as approved and with  
14 proposed changes, is located within Gilliam County. Therefore, the governing body within  
15 Gilliam County is the Special Advisory Group (SAG).<sup>10</sup> Prior to previous approval of the site  
16 certificate, the Council appointed the Gilliam County Court as a SAG.

17  
18 **Facility Modifications**

19  
20 In RFA2, the certificate holder requests Council approval to replace existing wind turbine blades  
21 and nacelles, or repower, up to 106 existing wind turbines, which would increase the maximum  
22 blade tip height and lower the minimum aboveground blade tip clearance. The proposed RFA2  
23 facility repower would also result in approximately 109 acres of temporary disturbance within  
24 the previously approved site boundary.

25  
26 **Local Applicable Substantive Criteria**

27  
28 Under OAR 345-022-0030(2), the Council must apply the applicable substantive criteria  
29 recommended by the SAG. The applicable substantive criteria for which the certificate holder  
30 must comply are established in the Gilliam County Zoning and Land Development Ordinance  
31 (GCZO) and Gilliam County Comprehensive Plan (GCCP), as updated and amended in 2017. The  
32 application criteria from GCZO and goals and policies from GCCP are presented below in Table  
33 1, *Gilliam County Applicable Substantive Criteria*.

34  
35  

---

<sup>9</sup> The Council must apply the Land Use standard in conformance with the requirements of ORS 469.504.

<sup>10</sup> Under ORS 469.480(1), the Council must designate as a Special Advisory Group the governing body of any local government within whose jurisdiction the facility is proposed or proposed changes of a facility would be located.

**Table 1: Gilliam County Applicable Substantive Criteria**

<b>Gilliam County Zoning and Land Development Ordinance (GCZO)</b>	
<i>Article 4 – Use Zones</i>	
Section 4.020	Exclusive Farm Use
Section D	Conditional Uses Permitted
Section J	Property Development Standards
<i>Article 7 – Conditional Uses</i>	
Section 7.010	Authorization to Grant or Deny Conditional Uses
Section A	General Approval Criteria
Section 7.020	Standards Governing Conditional Uses
Section A	Conditional Uses, Generally
Section Q	Conditional Uses in Exclusive Farm Use Zones
Section T	Wind Power Generation Facility Siting Requirements
<b>Gilliam County Comprehensive Plan (GCCP)</b>	
(Goal 2) Land Use Planning – Policy 7	
(Goal 3) Agricultural Lands – Policy 3	
(Goal 5) Natural Resources – Policies 2 and 12	
(Goal 6) Air, Water, and Land Resources Quality – Policies 6 and 7	
(Goal 8) Recreation – Policy 3	
(Goal 12) Transportation – Policies 10 and 14	
(Goal 13) Energy Conservation – Policy 3	

1  
 2 The Department reviewed the applicable substantive criteria as presented in Table 1: *Gilliam*  
 3 *County Applicable Substantive Criteria* above. Based on its review, because the site boundary  
 4 was previously approved and would not change, the proposed RFA2 facility repower would not  
 5 be expected to impact the certificate holder’s ability to satisfy requirements of the applicable  
 6 substantive criteria listed above or result in impacts to comprehensive planning goals, except  
 7 for potential impacts under GCZO Sections 7.010 and 7.020, which are evaluated below.

8  
 9 *Article 7: Conditional Uses*

10  
 11 *GCZO Section 7.010: Authorization to Grant or Deny Conditional Uses*

12  
 13 *A conditional use listed in this ordinance shall be permitted, altered or denied in*  
 14 *accordance with the standards and procedures of this ordinance and this article by*  
 15 *action of the Planning Commission or Planning Director. In the case of a use existing*  
 16 *prior to the effective date of this ordinance, and classified in this ordinance as a*  
 17 *Conditional Use, a change in use or in lot area or an alteration of a Conditional Use, a*  
 18 *change in use or in lot area or an alteration of structure shall conform with the*  
 19 *requirements for a Conditional Use.*

20  
 21 GCZO Section 7.010 establishes general approval criteria and conditions that may be applied to  
 22 conditional uses, regardless of the zone. In the GCZO Section 7.010 preamble presented above,

1 the ordinance states that “an alteration of a structure shall conform with the requirements for  
2 a conditional use.” The proposed RFA2 facility repower would result in alterations to existing  
3 wind turbines, including changes in maximum blade tip height, aboveground blade tip clearance  
4 and temporary disturbance, which the Department considers alterations of structures under  
5 Section 7.010, which must conform to any recommended new conditions or existing conditions  
6 identified as applicable.

7  
8 As presented in this order, the Department recommends Council impose several new  
9 conditions determined necessary to reduce or minimize potential impacts under applicable  
10 Council standards. Consistent with GCZO Section 7.020(T)(4), if an EFSC-jurisdictional facility  
11 receives Council approval of a site certificate amendment, and the amended site certificate  
12 contains conditions imposed to satisfy an applicable GCZO provision, the certificate holder  
13 should request a zoning and conditional use permit amendment or alteration.<sup>11</sup>

14  
15 **Recommended Condition 107:** Prior to RFA2 facility repower activities, the certificate  
16 holder shall:

- 17 (a) Pay the requisite fee and obtain a Zoning Permit/Conditional Use Permit with  
18 Alterations, without any local proceedings, from Gilliam County for facility  
19 modifications approved in RFA2 to incorporate conditions imposed in the second  
20 amended site certificate under the Council’s Land Use standard; and  
21 (b) Obtain all other necessary local permits, including access and haul permits.  
22 [Amendment #2]

23  
24 As described above, the Department evaluated the applicable substantive criteria for a “wind  
25 power generation facility” under GCZO Section 7.020(T)(5) and presents its impact assessment  
26 of specific criteria which could be impacted by the proposed RFA2 facility repower.

27  
28 *GCZO SECTION 7.020(T): Wind Power Generation Facility Siting Requirements*

29  
30 5. *Wind Power Generation Facility Siting Requirements. The requirements set out in this*  
31 *section shall apply for the application and review of the siting of a Wind Power*  
32 *Generation Facility and the issuance of a Gilliam County Facility Conditional Use*  
33 *Permit.*

34  
35 *a. The following information shall be provided as part of the application:...*

36 \*\*\*

- 37 3. *A Transportation Plan, with proposed recommendations, if any, reflecting*  
38 *the guidelines provided in the Gilliam County’s Transportation System*  
39 *Plan (TSP) and the transportation impacts of the proposed Wind Power*

---

<sup>11</sup> Pursuant to ORS 469.401(3), the county must issue local permits upon submittal of the proper applications and fees, but without hearings or other proceedings and subject only to conditions set forth in the site certificate (or amended site certificate).

1                    *Generation Facility upon the local and regional road system during and*  
2                    *after construction, after consultation with the Gilliam County*  
3                    *Roadmaster. The plan will designate the size, number, location and*  
4                    *nature of vehicle access points.*

5                    \*\*\*

6 GCZO Section 7.020(T)(5)(a)(3) establishes an informational requirement for wind power  
7 generation facilities seeking a site certificate or amended site certificate and establishes that,  
8 for a conditional use permit/permit alteration to be issued by the county, the certificate holder  
9 provide a Transportation Plan evaluating the potential impacts of facility related construction  
10 and operation on the local and regional road system.

11  
12 Construction of the proposed RFA2 facility repower would result in increased trip generation  
13 on local and state roads (I-84, OR 74 and OR 19) for approximately 6-months. In RFA2, the  
14 certificate holder estimates that proposed RFA2 facility repower activities would require  
15 approximately 60 temporary workers, 20 trucks, and 28 semi-trucks per day, which the  
16 Department estimates equates to a maximum trip rate increase of 216 trips per day on local  
17 and state roads.<sup>12</sup>

18  
19 During construction, trucks used to transport wind turbine blades and other heavy  
20 construction equipment (i.e. cranes) would likely require oversize load/overweight permits  
21 from Oregon Department of Transportation (ODOT) and Gilliam County Road Department. In  
22 addition to haul and heavy load permits, the certificate holder commits to consultation with  
23 Gilliam County Road Department prior to transport of new wind turbine blades and gearboxes  
24 to establish roads to be used, traffic control measures, and roadway improvement necessary  
25 before and after completion of the proposed activity.<sup>13</sup>

26  
27 Consistent with GCZO Section 7.020(T)(5)(a)(3), and based upon the temporary increase in  
28 construction-related traffic, the Department recommends Council impose Condition 108 to  
29 minimize potential impacts local roads:

- 30  
31                    **Recommended Condition 108: Prior to RFA2 facility repower activities, the certificate**  
32                    **holder shall submit to the Department and Gilliam County Road Department, for review,**  
33                    **a Transportation System Plan. The Transportation System Plan shall include, but is not**  
34                    **limited to, the following:**  
35                    (a) **Impact Assessment on Local Road Systems**  
36                    (b) **Maps identifying the size, number, location and nature of vehicle access points**

---

<sup>12</sup> Department trip rate calculation = 60 worker trips x 2 times per day + 20 trucks x 2 times per day + 28 semi-trucks x 2 times per day

<sup>13</sup> SFNAM2 pRFA2 Reviewing Agency Comments Gilliam County. 2019-11-18. During review of pRFA2, Gilliam County Planning Director (Michelle Colby) expressed concern regarding potential traffic related impacts from RFA2 on local roads and requested that impacts be mitigated through a road use agreement with the Gilliam County Road Department.

- 1 (c) Evaluation of consistency with Gilliam County’s Transportation System Plan
- 2 Guidelines
- 3 (d) Results of Consultation with Gilliam County Roadmaster, including a copy of
- 4 executed Road Use Agreement
- 5 (e) Traffic Control Measures
- 6 (f) Local Notification Procedures
- 7 [Amendment #2]

8

9 *8. A weed control plan.*

10 \*\*\*

11 GCZO Section 7.020(T)(5)(a)(8), which generally aligns with OAR 660-033-0130(37)(6)(D),  
12 establishes an informational requirement for wind power generation facilities seeking a site  
13 certificate or amended site certificate and establishes that, for a conditional use permit/permit  
14 alteration to be issued by the county, the certificate holder provide a Weed Control Plan which  
15 addresses prevention and control of all Gilliam County identified noxious weeds directly  
16 resulting facility impacts.

17

18 Based on consultation with Gilliam County Weedmaster Don Ferrar, the Department  
19 understands that there are specific methods that provide a higher rate of successful weed  
20 control following disturbance impacts near roadways, which are the predominant expected  
21 disturbance impacts from RFA2. Therefore, the Department recommends Council impose a  
22 condition requiring a specific Weed Control Plan be developed, in consultation with the  
23 Department and Gilliam County Weed Control Department, that addresses agency consultation,  
24 weed identification, application methods, appropriate control methods, monitoring and  
25 reporting, as follows:

26

27 **Recommended Condition 109: Prior to RFA2 facility repower activities, the certificate**  
28 **holder shall submit to the Department and Gilliam County Weed Department**  
29 **Supervisor, for review and approval, a Roadway Weed Control Plan. The Roadway Weed**  
30 **Control Plan shall include, but not be limited to, identification of county-listed weeds of**  
31 **economic concern, methods for evaluating weeds within impact area, results of weed**  
32 **assessment, control methods specific to roadway weed control and timing, agency**  
33 **consultation protocol, and process for evaluating success of weed control.**  
34 **[Amendment #2]**

- 35
- 36 *d. The following setback requirements and restrictions apply to the siting of a*  
37 *facility:*

38

39 *The Wind Power Generation Facility shall be on property zoned EFU, and no*  
40 *portion of the facility shall be within 3,520 feet of properties zoned residential*  
41 *use or designated on the Comprehensive Plan as residential. (For clarification*  
42 *purposes of this section, EFU Zones are not considered zoned for residential*  
43 *use.) Towers shall be set back at a minimum, 110% of maximum total turbine*

1                    *height from blade tip height, measured from the centerline of the turbine*  
2                    *tower from:*

- 3
- 4                    (1) *Any State, County or Federal right-of-way or the nearest edge of a State,*  
5                    *County, or Federal roadway, whichever is closer;*
- 6                    (2) *Any right of ingress or egress on the owner's property;*
- 7                    (3) *Any overhead utility lines;*
- 8                    (4) *All property lines; if adjacent landowner agrees in writing to a lesser distance,*  
9                    *this requirement may be waived.*
- 10                   (5) *Any existing guy wire, anchor, or small wind energy tower on the property.*
- 11                   (6) *Any residence including those outside the project boundary. If a landowner*  
12                   *agrees in writing to a lesser distance, this requirement may be waived.*
- 13                   (7) *A minimum of 150% of the maximum total turbine height from blade tip*  
14                   *height, measured from the centerline of the turbine tower, from federal*  
15                   *transmission line. If affected parties agree in writing to a lesser distance, this*  
16                   *requirement may be waived.*

17                   \*\*\*

18 GCZO Section 7.020(T)(5)(d) includes standards for conditional uses within EFU zoned land,  
19 specifically setback requirements for wind turbines. As presented above, GCZO Section  
20 7.020(T)(5)(d) imposes setbacks, based on a calculated percentage (110 or 150 percent) of the  
21 maximum blade tip height, from turbine towers within Gilliam County to road rights-of-way,  
22 rights of ingress or egress, overhead utility lines and federal transmission lines, all property  
23 lines, existing guy wires, and residences. Because these setbacks are based on maximum blade  
24 tip height, which would change based on the proposed RFA2 facility repower, the changes  
25 included in RFA2 could impact the certificate holder's ability to satisfy the setback requirement.  
26 The certificate holder affirms that potentially five wind turbines, once repowered, would not  
27 comply with GCZO Section 7.020(T)(5)(d) setback requirements. The Department recommends  
28 Council impose the following condition to ensure the proposed RFA2 facility repower complies  
29 with GCZO Section 7.020(T)(5)(d) setback requirements:

30

31                    **Recommended Condition 110: Prior to RFA2 facility repower activities, the certificate**  
32                    **holder shall submit documentation, with maps and distance tables, to the Department**  
33                    **demonstrating that the wind turbines selected for repowering would comply with the**  
34                    **following setback requirements:**

- 35                    (a) **All facility components must be at least 3,520 feet from the property line of**  
36                    **properties zoned residential use or designated in the Gilliam County Comprehensive**  
37                    **Plan as residential.**
- 38                    (b)    **Where (a) does not apply, the certificate holder shall maintain a minimum**  
39                    **distance of 110-percent of maximum blade tip height, measured from the centerline**  
40                    **of the turbine tower to the:**
- 41                    (i) **Nearest edge of any public road right-of-way. The certificate holder shall assume**  
42                    **a minimum right-of-way width of 60 feet.**
- 43                    (ii) **Any overhead utility lines;**
- 44                    (iii) **All property lines; if adjacent landowner agrees in writing to a lesser distance,**

1                    this requirement may be waived.

2                    (iv) Any existing guy wire, anchor, or small wind energy tower on the property.

3                    (v) Any residence including those outside the project boundary. If a landowner  
4                    agrees in writing to a lesser distance, this requirement may be waived.

5                    (c) Where (a) does not apply, the certificate holder shall maintain a minimum distance of  
6                    150% of the maximum total turbine height from blade tip height, measured from the  
7                    centerline of the turbine tower, from federal transmission line. If affected parties  
8                    agree in writing to a lesser distance, this requirement may be waived.

9                    [Amendment #2]

10  
11                    Based on compliance with recommended Condition 110, the Department recommends Council  
12                    find that the proposed RFA2 facility repower would satisfy the GCZO Section 7.020(T)(5)(d)  
13                    setback requirements.

14  
15                    *f. Reasonable efforts shall be taken to protect and to preserve existing trees,*  
16                    *vegetation, water resources, wildlife habitat or other significant natural resources.*

17  
18                    GCZO Section 7.020(T)(5)(f) includes standards for conditional uses within EFU zoned land,  
19                    specifically requirements to protect and preserve vegetation and habitat. Potential impacts to  
20                    vegetation and habitat are addressed under the Council’s Fish and Wildlife Habitat standard. As  
21                    further evaluated in Section III.A.6 *Fish and Wildlife Habitat* of this order, the Department  
22                    recommends Council impose Condition 111 to establish a process for conducting an updated  
23                    pre-disturbance habitat assessment, identification of monitoring and reference sites, and  
24                    ongoing consultation with the Department, ODFW and the County Weed Control Supervisor to  
25                    support evaluation of successful revegetation of temporarily disturbed areas. The certificate  
26                    holder already has a Revegetation Plan (provided as Attachment D of this order), that would  
27                    continue to apply to the facility.

28  
29                    **Conclusions of Law**

30  
31                    Based on the foregoing findings and the evidence in the record, and subject to compliance with  
32                    recommended new and existing site certificate conditions, the Department recommends the  
33                    Council find that the proposed RFA2 facility repower would continue to comply with the Land  
34                    Use standard.

1        III.A.6 Fish and Wildlife Habitat: OAR 345-022-0060

2  
3            *To issue a site certificate, the Council must find that the design, construction and*  
4            *operation of the facility, taking into account mitigation, are consistent with:*

5  
6            *(1) The general fish and wildlife habitat mitigation goals and standards of OAR 635-415-*  
7            *0025(1) through (6) in effect as of February 24, 2017\*\*\**

8  
9        **Findings of Fact**

10  
11        The EFSC Fish and Wildlife Habitat standard requires the Council to find that the design,  
12        construction and operation of a proposed facility, or facility with proposed changes, is  
13        consistent with the Oregon Department of Fish and Wildlife’s (ODFW) habitat mitigation policy,  
14        goals, and standards, as set forth in OAR 635-415-0025. The ODFW Habitat Mitigation Policy  
15        and EFSC Fish and Wildlife Habitat standard create requirements to mitigate impacts to fish and  
16        wildlife habitat, based on the quantity and quality of the habitat as well as the nature, extent,  
17        and duration of the potential impacts to the habitat. The policy also establishes a habitat  
18        classification system based on value the habitat would provide to a species or group of species.  
19        There are six habitat categories; Category 1 being the most valuable and Category 6 the least  
20        valuable.

21  
22        The analysis area for the Fish and Wildlife Habitat standard includes the area within and  
23        extending ½-mile from the site boundary.

24  
25        *Habitat Types and Categories in the Analysis Area*

26  
27        To identify potential habitat category and types within the temporary work areas of the  
28        proposed RFA2 facility repower, the certificate holder relied upon a combination of 2010  
29        preconstruction habitat categorization data and aerial imagery. As further discussed below,  
30        habitat types and categories that may be impacted by RFA2 activities include: Category 2  
31        Grassland; Category 3 Grassland, Curlew and Shrub-steppe (Sagebrush and Rabbitbrush);  
32        Category 4 Grassland, and Rock and Sand; Category 5 Shrub-steppe; and Category 6 Animal  
33        Facilities and Roads, and parking

34  
35        *Potential Habitat Impacts*

36  
37        As described above in Section II.A. *Requested Amendment* of this order, the proposed RFA2  
38        facility repower would include temporary laydown areas used to stage and store construction  
39        equipment, improvements to existing access roads and turbine pad areas, and temporary  
40        turnaround areas, resulting in approximately 109.3 acres of temporary disturbance. Based on  
41        the habitat categories (2, 3, 4 and 5) and types (Grassland, Curlew, Shrub-steppe, Rock and  
42        Sand) described above, potential habitat impacts would include temporary and temporal  
43        habitat loss. Impacts to Category 6 habitat do not require compensatory mitigation under the  
44        Council’s Fish and Wildlife Habitat standard.

1 As presented in Table 2, *Estimated Acreage of the Proposed RFA2 Facility Repower (by Category*  
 2 *and Subtype)* below, the repowering activities would temporarily disturb approximately 10.6,  
 3 80.9, 9.8, 0.7, and 4.4 acres of Category 2, 3, 4, 5, and 6 respectively, resulting in temporary  
 4 and temporal habitat impacts.<sup>14</sup>  
 5

**Table 2: Estimated Acreage of the Proposed RFA2 Facility Repower  
 (by Category and Subtype)**

Habitat Category and Subtype		Temporary Impacts	Impact totals by Category
<b>Habitat Category 2</b>			
<b>GL</b>	Grasslands	10.6	10.6
<b>Habitat Category 3</b>			
<b>CUR</b>	Long-Billed Curlew	62.3	80.9
<b>GL</b>	Grasslands	10.1	
<b>SS-R</b>	Shrub Steppe - rabbitbrush	6.8	
<b>SS-S</b>	Shrub Steppe – sage steppe	1.7	
<b>Habitat Category 4</b>			
<b>GL</b>	Grasslands	8.6	9.8
<b>RS</b>	Rock and Sand	1.2	
<b>Habitat Category 5</b>			
<b>SS-B</b>	Shrub Steppe – broom snakeweed steppe	0.7	0.7
<b>Habitat Category 6</b>			
<b>AF</b>	Animal Facilities	2.1	4.4
<b>RP</b>	Roads and Parking	2.3	

6  
 7 Temporal loss refers to loss of habitat function and values from the time an impact occurs to  
 8 the time when the restored habitat provides a pre-impact level of habitat function. Habitat  
 9 types identified within the site boundary with a sagebrush steppe component are reasonably  
 10 expected to require a longer restoration timeframe (5+ years) and therefore, the temporary  
 11 impacts to approximately 1.7 acres to shrub steppe – sage steppe would be expected to result  
 12 in temporal loss.  
 13

14 *Proposed Habitat Mitigation (Temporary and Temporal Loss)*

15  
 16 The certificate holder proposes to mitigate temporary habitat impacts through revegetation  
 17 and noxious weed control. Council previously imposed Condition 38 and 84 requiring that the  
 18 certificate holder implement plans to control the introduction and spread of noxious weeds and  
 19 revegetate temporarily disturbed areas. However, because this temporary disturbance would  
 20 be at different stages than weed control and revegetation activities implemented under the

---

<sup>14</sup> The Department notes that the proposed RFA2 facility repower would not permanently impact any habitat during construction or operation of the repowered turbines.

1 existing plans, the Department recommends Council impose new conditions to allow the  
2 certificate holder and Department the ability to implement and track measures that apply  
3 specifically to the proposed RFA2 facility repower disturbance areas. The Department  
4 recommends Council impose a condition, under the Land Use standard in Section III.A.5 *Land*  
5 *Use* of this order for, requiring that, prior to RFA2 facility repower activities, the certificate  
6 holder submit a Roadway Weed Control Plan, for review by the Department, in consultation  
7 with the Gilliam County Weed Control Department. The Department's recommended condition  
8 related to revegetation is presented below:

9  
10 **Recommended Condition 111:** The certificate holder shall:

11 (a) Prior to RFA2 facility repower activities:

- 12 i. Provide an updated habitat assessment of areas of disturbance, based on a  
13 protocol approved by the Department in consultation with ODFW.  
14 ii. Identify monitoring and reference sites, including sites within each habitat  
15 category and subtype impacted, and the methodology utilized for selecting the  
16 number of monitoring and reference sites should be included.  
17 iii. Consult with the Department, ODFW and Gilliam County Weed Control  
18 Department on timing and methods for revegetation and weed control.

19 (b) Following completion of RFA2 facility repower activities:

- 20 i. Restore areas temporarily disturbed by RFA2 facility repower activities  
21 according to the methods and monitoring procedures described in the  
22 Revegetation Plan that is incorporated in the Final Order on Amendment 2 for  
23 Shepherds Flat North as Attachment D and as amended from time to time.  
24 ii. Consult annually with the Department, ODFW and Gilliam County Weed  
25 Control Department on timing and methods for revegetation and weed control.  
26 [Amendment #2]

27  
28 Based on compliance with the recommended new conditions, the Department recommends the  
29 Council find that the certificate holder would meet the habitat mitigation goals for temporary  
30 habitat impacts.

31  
32 The certificate holder's existing Habitat Mitigation Plan (HMP) addresses temporal habitat  
33 impacts (i.e. loss of habitat function and values from the time an impact occurs to the time  
34 when the restored habitat provides a pre-impact level of habitat function) in the form of a  
35 permanent conservation easement on a habitat mitigation area (HMA). Specifically, for  
36 temporal habitat impacts, the certificate holder has included in its HMA 0.5 acre for every 1  
37 acre of Category 3 Shrub-steppe sage habitat temporarily disturbed (a 0.5:1 ratio). Because the  
38 areas of temporary disturbance are within previously disturbed areas, the temporal habitat  
39 impacts that would occur as a result of the proposed RFA2 facility repower have been  
40 accounted for in the HMA and are addressed in the existing HMP. Based on compliance with  
41 the existing HMP, the Department recommends the Council find that the certificate holder  
42 would meet the habitat mitigation goals for temporal habitat impacts.

1 *Potential Impact to State-Sensitive Species*  
2

3 The certificate holder conducted a desktop review to identify State Sensitive species with the  
4 potential to occur within the analysis area based on species range and existing habitat. The  
5 desktop review evaluated ODFW's 2016 Sensitive Species List. Based on this desktop review,  
6 the certificate holder identified suitable habitat within the analysis area for: 18 State-sensitive  
7 species (including 1 reptile, 10 birds, and 5 bat species). Of these State-sensitive species,  
8 presence was confirmed for the following: 10 birds and 2 bats.  
9

10 The certificate holder identifies that increased activity during the proposed RFA2 facility  
11 repower could result in potential impacts to state-sensitive species during nesting season,  
12 including ferruginous hawk and Swainson's hawk. To minimize potential disturbance impacts to  
13 state-sensitive species, the Department recommends Council impose the following condition:  
14

15 **Recommended Condition 112:** The certificate holder shall:

- 16 (a) Prior to RFA2 facility repower activities, the certificate holder shall conduct a pre-  
17 construction raptor nest survey, using a protocol approved by the Oregon Department  
18 of Fish and Wildlife (ODFW) to determine whether there are any active nests of state  
19 sensitive species within 0.5 miles of any areas that would be disturbed.  
20 (b) During RFA2 repower activities, if active raptor nests were identified within 0.5-mile of  
21 RFA2 repower activities per (a) of this condition or become active during the sensitive  
22 season, per (c) below, the certificate holder shall avoid construction activities within  
23 0.25 mile buffer in areas around active nests of the following species during the  
24 sensitive period, as provided in this condition:  
25

<u>Species</u>	<u>Sensitive Period</u>	<u>Early Release Date</u>
<u>Swainson's hawk</u>	<u>April 1 to August 15</u>	<u>May 31</u>
<u>Ferruginous hawk</u>	<u>March 15 to August 15</u>	<u>May 31</u>
<u>Burrowing owl</u>	<u>April 1 to August 15</u>	<u>July 15</u>

- 26  
27 (c) During RFA2 repower activities, if a nest becomes occupied by any of these species  
28 after the beginning of the sensitive period, the certificate holder will flag the  
29 boundaries of a 0.25-mile buffer area around the nest and shall instruct construction  
30 personnel to avoid disturbance of the area.  
31 (d) During RFA2 repower activities, if active nest sites are observed per (b) or (c) of this  
32 condition, the certificate holder shall hire a qualified independent professional  
33 biologist to observe the active nest sites during the sensitive period for signs of  
34 disturbance and to notify the Department of any non-compliance with this condition. If  
35 the biologist observes nest site abandonment or other adverse impact to nesting  
36 activity, the certificate holder shall implement appropriate mitigation, in consultation  
37 with ODFW and subject to the approval of the Department, unless the adverse impact  
38 is clearly shown to have a cause other than construction activity. The certificate holder  
39 may begin or resume construction activities within a buffer area before the ending day  
40 of the sensitive period if any known nest site is not occupied by the early release date.

1           If a nest site is occupied, then the certificate holder may begin or resume construction  
2           before the ending day of the sensitive period with the approval of ODFW, after the  
3           young are fledged. The certificate holder shall use a protocol approved by ODFW to  
4           determine when the young are fledged (the young are independent of the core nest  
5           site).

6           [Amendment 2]

7  
8           For each repowered wind turbine, permanent changes, not previously evaluated, would include  
9           a lower minimum aboveground blade tip clearance from 25 to 21.5 meters, and increasing the  
10          overall rotor diameter and rotor swept area from 100 to 127 meters. The maximum blade tip  
11          height of 150 meters, as approved by Council in the *Final Order*, would not change as a result of  
12          the proposed RFA2 facility repower. In RFA2, the certificate holder describes that potential  
13          impacts from these dimension changes could be an increase in bird and bat fatality from  
14          collision risk, however they assert that the primary impact from the repowering activities would  
15          be direct fatality from collision with, or crushing by heavy equipment. The certificate holder  
16          indicates that based on studies conducted in 2007 through 2016, the effect of turbine size on  
17          bird and bat collision risk remains unclear. Based on review of the studies referenced in RFA2,  
18          the Department agrees that a change in minimum aboveground blade tip clearance and rotor  
19          diameter does not represent a direct correlation in bird and bat fatality risk. Nonetheless, in  
20          response to ODFW recommendations that a bird and bat fatality monitoring study be  
21          conducted for two years, following completion of the facility repowering activities, the  
22          Department recommends Council impose Condition 113 as follows.

23  
24          **Recommended Condition 113:** Following completion of RFA2 facility repower activities,  
25          the certificate holder shall conduct two years of avian and bat fatality monitoring, as  
26          described in the *Wildlife Monitoring and Mitigation Plan*, or based on protocol otherwise  
27          approved by the Department in consultation with ODFW, provided as Attachment E of the  
28          Final Order on Amendment 2. [Amendment #2]

29  
30          **Conclusions of Law**

31  
32          Based on the foregoing findings of fact and conclusions, and subject to compliance with existing  
33          site certificate conditions, the Department recommends the Council find that the proposed RFA2  
34          facility repower would comply with the Council’s Fish and Wildlife Habitat standard.

35  
36          III.A.7 Recreation: OAR 345-022-0100

37  
38          *(1) Except for facilities described in section (2), to issue a site certificate, the Council must*  
39          *find that the design, construction and operation of a facility, taking into account*  
40          *mitigation, are not likely to result in a significant adverse impact to important*  
41          *recreational opportunities in the analysis area as described in the project order. The*  
42          *Council shall consider the following factors in judging the importance of a recreational*  
43          *opportunity:*  
44

- 1           (a) Any special designation or management of the location;
- 2           (b) The degree of demand;
- 3           (c) Outstanding or unusual qualities;
- 4           (d) Availability or rareness;
- 5           (e) Irreplaceability or irretrievability of the opportunity.

6           \*\*\*

7           **Findings of Fact**

8

9           The Recreation standard requires the Council to find that the design, construction, and  
10           operation of a facility would not likely result in significant adverse impacts to “important”  
11           recreational opportunities. Therefore, the Council’s Recreation standard applies only to those  
12           recreation areas that the Council finds to be “important,” utilizing the factors listed in the sub-  
13           paragraphs of section (1) of the standard. The importance of recreational opportunities is  
14           assessed based on five factors outlined in the standard: special designation or management,  
15           degree of demand, outstanding or unusual qualities, availability or rareness, and irreplaceability  
16           or irretrievability of the recreational opportunity.

17

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

21

22           **Recreational Opportunities within the Analysis Area**

23

24           In the *Final Order on the ASC*, and the *Final Order on Amendment 1*, Council found that the  
25           design, construction and operation of the facility, taking into account mitigation and conditions  
26           stated in the orders, were not likely to result in significant adverse impacts to recreational  
27           opportunities in the analysis area. In RFA2, the certificate holder identified one new  
28           recreational opportunity within the analysis area: Quesna County Park, which the Department  
29           estimates is approximately is 4 miles from the site boundary.

30

31           As represented in RFA2, the certificate holder requests that the Council determine Quesna  
32           County Park not to be important based on the factors under OAR 345-022-0100, and therefore  
33           not require an impact assessment. Based on review of the OAR 345-022-0100 factors and  
34           historic Council evaluation of this recreation opportunity, the Department recommends Council  
35           find that that Quesna County Park is an important recreational opportunity and therefore  
36           evaluate potential impacts from the proposed RFA2 facility repower to this resource.<sup>15</sup>

37

38           ***Direct Loss***

39           A direct loss occurs when construction or operation of a facility would impact a recreational  
40           opportunity by directly altering the resource so that it no longer exists in its current state. The  
41           facility, which is located entirely on private property, would not be located on or within any of

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<sup>15</sup> See *Final Order on the Application for Site Certificate for the Boardman Solar Energy Facility*, p.156

1 the important recreational opportunities identified above. Therefore, the Council finds that the  
2 facility would not result in direct loss of any of the recreational opportunities identified as  
3 important.

4  
5 ***Indirect Loss***

6 Similar to the assessment of direct loss, indirect loss would result if construction or operation of  
7 a facility would impact a recreational opportunity by indirectly altering the resource or some  
8 component of it. For the proposed RFA2 facility repower, the evaluation of indirect loss  
9 associated with noise, traffic, and visual impacts are provided in the sections below.

10  
11 ***Noise***

12 As described in RFA2, the evaluation of noise related impacts to important recreational  
13 opportunities within the analysis area, evaluates impacts associated with the construction and  
14 operation of the proposed RFA2 facility repower.

15  
16 As explained in Section III.A.11.1, *Noise Control Regulations*, of this order the noise caused by  
17 construction activities is exempt from the application of the DEQ noise rules, per OAR 340-035-  
18 0035(5)(g). However, construction of the proposed facility repowering will produce localized,  
19 short-duration noise levels similar to those produced by any large construction project with  
20 heavy construction equipment that may impact near-by recreational opportunities. Figure 3 in  
21 RFA2 illustrates recreational opportunities within the analysis area and the Department  
22 estimates that Quesna County Park is approximately 4 miles from the site boundary. Given  
23 the far proximity of the Park to the proposed construction activities associated with turbine  
24 repowering, the Department recommends the Council find that noise from construction would  
25 not create significant adverse impact at the recreational opportunity.

26  
27 Operation of the proposed RFA2 facility repower are expected to be similar to the existing wind  
28 turbines and will feature wind turbine blades that have been manufactured and designed to  
29 significantly reduce noise. The certificate holder explains that in all likelihood, the repowered  
30 turbines of the proposed RFA2 facility repower will produce lower sound levels than the  
31 existing turbines. Considering the existing ambient noises of activities on the Columbia River, I-  
32 84, and the high-volume railroad track, the Department recommends that Council find that the  
33 noise generated by the construction and operation of the proposed RFA2 facility repower is not  
34 likely to result in significant adverse impacts to Quesna County Park.

35  
36 ***Traffic***

37 The evaluation of traffic related impacts to important recreational opportunities within the  
38 analysis area, only evaluates impacts associated with the construction of the proposed RFA2  
39 facility repower. Operational related impacts will be the same as as the original review, and are  
40 not reiterated in the evaluation that follows.

41  
42 As discussed in Section IIIA.8., *Public Services*, of this order, the certificate holder identified  
43 Interstate 84 (I-84) as the primary transportation route for construction and operation of the  
44 facility. The certificate holder then explains that most vehicles will exit I-84 at Arlington.

1 Because Quesna County Park is approximately 13 miles east of the Arlington exit off of I-84, the  
2 Department recommends that Council find that traffic associated with the proposed RFA2  
3 facility repower would not likely result in significant adverse impacts to Quesna County Park.  
4

5 ***Visual Impacts***

6 Council previously evaluated and approved turbines with a maximum blade tip height of 150  
7 meters in the Final Order on the ASC, and found that the certificate holder could design,  
8 construct, and operate the facility in compliance with the Recreation Standard. Because the  
9 proposed RFA2 facility repower will not result in an increase to the maximum blade tip height,  
10 the Department recommends that the Council find that the proposed RFA2 facility repower will  
11 not result in significant adverse impacts to Quesna County Park.  
12

13 **Conclusions of Law**

14  
15 Based on the foregoing findings of fact, and subject to compliance with the existing site  
16 certificate conditions, the Department recommends that Council find that the facility, as  
17 amended, would continue to comply with the Council’s Recreation standard.  
18

19 **III.A.8 Public Services: OAR 345-022-0110**

20  
21 *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the*  
22 *Council must find that the construction and operation of the facility, taking into account*  
23 *mitigation, are not likely to result in significant adverse impact to the ability of public*  
24 *and private providers within the analysis area described in the project order to provide:*  
25 *sewers and sewage treatment, water, storm water drainage, solid waste management,*  
26 *housing, traffic safety, police and fire protection, health care and schools.*  
27

28 *(2) The Council may issue a site certificate for a facility that would produce power from*  
29 *wind, solar or geothermal energy without making the findings described in section (1).*  
30 *However, the Council may apply the requirements of section (1) to impose conditions on*  
31 *a site certificate issued for such a facility.*  
32

33 \*\*\*

34 **Finding of Fact**

35  
36 The Council’s Public Services standard requires the Council to find that the facility is not likely to  
37 result in significant adverse impacts on the ability of public and private service providers to  
38 supply sewer and sewage treatment, water, stormwater drainage, solid waste management,  
39 housing, traffic safety, police and fire protection, health care, and schools. Pursuant to OAR  
40 345-022-0110(2), the Council may issue a site certificate for a facility that would produce power  
41 from wind or solar energy without making findings regarding the Public Services standard;

1 however, the Council may impose site certificate conditions based upon the requirements of  
2 the standard.

3  
4 The analysis area for potential impacts to public services is the area within and extending 10-  
5 miles from the site boundary. The evaluation of impacts to public services, provided below, is  
6 an evaluation of only construction related impacts resulting from the proposed RFA2 facility  
7 repower. Operational impacts will be the same as the original review and are not reiterated in  
8 this order.

9  
10 As described in RFA2, the proposed facility repowering will be completed on a rolling schedule,  
11 where wind turbines will be upgraded over an approximately 6-month time frame with typically  
12 8-12 turbines off-line being upgraded at a time. It will take approximately 2 weeks to upgrade  
13 each turbine. There will be four crane crews including crane operation and tower work crews.  
14 There will also be other upgrade support crews. It is estimated that there will be approximately  
15 60 workers on-site at one time. The equipment used for upgrading will generally consist of  
16 cranes, semi-trucks and regular sized pick-up/operational trucks.

17  
18 *Sewer and Sewage Treatment; Stormwater Drainage*

19  
20 During construction of the proposed repowered turbines, on-site work crew will use existing  
21 sanitary facilities as well as portable toilet facilities, as needed. The disposal of these facilities  
22 will be managed similar to previously evaluated methods and addressed within existing site  
23 certificate conditions. Construction and operation of the proposed RFA2 facility repowering will  
24 not require use of public sewers or sewage treatment, nor require use of public or private  
25 stormwater drainage facilities. Therefore, construction and operation would not impact public  
26 and private providers of sewer, sewage treatment or stormwater drainage.

27  
28 *Water*

29  
30 Construction activities associated with the RFA2 repowering would require water for dust  
31 control. The certificate holder indicates in Section 6.19 of RFA2 that the repowering activities  
32 would not alter the certificate holder's ability to obtain water from the City of Arlington, nor  
33 would the repowering affect the ability to comply with existing Condition 78, limiting water use  
34 from the facility's onsite well to 5,000 gallon per day. Provided as Attachment 5 in RFA2, email  
35 correspondence between the City Recorder from the City of Arlington and the certificate  
36 holder, confirms the City of Arlington's continued ability to provide water to the facility,  
37 including the proposed repowering. Based on the minimal increase in construction-related  
38 water use, the Department recommends that Council find that construction of the proposed

1 facility repowering of RFA2 would continue to not likely result in significant adverse impacts on  
2 the ability of public or private providers of water to deliver services.

3  
4 The proposed repowering activities of RFA2 would not result in changes to operational water  
5 use, which is limited to facility-specific wells that do not result in impacts on the ability of public  
6 or private providers of water to deliver services.

7  
8 *Solid Waste Management*

9  
10 Construction activities associated with the RFA2 facility repowering will generate solid waste,  
11 including non-hazardous packaging associated with equipment, removed wind turbine blades,  
12 and erosion control materials (i.e. straw bales and silt fencing) which will be removed and  
13 recycled or taken to landfill in compliance with federal, state and local regulations. In RFA2, the  
14 Certificate Holder states that currently turbine blades and other materials used for Facility  
15 maintenance are taken to the Columbia Ridge Landfill. Additionally, the certificate holder  
16 explains that the Columbia Ridge Landfill has adequate capacity to accommodate construction-  
17 related debris and is not expected to reach full capacity for more than 100 years.

18  
19 The Council previously imposed several conditions addressing solid waste management,  
20 including conditions that require the certificate holder to develop and implement a solid waste  
21 management plan for the construction and operation of the facility (Condition 101 and 102).  
22 Existing Conditions 50, 51, and 100 provide guidance for the disposal of hazardous materials,  
23 spill response and accidental releases of hazardous materials, and the discharge of sanitary  
24 wastewater, and will continue to apply to the facility repowering activities of RFA2. Based on  
25 the capacity of the Columbia Ridge Landfill, and compliance with the aforementioned existing  
26 conditions, the Department recommends that the Council find that the construction and  
27 operation of the proposed RFA2 facility repowering would not be likely to result in a significant  
28 adverse impact on the ability of public and private providers of solid waste management to  
29 deliver services.

30  
31 *Traffic Safety*

32  
33 Construction of the proposed RFA2 facility repower would result in increased trip generation  
34 on local and state roads (I-84, OR 74 and OR 19) for approximately 6-months. In RFA2, the  
35 certificate holder estimates that proposed RFA2 facility repower activities would require  
36 approximately 60 temporary workers, 20 trucks, and 28 semi-trucks per day, which the  
37 Department estimates equates to a maximum trip rate increase of 216 trips per day on local  
38 and state roads.<sup>16</sup>

39  
40 During construction, trucks used to transport wind turbine blades and other heavy  
41 construction equipment (i.e. cranes) would likely require oversize load/overweight permits

---

<sup>16</sup> Department trip rate calculation = 60 worker trips x 2 times per day + 20 trucks x 2 times per day + 28 semi-trucks x 2 times per day.

1 from Oregon Department of Transportation (ODOT) and Gilliam County Road Department. In  
2 addition to haul and heavy load permits, the certificate holder commits to consultation with  
3 Gilliam County Road Department prior to transport of new wind turbine blades and gearboxes  
4 to establish roads to be used, traffic control measures, and roadway improvement necessary  
5 before and after completion of the proposed activity.<sup>17</sup>

6  
7 As evaluated in Section III.A.5 *Land Use* of this order, Gilliam County Zoning Ordinance (GCZO)  
8 Section 7.020(T)(5)(a)(3) establishes an informational requirement for wind power generation  
9 facilities seeking a site certificate or amended site certificate and establishes that, for a  
10 conditional use permit/permit alteration to be issued by the county, the certificate holder  
11 provide a Transportation Plan evaluating the potential impacts of facility related construction  
12 and operation on the local and regional road system. In response to this informational  
13 requirement, and based upon potential impacts from the short-term increase in construction  
14 related traffic impacts to local roads, the Department recommends Condition 108 which  
15 requires development and implementation of a Transportation Plan and Road Use Agreement  
16 with Gilliam County Road Department. The Department recommends Council find that, based  
17 on compliance with Condition 108, the proposed RFA2 facility repower would not be likely to  
18 impact the ability of local providers of traffic safety to provide services.

19  
20 *Housing, Police, Fire, Schools, and Healthcare*

21  
22 In Section 6.13 of the RFA, the certificate holder explains that although the Shepherds Flat  
23 North facility is already constructed and operational, the proposed repowering would result in a  
24 short-term and temporary influx of workers. The certificate holder estimates that the  
25 repowering activities would have a duration of six months and require a maximum of 60  
26 workers on-site at one time. Additionally, the certificate holder provided a conservative  
27 estimate that 30 percent of the workers necessary for the repowering would be local. The  
28 remaining 70 percent may be temporary new residents. In any case, the workforce required for  
29 the repowering activities would be less than the 175 transient workers evaluated in the Final  
30 Order on the Site Certificate.<sup>1819</sup> Council previously concluded that the impact to the ability of  
31 communities to provide housing, police and fire protection, healthcare and schools was not

---

<sup>17</sup> SFNAMD2 pRFA2 Reviewing Agency Comments Gilliam County. 2019-11-18. During review of pRFA2, Gilliam County Planning Director (Michelle Colby) expressed concern regarding potential traffic related impacts from RFA2 on local roads and requested that impacts be mitigated through a road use agreement with the Gilliam County Road Department.

<sup>18</sup> SFWAPPDoc240 SFW - Final Order - 2008-07-25

<sup>19</sup> In the context of this order, “transient workers” refers to workers that might come from outside of the analysis area, i.e. temporary new residents.

1 likely to be significant. Operation of the proposed repowered facility would not result in  
2 permanent population increases.

3  
4 **Conclusions of Law**

5  
6 Based on the foregoing analysis, and in compliance with OAR 345-022-0110(2), the Department  
7 recommends Council rely on the existing and recommended amended conditions to address  
8 the Public Services standard.

9  
10 **III.A.9 Waste Minimization: OAR 345-022-0120**

11  
12 *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the*  
13 *Council must find that, to the extent reasonably practicable:*

14  
15 *(a) The applicant's solid waste and wastewater plans are likely to minimize*  
16 *generation of solid waste and wastewater in the construction and operation of the*  
17 *facility, and when solid waste or wastewater is generated, to result in recycling and*  
18 *reuse of such wastes;*

19  
20 *(b) The applicant's plans to manage the accumulation, storage, disposal and*  
21 *transportation of waste generated by the construction and operation of the facility*  
22 *are likely to result in minimal adverse impact on surrounding and adjacent areas.*

23  
24 *(2) The Council may issue a site certificate for a facility that would produce power from*  
25 *wind, solar or geothermal energy without making the findings described in section (1).*  
26 *However, the Council may apply the requirements of section (1) to impose conditions on*  
27 *a site certificate issued for such a facility.*

28 \*\*\*

29  
30 **Finding of Fact**

31  
32 The Waste Minimization standard requires the Council to find that the certificate holder will  
33 minimize the generation of solid waste and wastewater, and that the waste generated would  
34 be managed to minimally impact surrounding and adjacent areas. Pursuant to OAR 345-022-  
35 0020(2), the Council may issue a site certificate for a wind facility without making findings  
36 regarding the Waste Minimization standard; however, the Council may impose site certificate  
37 conditions based upon the requirements of the standard.

38  
39 *Solid Waste and Wastewater*

40  
41 As mentioned above in Section III.A.8. *Public Services* of this order, construction activities  
42 associated with the proposed RFA2 facility repower would generate solid waste, including non-  
43 hazardous packaging associated with equipment, removed wind turbine blades, and erosion  
44 control materials (i.e. straw bales and silt fencing) which will be removed and recycled or taken

1 to landfill in compliance with federal, state and local regulations. The construction activities are  
2 not expected to generate wastewater. In RFA2, the certificate holder states that currently,  
3 turbine blades and other materials used for Facility maintenance are taken to the Columbia  
4 Ridge Landfill, and that operational Conditions 50, 51, 100, 101, and 102, which address the  
5 waste minimization standard, would continue to apply to the proposed RFA2 facility repower.  
6 Existing Condition 101 requires the certificate holder to implement a waste management plan  
7 during facility construction. Furthermore, it includes measures to be followed, including but not  
8 limited to the recycling of: steel and other metal scrap, wood waste, and packaging waste such  
9 as paper and cardboard. Although the certificate holder explains that the Columbia Ridge  
10 Landfill has adequate capacity to accommodate construction-related debris and is not expected  
11 to reach full capacity for more than 100 years, the Department recommends that Council  
12 impose Condition 114 to ensure the certificate holder minimizes waste generation consistent  
13 with Council’s standard.

14  
15 **Recommended Condition 114: During RFA2 facility repower activities, the certificate**  
16 **holder shall, or ensure its third-party contractors, reuse or recycle wind turbine blades,**  
17 **hubs and other removed wind turbine components to the extent practicable. The**  
18 **certificate holder shall report in its semi-annual report to the Department the quantities of**  
19 **removed wind turbine components recycled, reused, sold for scrap, and disposed of in a**  
20 **landfill. [Amendment 2]**

21  
22 Solid waste from operations of the proposed RFA2 facility repower would not exceed the  
23 existing amount of solid waste generated from the facility. Council previously imposed  
24 Condition 102, to require the certificate holder to, during operation, implement a waste  
25 management plan. The Department recommends that Council find that compliance with  
26 previously imposed conditions would minimize potential operational solid waste, and potential  
27 impacts from solid waste on surrounding lands.

### 28 **Conclusions of Law**

29  
30  
31 Based on the foregoing analysis, and subject to existing and recommended conditions, the  
32 Department recommends Council find that the proposed RFA2 facility repower would continue  
33 to comply with the Council’s Waste Minimization standard.

### 34 **III.A.10 Division 24 Standards**

35  
36  
37 The Council’s Division 24 standards include specific standards for the siting of wind project,  
38 which is further evaluated below.

### 39 **III.A.10.1 Public Health and Safety Standards for Wind Energy Facilities: OAR 345-024-0010**

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

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

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

8  
9       **Findings of Fact**

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

17  
18       *Potential Impacts from Structural Failure of the Tower or Blades and Safety Devices and Testing*  
19       *Procedures to Warn of Impending Failure*

20  
21       The Council must evaluate if the certificate holder has demonstrated that it has the ability to  
22       preclude a structural failure in the first place through design, construction and operation of the  
23       turbines. OAR 345-024-0010(2) does not require that a certificate holder demonstrate an  
24       *elimination* of all public health and safety risk [*Emphasis added*]. Instead, it requires that the  
25       certificate holder design, construct and operate the facility to avoid structural failure, to have  
26       adequate mechanisms in place to warn of an impending failure, and to minimize the  
27       consequences of such failure.

28  
29       The proposed repowering activity, resulting in a lower minimum aboveground blade tip  
30       clearance (25 to 21.5 meters) compared to the Council’s previous evaluation could potentially  
31       result in increased public health and safety risks. The Department evaluates the sufficiency of  
32       previously imposed conditions related to safety devices and testing procedures to warn of  
33       impending failure and minimize potential increases in risk.

34  
35       The site certificate includes a number of existing conditions that were imposed to address  
36       sub(2) of the standard and which would continue to ensure that the certificate holder reduces  
37       the risk of potential impacts from structural failure of the wind turbine tower or blades.

- 38  
39
  - 40       • Condition 71 requires that the certificate holder notify the Department and the Gilliam  
41       County Planning Director within 72 hours of any accidents or mechanical failures  
42       associated with operation of the facility that may result in public health and safety  
43       concerns.
  - 44       • Recommended new Condition 110 establishes required setback distances of: 3,520 foot  
      setback from the property line of properties zoned residential use or designated in the

1 Gilliam County Comprehensive Plan as residential; and, a minimum distance of 110-  
2 percent of maximum blade tip height measured from the centerline of the turbine  
3 tower to the nearest edge of any public road right-of-way (assuming a minimum road  
4 right of way width of 60 feet), when the 3,520 foot setback from doesn't apply.  
5

6 As mentioned above in Section III.A.1 *General Standard of Review*, Council imposed Condition  
7 26 in The *Final Order on the ASC* to establish limits on the turbines selected, depending on the  
8 turbine type selected. Condition 26(d) established a the minimum blade tip clearance of 25  
9 meters above the ground at the closest point of rotation. The proposed lowering of the  
10 minimum aboveground blade tip clearance could result in potential public health and safety  
11 impacts from increased proximity to turbine blades. However, the certificate holder describes  
12 that the Turbines would remain located entirely on private property, in rural eastern Oregon,  
13 and that public access would be limited. The Department recommends that the Council  
14 consider that the facility design, including restricted public access, and compliance to the  
15 setback requirements of Condition 40, to be sufficient to minimize potential increases in public  
16 health and safety risks from proximity to the proposed RFA2 repowered turbines, with lower  
17 minimum aboveground blade tip clearance.  
18

19 Based upon the proposed RFA2 repowering activities for Shepherds Flat North, the Department  
20 recommends that Council amend Condition 26 to specify the minimum blade tip clearance from  
21 25 meters to 21.5 meters. Additionally, the Department recommends Council remove from the  
22 condition a limitation on the megawatt output of the facility. The Council's standards are not  
23 concerned with the electrical power output of the facility. The amended condition would read  
24 as follows:  
25

26 **Recommended Amended Condition 26:** The certificate holder shall construct a facility  
27 substantially as described in the site certificate and may select turbines of any type, subject  
28 to the following restrictions and compliance with all other site certificate conditions. Before  
29 beginning construction, the certificate holder shall provide to the Department a description  
30 of the turbine types selected for the facility demonstrating compliance with this condition.

- 31 (a) The total number of turbines at the facility must not exceed 116 turbines.  
32 ~~(b) The combined peak generating capacity of the facility must not exceed 290~~  
33 ~~megawatts.~~  
34 (b) The turbine hub height must not exceed 105 meters and the maximum blade tip  
35 height must not exceed 150 meters.  
36 (c) The minimum blade tip clearance must be 25 meters above ground. Repowered  
37 turbines that comply with the setback requirements of Condition 40, must have a  
38 minimum blade tip clearance of 21.5 meters above ground.  
39 (d) The maximum volume of concrete above three feet below grade in the turbine  
40 foundations must not exceed 66 cubic yards.  
41 (e) The maximum combined weight of metals in the tower (including ladders and  
42 platforms) and nacelle must not exceed 393 U.S. tons per turbine.  
43 (f) The certificate holder shall request an amendment of the site certificate to ~~increase~~  
44 ~~the combined peak generating capacity of the facility beyond 318 megawatts, to~~

1 increase the number of wind turbines to more than 106 wind turbines or to install  
2 wind turbines with a hub height greater than 105 meters, a blade tip height greater  
3 than 150 meters or a blade tip clearance less than 25 meters above ground.

4 [Amendment #1 (SFWF); Amendment #1, Amendment #2]

5  
6 As mentioned above, the proposed RFA2 facility repowering would not only lower the minimum  
7 blade tip clearance, but would also increase maximum height and the rotor diameter of the two  
8 specified turbines. The new maximum height of the repowered turbines would be 150 meters,  
9 consistent with the maximum blade tip height limited in Condition 26. Council previously  
10 evaluated and approved turbines with a maximum blade tip height of 150 meters in the Final  
11 Order on the ASC, and found that the certificate holder could design, construct, and operate the  
12 facility in compliance with the Public Health and Safety Standard for Wind Energy Facilities.

13  
14 Existing Condition 57 requires the certificate holder to submit a Notice of Proposed Construction  
15 or Alteration (Form 7460) to the Federal Aviation Administration (FAA) and the Oregon  
16 Department of Aviation (ODA). Because the existing turbine specifications feature a maximum  
17 blade tip height of 135 meters, and the proposed demonstration activities would increase the  
18 maximum height to 150 meters, the Department recommends Council impose condition 114 to  
19 require the certificate holder to submit a Notice of Proposed Construction and Alteration to the  
20 FAA and ODA. Recommended Condition 115 would read as follows:

21  
22 **Recommended Condition 115:** Prior to RFA2 facility repower activities, the certificate  
23 holder shall submit a Notice of Proposed Construction or Alteration to the Federal Aviation  
24 Administration (FAA) and the Oregon Department of Aviation identifying the new maximum  
25 blade tip height of 150 meters. The certificate holder shall promptly notify the Department  
26 of the responses from the FAA and the Oregon Department of Aviation. [Amendment #2]

27  
28 The Department recommends that Council find that compliance with the existing and  
29 recommended new and amended conditions would continue to satisfy the requirements of the  
30 standard and ensure that the proposed RFA2 facility repowering are designed, constructed, and  
31 operated to preclude structural failure of the tower or blades that could endanger public safety,  
32 and that the proposed RFA2 facility repowering would have adequate safety devices and testing  
33 procedures to warn of impending failure and minimize consequences of such failure, should it  
34 occur.

### 35 36 **Conclusions of Law**

37  
38 Based on the foregoing analysis, and subject to compliance with existing and recommended  
39 conditions, the Department recommends the Council find that the proposed RFA2 facility

1 repower activity would comply with the Council’s Public Health and Safety Standards for Wind  
2 Energy Facilities.

3  
4 **III.A.10.2 Cumulative Effects Standard for Wind Energy Facilities OAR 345-024-0015**  
5

6 *To issue a site certificate for a proposed wind energy facility, the Council must find that the*  
7 *applicant can design and construct the facility to reduce cumulative adverse environmental*  
8 *effects in the vicinity by practicable measures including, but not limited to, the following:*  
9

- 10 (1) *Using existing roads to provide access to the facility site, or if new roads are needed,*  
11 *minimizing the amount of land used for new roads and locating them to reduce adverse*  
12 *environmental impacts.*  
13 (2) *Using underground transmission lines and combining transmission routes.*  
14 (3) *Connecting the facility to existing substations, or if new substations are needed,*  
15 *minimizing the number of new substations.*  
16 (4) *Designing the facility to reduce the risk of injury to raptors or other vulnerable wildlife in*  
17 *areas near turbines or electrical equipment.*  
18 (5) *Designing the components of the facility to minimize adverse visual features.*  
19 (6) *Using the minimum lighting necessary for safety and security purposes and using*  
20 *techniques to prevent casting glare from the site, except as otherwise required by the*  
21 *Federal Aviation Administration or the Oregon Department of Aviation.*  
22

23 **Findings of Fact**  
24

25 This standard requires the use of practicable measures to reduce the cumulative adverse  
26 environmental effects by practicable measures.  
27

28 *Access Roads*  
29

30 OAR 345-024-0015(1) encourages the use of existing roads for facility site access, minimizing  
31 the amount of land used for new roads, and locating new roads in such a manner that reduces  
32 adverse environmental impacts. The certificate holder proposes to utilize existing access roads,  
33 to be temporarily widened to support the proposed RFA2 facility repowering. No new  
34 permanent roads would be constructed as part of RFA2.  
35

36 Because the proposed RFA2 facility repowering would not result in new permanent access  
37 roads, the Department recommends the Council continue to find that the certificate holder  
38 demonstrates that it would use existing roads where practicable to provide access to the site  
39 and through the temporary expansion of existing roads, would reduce adverse environmental  
40 impacts and constructed in a manner that minimizes the amount of land used.  
41

1 *Transmission Lines and Substations*

2

3 RFA2 does not propose new transmission lines or substations, or changes to the previously  
4 approved site boundary. Therefore, the Department recommends Council find that RFA2 would  
5 not result in a significant adverse impact under OAR 345-024-0015(2) and (3) that was not  
6 addressed in a previous Council orders.

7

8 *Wildlife Protection*

9

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

12

13 The proposed RFA2 facility repowering would increase the rotor-swept diameter from 100  
14 meters to 127 meters, and decrease the aboveground blade tip clearance by 3.5 meters. The  
15 proposed changes in wind turbine dimension could result in increased bird and bat fatality risk  
16 from wind turbine collision. However, the certificate holder explains that the effect of turbine  
17 size on bird and bat collision rates remains unclear, particularly with respect to blade length.  
18 However, in response to ODFW recommendations, the certificate holder agrees that two years  
19 of fatality monitoring, to look at mortality effects from turbine repowering, following  
20 construction completion of the proposed RFA2 facility repower.

21

22 As discussed in Section III.A.6, *Fish and Wildlife Habitat*, the certificate holder proposes to  
23 conduct 2-years of post-construction fatality monitoring to determine whether the changes in  
24 wind turbine dimensions result in increased fatality risk and then whether additional mitigation  
25 is necessary. The post construction fatality monitoring would be implemented in accordance  
26 with the Wildlife Monitoring and Mitigation Plan (WMMP), provided as Attachment E to this  
27 order.

28

29 Based on compliance with other existing and recommended new site certificate conditions, the  
30 certificate holder would implement the following measures to further reduce and avoid wildlife  
31 impacts:

32

- 33 • Pre- and post-construction raptor nest monitoring, seasonal timing restrictions and  
34 avoidance requirements
- 35 • Habitat mitigation, revegetation and monitoring
- 36 • Weed control and monitoring

37

38 Subject to compliance with existing and recommended new site certificate conditions, the  
39 Department recommends the Council find the certificate holder continues to demonstrate that  
40 it can reduce cumulative adverse environmental effects in the vicinity by designing the  
41 proposed RFA2 facility repower to reduce the risk of injury to raptors or other vulnerable  
42 wildlife in areas near wind turbines or electrical equipment.

1 *Visual Features*

2 OAR 345-024-0015(5) encourages the certificate holder to design a facility to minimize adverse  
3 visual features. The visual features of the proposed demonstration wind turbines would be  
4 similar to those previously evaluated by Council. Additionally, based on compliance with  
5 existing site certificate conditions, the certificate holder would implement the following  
6 measures to reduce potential visual impacts from the proposed repowered wind turbines:  
7

- 8 • Uniformly paint turbine towers, nacelles, and rotors in a neutral color to blend with the  
9 surrounding landscape
- 10 • Exterior nighttime lighting would be kept to a minimum

11  
12 Based on the evidence in the record and subject to compliance with existing site certificate  
13 conditions, the Department recommends the Council find the certificate holder continues to  
14 demonstrate that it can reduce cumulative adverse environmental effects in the vicinity by  
15 designing the components of the facility, with proposed changes, to minimize the adverse  
16 impacts of lighting.

17  
18 *Lighting*

19  
20 OAR 345-024-0015(6) requires the use of techniques to prevent casting glare from the site and  
21 the use of minimum lighting necessary for safety and security purposes, except as otherwise  
22 required by the Federal Aviation Administration (FAA) and the Oregon Department of Aviation.  
23

24 Existing Condition 95 requires wind turbines to be equipped with the minimum turbine tower  
25 lighting required by FAA. Based on compliance with this condition, the Department  
26 recommends the Council find the certificate holder continues to demonstrate that it can reduce  
27 cumulative adverse environmental effects in the vicinity by designing the components of the  
28 facility, with proposed changes, to minimize the adverse impacts of lighting.  
29

30 **Conclusions of Law**

31  
32 Based on the foregoing findings of fact and conclusions, and subject to compliance with existing  
33 conditions, the Department recommends Council finds that the proposed RFA2 facility repower  
34 would comply with the Council’s Cumulative Effects Standards for Wind Energy Facilities.  
35

36 **III.A.11 Other Applicable Regulatory Requirements Under Council Jurisdiction**

37  
38 Under ORS 469.503(3) and under the Council’s General Standard of Review (OAR 345-022-  
39 0000), the Council must determine whether the proposed facility complies with “all other  
40 Oregon statutes and administrative rules...as applicable to the issuance of a site certificate for  
41 the proposed facility.” This section addresses the applicable Oregon statutes and administrative

1 rules that are not otherwise addressed in Council standards, including the Oregon Department  
2 of Environmental Quality's noise control regulations.

3  
4 **III.A.11.1 Noise Control Regulations: OAR 340-035-0035**

5  
6 *(1) Standards and Regulations:*

7 \*\*\*

8 *(b) New Noise Sources:*

9  
10 *(B) New Sources Located on Previously Unused Site:*

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

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

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

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*  
33 *the appropriate measurement point as specified in subsection (3)(b) of*  
34 *this rule using generally accepted noise engineering measurement*  
35 *practices. Background noise measurements shall be obtained at the*  
36 *appropriate measurement point, synchronized with windspeed*  
37 *measurements of hub height conditions at the nearest wind turbine*  
38 *location. "Actual ambient background level" does not include noise*  
39 *generated or caused by the wind 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*  
42 *above the limits specified in Table 8), if the person who owns the noise*  
43 *sensitive property executes a legally effective easement or real*  
44 *covenant that benefits the property on which the wind energy facility*

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

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

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

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

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

41                   *\*\*\**

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**Findings of Fact**

The Department of Environmental Quality (DEQ) noise control regulations at OAR 340-035-0035 have been adopted by Council as the compliance requirements for EFSC-jurisdiction energy facilities. The analysis area for the Noise Control Regulation is the area within and extending 1-mile from the site boundary.

OAR 340-035-0035(5) outlines sources of noise that are exempt from the DEQ noise rules, including sounds that originate from construction sites as well as maintenance of capital equipment.

Noise generated by a wind energy facility located on a previously unused site must comply with two tests: the “ambient noise degradation test” and the “maximum allowable noise test.” Under the ambient noise degradation test, facility-generated noise must not increase the ambient hourly L10 or L50 noise levels at any noise sensitive property by more than 10 dBA when turbines are operating “between cut-in speed and the wind speed corresponding to the maximum sound power level.” To show that a facility complies with this test, the certificate holder may use an assumed ambient hourly L50 noise level of 26 dBA or measure the actual ambient hourly noise levels at the receiver in accordance with the procedures specified in the regulation. In this case, the certificate holder elected to use an assumed ambient hourly L50 noise level of 26 dBA.

To demonstrate compliance with the ambient noise degradation test, the noise generated during facility operation must not cause the hourly L<sub>50</sub> noise level at any noise-sensitive property to exceed 36 dBA. However, OAR 340-035-0035(1)(b)(B)(iii)(III) relieves the certificate holder from having to show compliance with the ambient noise degradation test “if the person who owns the noise sensitive property executes a legally effective easement or real covenant that benefits the property on which the wind energy facility is located” (a “noise waiver”).

Under the maximum allowable noise test at OAR 340-035-0035(1)(b)(B)(i) a wind energy facility may not exceed the noise levels specified in Table 8 of the noise rules, as represented in Table 3, *Statistical Noise Limits for Industrial and Commercial Noise Sources* below. Pursuant to OAR 340-035-0035(1)(b)(B)(iii)(III), it is not possible for a property owner to waive an exceedance under the maximum allowable noise test.

**Table 3: 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

**Table 3: 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)
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		

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*Potential Noise Impacts*

*Construction*

As discussed in RFA2 and in Section III.A.8, *Public Services*, of this order, proposed RFA2 facility repower would result in worker and haul truck trips, and construction equipment operation, which would generate temporary, short-term construction noise. In RFA2, the certificate holder estimates that proposed RFA2 facility repowering activities would take approximately 6 months and would require approximately 60 temporary workers, 20 trucks, and 28 semi-trucks per day, which the Department estimates equates to a maximum trip rate increase of 216 trips per day on local and state roads. Noise related to the construction of the turbine repowering, however, exempt from the noise standards pursuant to OAR 340-035-0035(5)(g) and (h). The evaluation of construction-related noise, including methodology and assumptions, is an informational requirement per OAR Chapter 345 Division 21 and can be utilized to inform the evaluation of construction-related noise impacts under the Council’s Recreation standard of this order.

*Operation*

In RFA2, the certificate holder states that the sound power properties of the repowered turbines is expected to be similar to the existing wind turbines, with a sound power level of 105 dBA per turbine. The certificate holder indicates that the original noise study<sup>20</sup> demonstrated compliance with the DEQ noise requirements. As mentioned above in Section III.A.7, due to advances in blade airfoil shape and manufacturing, significantly reducing noise from wind turbine blades, in all likelihood, the repowered turbines of the proposed RFA2 facility repower will produce lower sound levels than the existing turbines. Council previously imposed Condition 97, which requires the certificate holder to provide sound power level and octave band data, based on manufacturer warranties or as otherwise confirmed acceptable by the Department, and demonstrate through a final noise modeling assessment compliance with the DEQ noise requirements.

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<sup>20</sup> SFWF Exhibit X.

1 In RFA2, the certificate holder explains that Council concluded in both the *Final Order* and  
2 *Amendment 1*, that the facility, subject to site certificate conditions, would comply with the  
3 applicable State noise regulations. A noise survey conducted in support of RFA1, indicated the  
4 facility's compliance with the L50 noise level limits at all 10 NSR's. However, the noise survey  
5 results also indicated that all 10 NSR's would exceed the hourly L10 noise level limits. To comply  
6 with the State noise regulations, the certificate holder either had to modify the facility design to  
7 reduce the sound levels at the NSR's to below 36 dBA, or obtain noise waivers from the owners  
8 of all 10 NSR's. In the noise analysis, the certificate holder indicates that because of their similar  
9 sound power levels when compared to the existing wind turbines, the noise impacts of the  
10 repowered turbines at all 10 NSR's are expected to be the same or less than those reported in  
11 the RFA1 noise survey. To verify ongoing compliance with the applicable requirements, the  
12 Department recommends Council impose Condition 116 as follows:

13  
14 **Recommended Condition 116: Prior to RFA2 facility repower activities, the certificate**  
15 **holder shall provide to the Department:**

- 16 (a) The maximum sound power level and octave band for the modified wind  
17 turbines based on manufacturer' warranties or confirmed by other means  
18 acceptable to the Department.
- 19 (b) The results of noise analysis for the RFA2 facility repower, as approved in the  
20 Second Amended Site Certificate, performed in a manner consistent with the  
21 requirements of OAR 340-035-0035(1)(b)(B)(iii)(IV) and (VI) demonstrating to the  
22 satisfaction of the Department that the total noise generated (including the  
23 noise from repowered wind turbines and existing substation transformers)  
24 would meet the ambient degradation test and maximum allowable test at the  
25 appropriate measurement point for all potentially-affected noise sensitive  
26 properties.
- 27 (c) For each noise-sensitive property where the certificate holder relies on a noise  
28 waiver to demonstrate compliance in accordance with OAR 340-035-0035  
29 (1)(b)(B)(iii)(III) related to site certificate amendment 2 activities, a copy of the a  
30 legally effective easement or real covenant pursuant to which the owner of the  
31 property authorizes the certificate holder's operation of the facility to increase  
32 ambient statistical noise levels L10 and L50 by more than 10 dBA at the  
33 appropriate measurement point. The legally-effective easement or real covenant  
34 must: include a legal description of the burdened property (the noise sensitive  
35 property); be recorded in the real property records of the county; expressly  
36 benefit the certificate holder; expressly run with the land and bind all future  
37 owners, lessees or holders of any interest in the burdened property; and not be  
38 subject to revocation without the certificate holder's written approval.

39 [Amendment #2]  
40

41 In addition, Council previously imposed Condition 98, which requires the certificate holder to  
42 maintain a complaint response system to address noise complaints during operation. Condition  
43 98 also allows Council to require the certificate holder to monitor and record the statistical

1 noise levels to verify compliance with the noise control regulations. This condition would  
2 continue to apply to the proposed RFA2 facility repower.

3

4 **Conclusions of Law**

5

6 Based on the foregoing findings, the Department recommends that the Council find that the  
7 proposed RFA2 facility repower would comply with the Noise Control Regulations in OAR 340-  
8 035-0035(1)(b)(B).

9

10 **III.B. Standards Not Likely to Be Impacted by Request for Amendment 2**

11

12 RFA2, as described throughout this order, solely requests authorization for a proposed upgrade  
13 (or repower) to the facility’s wind turbines, where blade replacement and nacelle modification  
14 would occur. Changes in wind turbine dimensions would lower wind turbine minimum  
15 aboveground blade tip clearance from 25 to 21.5 meters, increase blade tip height from 135 to  
16 150 meters, and increase rotor diameter from 100 to 127 meters, with the change in minimum  
17 aboveground blade tip clearance representing the only change necessitating a site certificate  
18 condition amendment as maximum blade tip height of 150 meters was previously evaluated  
19 and approved (Condition 26) and rotor diameter was not previously correlated with an impact  
20 protected by a Council standard nor limited by the site certificate.

21

22 In RFA2, the certificate holder describes the number of equipment and personnel that would be  
23 required for the proposed RFA2 facility repower, and potential impacts associated with the  
24 repowering activities. Based on the Department’s review of the RFA and of the previously  
25 evaluated impacts and imposed conditions, the following standards would not be impacted by  
26 RFA2 and do not require re-evaluation in this order.

27

28

**Table 4: Summary of Council Standards Not Likely Impacted by RFA2**

<b>Rule Citation</b>	<b>Standard</b>	<b>Department's Evaluation</b>
345-022-0022	Soil Protection	Potential impacts to soils would be the same (erosion, risk of lubricant oil spill). Amendment would not impact certificate holder's ability to satisfy requirements. Conditions 51 (hazardous material handling), 55 (72-hr spill notification) and 77 (operational erosion control, maintenance and inspection) apply. Additional conditions not necessary to satisfy standard.
345-022-0040	Protected Areas	RFA2 includes an evaluation of potential impacts to Cottonwood Canyon State Park, even though the State Park was not designated as a protected area until 2015. Potential impacts to this park were not previously evaluated by Council, as the standard applies to protected areas with designations that predate May 12, 2007. Potential impact from change in minimum aboveground blade tip clearance would not result in new traffic, noise, visual, water or wastewater impacts to any protected area. Additional conditions not necessary to satisfy standard.
345-022-0050	Retirement and Financial Assurance	Amendment would not result in change to the facilities Retirement and Financial Assurance. Conditions 7 (Prevent development on site that would preclude restoration), 8 (maintaining a Bond or Letter of Credit), and 30 (Adjusting the bond or letter of credit) apply. Additional conditions not necessary to satisfy standard.
345-022-0070	Threatened and Endangered Species	Potential Impact from change in minimum aboveground blade tip clearance would not result in new impacts to Threatened and Endangered Species. Conditions 83 (Wildlife Monitoring and Mitigation Plan), and 92 (Speed Limits on facility roads) apply. Additional conditions not necessary to satisfy standard.
345-022-0080	Scenic Resources	Potential impact from change in minimum aboveground blade tip clearance would not result in new visual impacts or ground disturbing impacts in areas not previously evaluated or would occur in areas where existing requirements (revegetation and weed control) would continue to apply. Conditions 93 (Visual impact minimization), 95 (Exterior nighttime lighting), 43 (Final Design map), 45 (inadvertent discovery), and 46 (Oregon Trail Buffers) apply. Additional conditions not necessary to satisfy standard.
345-022-0090	Historic, Cultural, and Archaeological Resources	
	Divisions 23 Standards	Apply to nongenerating facilities and therefore do not apply to this facility or proposed RFA2 facility repowering.

**Table 4: Summary of Council Standards Not Likely Impacted by RFA2**

Rule Citation	Standard	Department’s Evaluation
345-024-0090	Siting Standards for Transmission Lines	Amendment would not result in changes to facility transmission lines; standard would not be impacted by amendment request. Conditions 58 (Maintenance of turbine pads), 86 (Disturbance avoidance areas), 93 (Visual impact minimization), and 95 (Exterior nighttime lighting) apply.
	Removal-Fill Law	Amendment would not result in impacts to new area or result in stream crossings, nor request a removal fill permit. Regulatory requirements would not be impacted by amendment request.
	Water Rights	Amendment would not result in new or changes in water use. Regulatory requirements would not be impacted by amendment request. Condition 78 (operational water usage) applies.

1  
 2 For the above-described reasons, the Department recommends Council find that the standards  
 3 listed in Table 4, *Summary of Council Standards Not Likely Impacted by Amendment 2* are not  
 4 likely to be impacted by RFA2.

5  
 6 Sections III.B.1 through III.B.9 present the language of the identified standards not likely to be  
 7 impacted by RFA2 from OAR 345 Chapter 22, for reference purposes only.

8  
 9  
 10  
 11 III.B.1 Protected Areas: OAR 345-022-0040

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

20  
 21 *(a) National parks, including but not limited to Crater Lake National Park and Fort*  
 22 *Clatsop National Memorial;*

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

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

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

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

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

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

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

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

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

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

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

*(m) Agricultural experimental stations established by the College of Agriculture, Oregon State University, including but not limited to: Coastal Oregon Marine Experiment Station, Astoria Mid-Columbia Agriculture Research and Extension Center, Hood River Agriculture Research and Extension Center, Hermiston Columbia Basin Agriculture Research Center, Pendleton Columbia Basin Agriculture Research Center, Moro North Willamette Research and Extension Center, Aurora East Oregon Agriculture Research Center, Union Malheur Experiment Station, Ontario Eastern Oregon Agriculture Research Center, Burns Eastern Oregon Agriculture Research Center, Squaw Butte Central Oregon Experiment Station, Madras Central Oregon Experiment Station, Powell Butte Central Oregon Experiment Station, Redmond*

1           *Central Station, Corvallis Coastal Oregon Marine Experiment Station, Newport*  
2           *Southern Oregon Experiment Station, Medford Klamath Experiment Station, Klamath*  
3           *Falls;*

4  
5           *(n) Research forests established by the College of Forestry, Oregon State University,*  
6           *including but not limited to McDonald Forest, Paul M. Dunn Forest, the Blodgett*  
7           *Tract in Columbia County, the Spaulding Tract in the Mary's Peak area and the*  
8           *Marchel Tract;*

9  
10           *(o) Bureau of Land Management areas of critical environmental concern,*  
11           *outstanding natural areas and research natural areas;*

12  
13           *(p) State wildlife areas and management areas identified in OAR chapter 635,*  
14           *Division 8.*

15           \*\*\*

16           III.B.2 Retirement and Financial Assurance: OAR 345-022-0050

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

19  
20           *(1) The site, taking into account mitigation, can be restored adequately to a useful, non-*  
21           *hazardous condition following permanent cessation of construction or operation of the*  
22           *facility.*

23  
24           *(2) The applicant has a reasonable likelihood of obtaining a bond or letter of credit in a form*  
25           *and amount satisfactory to the Council to restore the site to a useful, non-hazardous*  
26           *condition.*

27  
28           III.B.3 Threatened and Endangered Species: OAR 345-022-0070

29  
30           *To issue a site certificate, the Council, after consultation with appropriate state agencies,*  
31           *must find that:*

32  
33           *(1) For plant species that the Oregon Department of Agriculture has listed as*  
34           *threatened or endangered under ORS 564.105(2), the design, construction and*  
35           *operation of the proposed facility, taking into account mitigation:*

36  
37           *(a) Are consistent with the protection and conservation program, if any, that the*  
38           *Oregon Department of Agriculture has adopted under ORS 564.105(3); or*

39  
40           *(b) If the Oregon Department of Agriculture has not adopted a protection and*  
41           *conservation program, are not likely to cause a significant reduction in the*  
42           *likelihood of survival or recovery of the species; and*

43

1           (2) For wildlife species that the Oregon Fish and Wildlife Commission has listed as  
2           threatened or endangered under ORS 496.172(2), the design, construction and  
3           operation of the proposed facility, taking into account mitigation, are not likely to  
4           cause a significant reduction in the likelihood of survival or recovery of the species.  
5

6           III.B.4 Scenic Resources: OAR 345-022-0080  
7

8           (1) Except for facilities described in section (2), to issue a site certificate, the Council  
9           must find that the design, construction and operation of the facility, taking into  
10          account mitigation, are not likely to result in significant adverse impact to scenic  
11          resources and values identified as significant or important in local land use plans,  
12          tribal land management plans and federal land management plans for any lands  
13          located within the analysis area described in the project order.  
14

15          III.B.5 Historic, Cultural, and Archaeological Resources: OAR 345-022-0090  
16

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

20  
21               (a) Historic, cultural or archaeological resources that have been listed on, or would  
22               likely be listed on the National Register of Historic Places;

23  
24               (b) For a facility on private land, archaeological objects, as defined in ORS  
25               358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c); and

26  
27               (c) For a facility on public land, archaeological sites, as defined in ORS 358.905(1)(c).  
28

29          (2) The Council may issue a site certificate for a facility that would produce power from  
30          wind, solar or geothermal energy without making the findings described in section (1).  
31          However, the Council may apply the requirements of section (1) to impose conditions on  
32          a site certificate issued for such a facility.  
33

34          \*\*\*

35          III.B.6 Division 23 Standards  
36

37          The Division 23 standards apply only to “nongenerating facilities” as defined in ORS  
38          469.503(2)(e)(K), except nongenerating facilities that are related or supporting facilities. The  
39          facility, with proposed changes, would not be a nongenerating facility as defined in statute and  
40          therefore Division 23 is inapplicable to the facility, with proposed changes..  
41

1        III.B.7 Siting Standards for Transmission Lines: OAR 345-024-0090

2  
3        *To issue a site certificate for a facility that includes any transmission line under Council*  
4        *jurisdiction, the Council must find that the applicant:*

5  
6            *(1) Can design, construct and operate the proposed transmission line so that alternating*  
7            *current electric fields do not exceed 9 kV per meter at one meter above the ground*  
8            *surface in areas accessible to the public;*

9  
10          *(2) Can design, construct and operate the proposed transmission line so that induced*  
11          *currents resulting from the transmission line and related or supporting facilities will*  
12          *be as low as reasonably achievable.*

13  
14        III.B.8 Removal-Fill

15  
16        The Oregon Removal-Fill Law (ORS 196.795 through 196.990) and Department of State Lands  
17        (DSL) regulations (OAR 141-085-0500 through 141-085-0785) require a removal-fill permit if 50  
18        cubic yards or more of material is removed, filled, or altered within any “waters of the state.”<sup>21</sup>  
19        The Council, in consultation with DSL, must determine whether a removal-fill permit is needed  
20        and if so, whether a removal-fill permit should be issued.

21  
22        III.B.9 Water Rights

23  
24        Under ORS Chapters 537 and 540 and OAR Chapter 690, the Oregon Water Resources  
25        Department (OWRD) administers water rights for appropriation and use of the water resources  
26        of the state. Under OAR 345-022-0000(1)(b), the Council must determine whether the facility  
27        would comply with these statutes and administrative rules. OAR 345-021-0010(1)(o)(F) requires  
28        that if a facility needs a groundwater permit, surface water permit, or water right transfer, that  
29        a decision on authorizing such a permit rests with the Council.

30  

---

<sup>21</sup> ORS 196.800(15) defines “Waters of this state.” The term includes wetlands and certain other waterbodies.

1 **IV. DRAFT PROPOSED ORDER**

2  
3 Based on the recommended findings and conclusions included in this order, the Department  
4 recommends that Council make the following findings:

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

19 Accordingly, the Department recommends that the Council find that the Request for  
20 Amendment 2 of the Shepherds Flat North site certificate complies with the General Standard  
21 of Review (OAR 345-022-0000). The Department recommends that the Council find, based on a  
22 preponderance of the evidence on the record, that the site certificate may be amended as  
23 requested.  
24  
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44

1 **Draft Proposed Order**

2

3 The Department recommends that the Council approve Amendment 2 of the Shepherds Flat  
4 North site certificate.

5

**Issued this 22<sup>nd</sup> day of November 2019**

**The OREGON DEPARTMENT OF ENERGY**



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

**Todd Cornett, Assistant Director  
Oregon Department of Energy, Energy Facility Siting Division**

6

7

8 Attachment A: Draft Amended Site Certificate (Red-line Version)

9 Attachment B: Reviewing Agency Comments on preliminary RFA2

10 Attachment C: [Reserved for Draft Proposed Order Comments]

11 Attachment D: Revegetation Plan

12 Attachment E: Wildlife Monitoring and Mitigation Plan

13 Attachment F: Habitat Mitigation Plan

**Attachment A: Draft Amended Site Certificate**

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

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**~~First~~ Second Amended Site Certificate  
for  
Shepherds Flat North**

~~March 12, 2010~~ November 2019

<u>ISSUANCE DATES</u>	
<u>Site Certificate</u>	<u>July 25, 2008</u>
<u>First Amended Site Certificate</u>	<u>March 12, 2010</u>
<u>Second Amended Site Certificate</u>	<u>TBD</u>

## The Oregon Energy Facility Siting Council

### FIRST-SECOND AMENDED SITE CERTIFICATE FOR SHEPHERDS FLAT NORTH

#### I. INTRODUCTION

1 The Oregon Energy Facility Siting Council (Council) issues this amended site certificate  
2 for Shepherds Flat North (the facility) in the manner authorized under ORS Chapter 469. This  
3 amended site certificate is a binding agreement between the State of Oregon (State), acting  
4 through the Council, and North Hurlburt Wind, LLC (certificate holder) authorizing the  
5 certificate holder to construct and operate the facility in Gilliam County, Oregon. [Amendment #1  
6 for the Shepherds Flat Wind Farm (SFWF); Amendment #2]

7 The findings of fact, reasoning and conclusions of law underlying the terms and  
8 conditions of this site certificate are set forth in the following documents, incorporated herein by  
9 this reference: (a) the Council's *Final Order on the Application for the Shepherds Flat Wind*  
10 *Farm* issued on July 25, 2008, (b) the *Final Order on Amendment #1 for the Shepherds Flat*  
11 *Wind Farm*, ~~and~~ (c) the *Final Order on Amendment #1 for Shepherds Flat North*, and (d) the  
12 *Final Order on Amendment #2 for Shepherds Flat North*. In interpreting this amended site  
13 certificate, any ambiguity will be clarified by reference to the following, in order of priority: (1)  
14 this *Second Amended Site Certificate*, (2) the *Final Order on Amendment #2 First Amended Site*  
15 *Certificate*, (23) the *Final Order on Amendment #1*, (34) the *Final Order on Amendment #1 for*  
16 *the Shepherds Flat Wind Farm*, (45) the *Final Order on the Application for the Shepherds Flat*  
17 *Wind Farm* and (56) the record of the proceedings that led to the Final Orders on the Application  
18 and Amendment #1 for the Shepherds Flat Wind Farm and to the *Final Order on Amendment #1*  
19 *and #2*. [Amendment #1 (SFWF); Amendment #1: Amendment #2]

20 [Text added by Amendment #1 (SFWF) was removed by Amendment #1.].

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

#### II. SITE CERTIFICATION

- 23 1. To the extent authorized by state law and subject to the conditions set forth herein, the State  
24 authorizes the certificate holder to construct, operate and retire a wind energy facility,  
25 together with certain related or supporting facilities, at the site in Gilliam County, Oregon, as  
26 described in Section III of this site certificate. ORS 469.401(1). [Amendment #1 (SFWF)]
- 27 2. This site certificate is effective until it is terminated under OAR 345-027-0110 or the rules in  
28 effect on the date that termination is sought or until the site certificate is revoked under ORS  
29 469.440 and OAR 345-029-0100 or the statutes and rules in effect on the date that revocation  
30 is ordered. ORS 469.401(1).
- 31 3. This site certificate does not address, and is not binding with respect to, matters that were not  
32 addressed in the Council's Final Orders on the Application and Amendment #1 for the  
33 Shepherds Flat Wind Farm and in the *Final Order on Amendment #1* ~~and~~ *Final Order on*  
34 *Amendment #2*. Such matters include, but are not limited to: building code compliance, wage,  
35 hour and other labor regulations, local government fees and charges and other design or  
36 operational issues that do not relate to siting the facility (ORS 469.401(4)) and permits issued  
37 under statutes and rules for which the decision on compliance has been delegated by the

1 federal government to a state agency other than the Council. 469.503(3). [Amendment #1  
2 (SFWF); Amendment #1: Amendment #2]

- 3 4. Both the State and the certificate holder shall abide by local ordinances, state law and the  
4 rules of the Council in effect on the date this site certificate is executed. ORS 469.401(2). In  
5 addition, upon a clear showing of a significant threat to public health, safety or the  
6 environment that requires application of later-adopted laws or rules, the Council may require  
7 compliance with such later-adopted laws or rules. ORS 469.401(2).
- 8 5. For a permit, license or other approval addressed in and governed by this site certificate, the  
9 certificate holder shall comply with applicable state and federal laws adopted in the future to  
10 the extent that such compliance is required under the respective state agency statutes and  
11 rules. ORS 469.401(2).
- 12 6. Subject to the conditions herein, this site certificate binds the State and all counties, cities and  
13 political subdivisions in Oregon as to the approval of the site and the construction, operation  
14 and retirement of the facility as to matters that are addressed in and governed by this site  
15 certificate. ORS 469.401(3).
- 16 7. Each affected state agency, county, city and political subdivision in Oregon with authority to  
17 issue a permit, license or other approval addressed in or governed by this site certificate shall,  
18 upon submission of the proper application and payment of the proper fees, but without  
19 hearings or other proceedings, issue such permit, license or other approval subject only to  
20 conditions set forth in this site certificate. ORS 469.401(3).
- 21 8. After issuance of this site certificate, each state agency or local government agency that  
22 issues a permit, license or other approval for the facility shall continue to exercise  
23 enforcement authority over such permit, license or other approval. ORS 469.401(3).
- 24 9. After issuance of this site certificate, the Council shall have continuing authority over the site  
25 and may inspect, or direct the Oregon Department of Energy (Department) to inspect, or  
26 request another state agency or local government to inspect, the site at any time in order to  
27 ensure that the facility is being operated consistently with the terms and conditions of this  
28 site certificate. ORS 469.430.

### III. DESCRIPTION

#### 1. The Facility

##### (a) The Energy Facility

29 The energy facility is an electric power generating facility with an average electric  
30 generating capacity of up to 106 megawatts and a peak generating capacity of not more than 318  
31 megawatts that produces power from wind energy. The facility consists of not more than 106  
32 wind turbines. The energy facility is described further in the *Final Order on Amendment #1 for*  
33 *the Shepherds Flat Wind Farm* and in the *Final Order on Amendment #1*. [Amendment #1 (SFWF);  
34 Amendment #1]

##### Wind Turbine Repower

36 Wind turbine repowering includes removal and replacement of wind turbine blades and  
37 associated wind turbine components on up to 106 existing turbine towers. Wind turbine  
38 repowering requires trucks, small cranes or telehandlers, and a track mounted crane. Trucks

1 deliver new wind turbine components to wind turbine pad sites, and transport the old  
2 components offsite for proper disposal or recycling at a licensed facility. Once the new wind  
3 turbines components are delivered via truck to each pad site, smaller cranes or telehandlers  
4 unload and stage the components. A track mounted crane then mobilizes to the turbine pad area,  
5 setting up on the access road adjacent the turbine, and lowers the old rotor down to the pad site  
6 for disassembly, followed by the old gearbox. Once disassembled, the old components are staged  
7 for truck removal. The track mounted crane then lifts the new gearbox and rotor into place.  
8 Once, complete, the track mounted crane advances to the next wind turbine, and the process is  
9 repeated.

10  
11 The facility repower activity results in approximately 109 acres of temporary disturbance from  
12 temporary access roads, road improvements and laydown areas.

13  
14 [Amendment #2]

### **(b) Related or Supporting Facilities**

15 The facility includes the following related or supporting facilities described below and in  
16 greater detail in the *Final Order on Amendment #1 for the Shepherds Flat Wind Farm* and in the  
17 *Final Order on Amendment #1*:

- 18 • Power Collection System
- 19 • Collector Substation
- 20 • Meteorological towers
- 21 • Field workshop
- 22 • Control system
- 23 • Access roads
- 24 • Additional construction areas

25 [Amendment #1 (SFWF); Amendment #1]

#### **Power Collection System**

27 A power collection system operating at 34.5 kilovolts (kV) transports power from each  
28 turbine to a collector substation. The collection system is installed underground at a depth of at  
29 least three feet. [Amendment #1]

#### **Collector Substations and Interconnection**

31 The facility includes a collector substation. The facility includes a 230-kV transmission  
32 line between the substation and the interconnection site. The interconnection site is located at the  
33 Bonneville Power Administration Slatt Switching Station. [Amendment #1 (SFWF)]

#### **Meteorological Towers**

35 The facility includes two permanent meteorological (met) towers. [Amendment #1 (SFWF)]

#### **Field Workshop**

37 The facility includes a field workshop. Including fenced areas, the field workshop  
38 occupies about 1.6 acres. [Amendment #1 (SFWF)]

1           **Control System**

2           A fiber optic communications network links the control panels within each wind turbine  
3 to a host computer located in the field workshop. Supervisory, Control and Data Acquisition  
4 (SCADA) systems at the field workshop collect operating and performance data from the  
5 turbines and the facility’s met towers. [Amendment #1 (SFWF)]

6           **Access Roads**

7           The facility includes up to 31 miles of new roads that provide access to the turbine  
8 strings. The access roads connect to graveled turbine turnouts at the base of each turbine.  
9 [Amendment #1 (SFWF)]

10          **Temporary Construction Areas**

11          During construction, the facility includes temporary laydown areas used to stage  
12 construction and store supplies and equipment. The facility includes construction crane paths to  
13 move construction cranes between turbine strings.

**2. Location of the Facility**

14          The facility is located in Gilliam County south of Interstate Highway 84 and east of  
15 Arlington, Oregon, between State Highways 19 and 74. The facility is located entirely on private  
16 land subject to long-term wind energy leases. [Amendment #1 (SFWF)]

**IV. CONDITIONS REQUIRED BY COUNCIL RULES**

17          This section lists conditions required by OAR 345-027-0020 (Mandatory Conditions in  
18 Site Certificates), OAR 345-027-0023 (Site Specific Conditions), OAR 345-027-0028  
19 (Monitoring Conditions) and OAR Chapter 345, Division 26 (Construction and Operation Rules  
20 for Facilities). These conditions should be read together with the specific facility conditions  
21 listed in Section V to ensure compliance with the siting standards of OAR Chapter 345,  
22 Divisions 22 and 24, and to protect the public health and safety. In these conditions, the  
23 definitions in OAR 345-001-0010 apply.

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

34          In addition to these conditions, the site certificate holder is subject to all conditions and  
35 requirements contained in the rules of the Council and in local ordinances and state law in effect  
36 on the date the certificate is executed. Under ORS 469.401(2), upon a clear showing of a  
37 significant threat to the public health, safety or the environment that requires application of later-  
38 adopted laws or rules, the Council may require compliance with such later-adopted laws or rules.

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

5 1 ~~OAR 345-027-0020(1)~~: The Council shall not change the conditions of the site certificate  
6 except as provided for in OAR Chapter 345, Division 27.

7 2 ~~OAR 345-027-0020(2)~~: The certificate holder shall submit a legal description of the site to  
8 the Department of Energy within 90 days after beginning operation of the facility. The legal  
9 description required by this rule means a description of metes and bounds or a description  
10 of the site by reference to a map and geographic data that clearly and specifically identifies  
11 the outer boundaries that contain all parts of the facility.

12 3 ~~OAR 345-027-0020(3)~~: The certificate holder shall design, construct, operate and retire the  
13 facility:

14 (a) Substantially as described in the site certificate;

15 (b) In compliance with the requirements of ORS Chapter 469, applicable Council rules,  
16 and applicable state and local laws, rules and ordinances in effect at the time the site  
17 certificate is issued; and

18 (c) In compliance with all applicable permit requirements of other state agencies.

19 4 ~~OAR 345-027-0020(4)~~: The certificate holder shall begin and complete construction of the  
20 facility by the dates specified in the site certificate. (*See Conditions 24 and 25.*)

21 5 ~~OAR 345-027-0020(5)~~: Except as necessary for the initial survey or as otherwise allowed  
22 for wind energy facilities, transmission lines or pipelines under this section, the certificate  
23 holder shall not begin construction, as defined in OAR 345-001-0010, or create a clearing  
24 on any part of the site until the certificate holder has construction rights on all parts of the  
25 site. For the purpose of this rule, “construction rights” means the legal right to engage in  
26 construction activities. For wind energy facilities, transmission lines or pipelines, if the  
27 certificate holder does not have construction rights on all parts of the site, the certificate  
28 holder may nevertheless begin construction, as defined in OAR 345-001-0010, or create a  
29 clearing on a part of the site if the certificate holder has construction rights on that part of  
30 the site and:

31 (a) The certificate holder would construct and operate part of the facility on that part of  
32 the site even if a change in the planned route of the transmission line or pipeline occurs  
33 during the certificate holder’s negotiations to acquire construction rights on another part of  
34 the site; or

35 (b) The certificate holder would construct and operate part of a wind energy facility on  
36 that part of the site even if other parts of the facility were modified by amendment of the  
37 site certificate or were not built.

38 6 ~~OAR 345-027-0020(6)~~: If the Council requires mitigation based on an affirmative finding  
39 under any standards of Division 22 or Division 24 of this chapter, the certificate holder  
40 shall consult with affected state agencies and local governments designated by the Council  
41 and shall develop specific mitigation plans consistent with Council findings under the  
42 relevant standards. The certificate holder must submit the mitigation plans to the Office and  
43 receive Office approval before beginning construction or, as appropriate, operation of the  
44 facility.

- 1 7 ~~OAR 345-027-0020(7)~~-The certificate holder shall prevent the development of any  
2 conditions on the site that would preclude restoration of the site to a useful, non-hazardous  
3 condition to the extent that prevention of such site conditions is within the control of the  
4 certificate holder.
- 5 8 ~~OAR 345-027-0020(8)~~-Before beginning construction of the facility, the certificate holder  
6 shall submit to the State of Oregon, through the Council, a bond or letter of credit, in a form  
7 and amount satisfactory to the Council to restore the site to a useful, non-hazardous  
8 condition. The certificate holder shall maintain a bond or letter of credit in effect at all  
9 times until the facility has been retired. The Council may specify different amounts for the  
10 bond or letter of credit during construction and during operation of the facility. (*See*  
11 *Condition 30.*)
- 12 9 ~~OAR 345-027-0020(9)~~-The certificate holder shall retire the facility if the certificate holder  
13 permanently ceases construction or operation of the facility. The certificate holder shall  
14 retire the facility according to a final retirement plan approved by the Council, as described  
15 in OAR 345-027-0110. The certificate holder shall pay the actual cost to restore the site to a  
16 useful, non-hazardous condition at the time of retirement, notwithstanding the Council's  
17 approval in the site certificate of an estimated amount required to restore the site.
- 18 10 ~~OAR 345-027-0020(10)~~-The Council shall include as conditions in the site certificate all  
19 representations in the site certificate application and supporting record the Council deems to  
20 be binding commitments made by the applicant.
- 21 11 ~~OAR 345-027-0020(11)~~-Upon completion of construction, the certificate holder shall  
22 restore vegetation to the extent practicable and shall landscape all areas disturbed by  
23 construction in a manner compatible with the surroundings and proposed use. Upon  
24 completion of construction, the certificate holder shall remove all temporary structures not  
25 required for facility operation and dispose of all timber, brush, refuse and flammable or  
26 combustible material resulting from clearing of land and construction of the facility.
- 27 12 ~~OAR 345-027-0020(12)~~-The certificate holder shall design, engineer and construct the  
28 facility to avoid dangers to human safety presented by seismic hazards affecting the site that  
29 are expected to result from all maximum probable seismic events. As used in this rule  
30 "seismic hazard" includes ground shaking, landslide, liquefaction, lateral spreading,  
31 tsunami inundation, fault displacement and subsidence.
- 32 13 ~~OAR 345-027-0020(13)~~-The certificate holder shall notify the Department, the State  
33 Building Codes Division and the Department of Geology and Mineral Industries promptly  
34 if site investigations or trenching reveal that conditions in the foundation rocks differ  
35 significantly from those described in the application for a site certificate. After the  
36 Department receives the notice, the Council may require the certificate holder to consult  
37 with the Department of Geology and Mineral Industries and the Building Codes Division  
38 and to propose mitigation actions.
- 39 14 ~~OAR 345-027-0020(14)~~-The certificate holder shall notify the Department, the State  
40 Building Codes Division and the Department of Geology and Mineral Industries promptly  
41 if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity  
42 of the site.

1 ~~15 OAR 345-027-0020(15):~~ Before any transfer of ownership of the facility or ownership of  
2 the site certificate holder, the certificate holder shall inform the Department of the proposed  
3 new owners. The requirements of OAR 345-027-0100 apply to any transfer of ownership  
4 that requires a transfer of the site certificate.

5 ~~16 OAR 345-027-0020(16):~~ If the Council finds that the certificate holder has permanently  
6 ceased construction or operation of the facility without retiring the facility according to a  
7 final retirement plan approved by the Council, as described in OAR 345-027-0110, the  
8 Council shall notify the certificate holder and request that the certificate holder submit a  
9 proposed final retirement plan to the Office within a reasonable time not to exceed 90 days.  
10 If the certificate holder does not submit a proposed final retirement plan by the specified  
11 date, the Council may direct the Department to prepare a proposed final retirement plan for  
12 the Council's approval. Upon the Council's approval of the final retirement plan, the  
13 Council may draw on the bond or letter of credit described in OAR 345-027-0020(8) to  
14 restore the site to a useful, non-hazardous condition according to the final retirement plan,  
15 in addition to any penalties the Council may impose under OAR Chapter 345, Division 29.  
16 If the amount of the bond or letter of credit is insufficient to pay the actual cost of  
17 retirement, the certificate holder shall pay any additional cost necessary to restore the site to  
18 a useful, non-hazardous condition. After completion of site restoration, the Council shall  
19 issue an order to terminate the site certificate if the Council finds that the facility has been  
20 retired according to the approved final retirement plan.

21 ~~17 OAR 345-027-0023(4):~~ If the facility includes any transmission line under Council  
22 jurisdiction:

23 (a) The certificate holder shall design, construct and operate the transmission line in  
24 accordance with the requirements of the National Electrical Safety Code (American  
25 National Standards Institute, Section C2, 1997 Edition); and

26 (b) The certificate holder shall develop and implement a program that provides  
27 reasonable assurance that all fences, gates, cattle guards, trailers, or other objects or  
28 structures of a permanent nature that could become inadvertently charged with electricity  
29 are grounded or bonded throughout the life of the line.

30 ~~18 OAR 345-027-0023(5):~~ If the proposed energy facility is a pipeline or a transmission line or  
31 has, as a related or supporting facility, a pipeline or transmission line, the Council shall  
32 specify an approved corridor in the site certificate and shall allow the certificate holder to  
33 construct the pipeline or transmission line anywhere within the corridor, subject to the  
34 conditions of the site certificate. If the applicant has analyzed more than one corridor in its  
35 application for a site certificate, the Council may, subject to the Council's standards,  
36 approve more than one corridor.

37 ~~19 OAR 345-027-0028:~~ The following general monitoring conditions apply:

38 (a) The certificate holder shall consult with affected state agencies, local governments  
39 and tribes and shall develop specific monitoring programs for impacts to resources  
40 protected by the standards of divisions 22 and 24 of OAR Chapter 345 and resources  
41 addressed by applicable statutes, administrative rules and local ordinances. The certificate  
42 holder must submit the monitoring programs to the Department of Energy and receive  
43 Department approval before beginning construction or, as appropriate, operation of the  
44 facility.

1 (b) The certificate holder shall implement the approved monitoring programs described in  
2 OAR 345-027-0028(1) and monitoring programs required by permitting agencies and local  
3 governments.

4 (c) For each monitoring program described in OAR 345-027-0028(1) and (2), the  
5 certificate holder shall have quality assurance measures approved by the Department before  
6 beginning construction or, as appropriate, before beginning commercial operation.

7 (d) If the certificate holder becomes aware of a significant environmental change or  
8 impact attributable to the facility, the certificate holder shall, as soon as possible, submit a  
9 written report to the Department describing the impact on the facility and any affected site  
10 certificate conditions.

11 20 ~~OAR 345-026-0048~~: Following receipt of the site certificate or an amended site certificate,  
12 the certificate holder shall implement a plan that verifies compliance with all site certificate  
13 terms and conditions and applicable statutes and rules. As a part of the compliance plan, to  
14 verify compliance with the requirement to begin construction by the date specified in the  
15 site certificate, the certificate holder shall report promptly to the Department of Energy  
16 when construction begins. Construction is defined in OAR 345-001-0010. In reporting the  
17 beginning of construction, the certificate holder shall describe all work on the site  
18 performed before beginning construction, including work performed before the Council  
19 issued the site certificate, and shall state the cost of that work. For the purpose of this  
20 exhibit, “work on the site” means any work within a site or corridor, other than surveying,  
21 exploration or other activities to define or characterize the site or corridor. The certificate  
22 holder shall document the compliance plan and maintain it for inspection by the  
23 Department or the Council.

24 21 ~~OAR 345-026-0080~~: The certificate holder shall report according to the following  
25 requirements:

26 (a) General reporting obligation for energy facilities under construction or operating:

27 (i) Within six months after beginning construction, and every six months thereafter  
28 during construction of the energy facility and related or supporting facilities, the certificate  
29 holder shall submit a semiannual construction progress report to the Department of Energy.  
30 In each construction progress report, the certificate holder shall describe any significant  
31 changes to major milestones for construction. The certificate holder shall include such  
32 information related to construction as specified in the site certificate. When the reporting  
33 date coincides, the certificate holder may include the construction progress report within the  
34 annual report described in OAR 345-026-0080.

35 (ii) By April 30 of each year after beginning construction, the certificate holder shall  
36 submit an annual report to the Department addressing the subjects listed in OAR 345-026-  
37 0080. The Council Secretary and the certificate holder may, by mutual agreement, change  
38 the reporting date.

39 (iii) To the extent that information required by OAR 345-026-0080 is contained in  
40 reports the certificate holder submits to other state, federal or local agencies, the certificate  
41 holder may submit excerpts from such other reports to satisfy this rule. The Council  
42 reserves the right to request full copies of such excerpted reports.

43 (b) In the annual report, the certificate holder shall include the following information for  
44 the calendar year preceding the date of the report:

45 (i) Facility Status: An overview of site conditions, the status of facilities under  
46 construction, and a summary of the operating experience of facilities that are in operation.

1 In this section of the annual report, the certificate holder shall describe any unusual events,  
2 such as earthquakes, extraordinary windstorms, major accidents or the like that occurred  
3 during the year and that had a significant adverse impact on the facility.

4 (ii) Reliability and Efficiency of Power Production: For electric power plants, the  
5 plant availability and capacity factors for the reporting year. The certificate holder shall  
6 describe any equipment failures or plant breakdowns that had a significant impact on those  
7 factors and shall describe any actions taken to prevent the recurrence of such problems.

8 (iii) Fuel Use: For thermal power plants:

9 (A) The efficiency with which the power plant converts fuel into electric energy.  
10 If the fuel chargeable to power heat rate was evaluated when the facility was sited, the  
11 certificate holder shall calculate efficiency using the same formula and assumptions, but  
12 using actual data; and

13 (B) The facility's annual hours of operation by fuel type and, every five years  
14 after beginning operation, a summary of the annual hours of operation by fuel type as  
15 described in OAR 345-024-0590(5).

16 (iv) Status of Surety Information: Documentation demonstrating that bonds or letters  
17 of credit as described in the site certificate are in full force and effect and will remain in full  
18 force and effect for the term of the next reporting period.

19 (v) Monitoring Report: A list and description of all significant monitoring and  
20 mitigation activities performed during the previous year in accordance with site certificate  
21 terms and conditions, a summary of the results of those activities and a discussion of any  
22 significant changes to any monitoring or mitigation program, including the reason for any  
23 such changes.

24 (vi) Compliance Report: A description of all instances of noncompliance with a site  
25 certificate condition. For ease of review, the certificate holder shall, in this section of the  
26 report, use numbered subparagraphs corresponding to the applicable sections of the site  
27 certificate.

28 (vii) Facility Modification Report: A summary of changes to the facility that the  
29 certificate holder has determined do not require a site certificate amendment in accordance  
30 with OAR 345-027-0050.

31 (viii) Nongenerating Facility Carbon Dioxide Emissions: For nongenerating facilities  
32 that emit carbon dioxide, a report of the annual fuel use by fuel type and annual hours of  
33 operation of the carbon dioxide emitting equipment as described in OAR 345-024-0630(4).

34 22 ~~OAR 345-026-0105~~: The certificate holder and the Department of Energy shall exchange  
35 copies of all correspondence or summaries of correspondence related to compliance with  
36 statutes, rules and local ordinances on which the Council determined compliance, except for  
37 material withheld from public disclosure under state or federal law or under Council rules.  
38 The certificate holder may submit abstracts of reports in place of full reports; however, the  
39 certificate holder shall provide full copies of abstracted reports and any summarized  
40 correspondence at the request of the Department.

41 23 ~~OAR 345-026-0170~~: The certificate holder shall notify the Department of Energy within 72  
42 hours of any occurrence involving the facility if:

43 (a) There is an attempt by anyone to interfere with its safe operation;

44 (b) A natural event such as an earthquake, flood, tsunami or tornado, or a human-caused  
45 event such as a fire or explosion affects or threatens to affect the public health and safety or  
46 the environment; or

1 (c) There is any fatal injury at the facility.

## 2 V. SPECIFIC FACILITY CONDITIONS

3 The conditions listed in this section include conditions based on representations in the  
4 site certificate application and supporting record. These conditions are required under OAR 345-  
5 027-0020(10). The certificate holder must comply with these conditions in addition to the  
6 conditions listed in Section VI. This section includes other specific facility conditions the  
7 Council finds necessary to ensure compliance with the siting standards of OAR Chapter 345,  
8 Divisions 22 and 24, and to protect the public health and safety. For conditions that require  
9 subsequent review and approval of a future action, ORS 469.402 authorizes the Council to  
10 delegate the future review and approval to the Department if, in the Council's discretion, the  
delegation is warranted under the circumstances of the case.

### 1. Certificate Administration Conditions

11 24 The certificate holder shall begin construction of the facility by July 25, 2011. The Council  
12 may grant an extension of the deadline to begin construction in accordance with OAR 345-  
13 027-0030 or any successor rule in effect at the time the request for extension is submitted.  
14 [Amendment #1 (SFWF)]

15 25 The certificate holder shall complete construction of the facility by July 25, 2014.  
16 Construction is complete when: 1) the facility is substantially complete as defined by the  
17 certificate holder's construction contract documents, 2) acceptance testing has been  
18 satisfactorily completed and 3) the energy facility is ready to begin continuous operation  
19 consistent with the site certificate. The certificate holder shall promptly notify the  
20 Department of the date of completion of construction. The Council may grant an extension  
21 of the deadline for completing construction in accordance with OAR 345-027-0030 or any  
22 successor rule in effect at the time the request for extension is submitted. [Amendment #1  
23 (SFWF)]

24 26 The certificate holder shall construct a facility substantially as described in the site  
25 certificate and may select turbines of any type, subject to the following restrictions and  
26 compliance with all other site certificate conditions. Before beginning construction, the  
27 certificate holder shall provide to the Department a description of the turbine types selected  
28 for the facility demonstrating compliance with this condition.

29 (a) The total number of turbines at the facility must not exceed 106 turbines.

30 ~~(b) The combined peak generating capacity of the facility must not exceed 318~~  
31 ~~megawatts.~~

32 ~~(e)(b)~~ The turbine hub height must not exceed 105 meters and the maximum blade tip  
33 height must not exceed 150 meters.

34 ~~(d)(c)~~ The minimum blade tip clearance must be 25 meters above ground. Repowered  
35 turbines that comply with the setback requirements of Condition 40, must have a minimum  
36 blade tip clearance of 21.5 meters above ground.

37 ~~(e)(d)~~ The maximum volume of concrete above three feet below grade in the turbine  
38 foundations must not exceed 66 cubic yards.

39 ~~(f)(e)~~ The maximum combined weight of metals in the tower (including ladders and  
40 platforms) and nacelle must not exceed 393 U.S. tons per turbine.

1           ~~(e)(f)~~ The certificate holder shall request an amendment of the site certificate ~~to increase~~  
2 ~~the combined peak generating capacity of the facility beyond 318 megawatts,~~ to increase  
3 the number of wind turbines to more than 106 wind turbines or to install wind turbines with  
4 a hub height greater than 105 meters, a blade tip height greater than 150 meters or a blade  
5 tip clearance less than 25 meters above ground.

6           [Amendment #1 (SFWF); ~~Amendment #2~~]

7   27   The certificate holder shall obtain all necessary federal, state and local permits or approvals  
8 required for construction, operation and retirement of the facility or ensure that its  
9 contractors obtain the necessary federal, state and local permits or approvals.

10 28   Before beginning construction, the certificate holder shall notify the Department in advance  
11 of any work on the site that does not meet the definition of “construction” in ORS 469.300,  
12 excluding surveying, exploration or other activities to define or characterize the site, and  
13 shall provide to the Department a description of the work and evidence that its value is less  
14 than \$250,000.

15 29   Before beginning construction and after considering all micrositing factors, the certificate  
16 holder shall provide to the Department, to the Oregon Department of Fish and Wildlife  
17 (ODFW) and to the Planning Director of Gilliam County detailed maps of the facility site,  
18 showing the final locations where the certificate holder proposes to build facility  
19 components, and a table showing the acres of temporary and permanent habitat impact by  
20 habitat category and subtype, similar to Table 7 in the Final Order on Amendment #1 for  
21 the Shepherds Flat Wind Farm. The detailed maps of the facility site shall indicate the  
22 habitat categories of all areas that would be affected during construction (similar to the  
23 maps labeled “ODFW-2” in the site certificate application for the Shepherds Flat Wind  
24 Farm). In classifying the affected habitat into habitat categories, the certificate holder shall  
25 consult with the ODFW. The certificate holder shall not begin ground disturbance in an  
26 affected area until the habitat assessment has been approved by the Department. The  
27 Department may employ a qualified contractor to confirm the habitat assessment by on-site  
28 inspection. [Amendment #1 (SFWF)]

29 30   Before beginning construction, the certificate holder shall submit to the State of Oregon  
30 through the Council a bond or letter of credit in the amount described herein naming the  
31 State of Oregon, acting by and through the Council, as beneficiary or payee. The initial  
32 bond or letter of credit amount is either \$7.443 million (1<sup>st</sup> Quarter 2010 dollars), to be  
33 adjusted to the date of issuance as described in (b), or the amount determined as described  
34 in (a). The certificate holder shall adjust the amount of the bond or letter of credit on an  
35 annual basis thereafter as described in (b).

36           (a) The certificate holder may adjust the amount of the bond or letter of credit based on  
37 the final design configuration of the facility and turbine types selected by applying the unit  
38 costs and general costs illustrated in Table 1 in the Final Order on Amendment #1 for the  
39 Shepherds Flat Wind Farm and calculating the financial assurance amount as described in  
40 that order, adjusted to the date of issuance as described in (b) and subject to approval by the  
41 Department.

42           (b) The certificate holder shall adjust the amount of the bond or letter of credit, using the  
43 following calculation and subject to approval by the Department:

1 (i) Adjust the Subtotal component of the bond or letter of credit amount (expressed in  
2 3<sup>rd</sup> Quarter 2009 dollars) to present value, using the U.S. Gross Domestic Product Implicit  
3 Price Deflator, Chain-Weight, as published in the Oregon Department of Administrative  
4 Services’ “Oregon Economic and Revenue Forecast” or by any successor agency (the  
5 “Index”) and using the index value for 3<sup>rd</sup> Quarter 2009 dollars and the quarterly index  
6 value for the date of issuance of the new bond or letter of credit. If at any time the Index is  
7 no longer published, the Council shall select a comparable calculation to adjust 3<sup>rd</sup> Quarter  
8 2009 dollars to present value.

9 (ii) Add 1 percent of the adjusted Subtotal (i) for the adjusted performance bond  
10 amount to determine the adjusted Gross Cost.

11 (iii) Add 10 percent of the adjusted Gross Cost (ii) for the adjusted administration and  
12 project management costs and 10 percent of the adjusted Gross Cost (ii) for the adjusted  
13 future developments contingency.

14 (iv) Add the adjusted Gross Cost (ii) to the sum of the percentages (iii) and round the  
15 resulting total to the nearest \$1,000 to determine the adjusted financial assurance amount.

16 (c) The certificate holder shall use a form of bond or letter of credit approved by the  
17 Council.

18 (d) The certificate holder shall use an issuer of the bond or letter of credit approved by  
19 the Council.

20 (e) The certificate holder shall describe the status of the bond or letter of credit in the  
21 annual report submitted to the Council under Condition 21.

22 (f) The bond or letter of credit shall not be subject to revocation or reduction before  
23 retirement of the facility site.

24 [Amendment #1 (SFWF); Amendment #1]

25 31 If the certificate holder elects to use a bond to meet the requirements of Condition 30, the  
26 certificate holder shall ensure that the surety is obligated to comply with the requirements  
27 of applicable statutes, Council rules and this site certificate when the surety exercises any  
28 legal or contractual right it may have to assume construction, operation or retirement of the  
29 energy facility. The certificate holder shall also ensure that the surety is obligated to notify  
30 the Council that it is exercising such rights and to obtain any Council approvals required by  
31 applicable statutes, Council rules and this site certificate before the surety commences any  
32 activity to complete construction, operate or retire the energy facility.

33 32 Before beginning construction, the certificate holder shall notify the Department of the  
34 identity and qualifications of the major design, engineering and construction contractor(s)  
35 for the facility. The certificate holder shall select contractors that have substantial  
36 experience in the design, engineering and construction of similar facilities. The certificate  
37 holder shall report to the Department any change of major contractors.

38 33 The certificate holder shall contractually require all construction contractors and  
39 subcontractors involved in the construction of the facility to comply with all applicable  
40 laws and regulations and with the terms and conditions of the site certificate. Such  
41 contractual provisions shall not operate to relieve the certificate holder of responsibility  
42 under the site certificate.

43 34 During construction, the certificate holder shall have a full-time, on-site assistant  
44 construction manager who is qualified in environmental compliance to ensure compliance

1 with all site certificate conditions. The certificate holder shall notify the Department of the  
2 name, telephone number and e-mail address of this person.

3 35 Within 72 hours after discovery of conditions or circumstances that may violate the terms  
4 or conditions of the site certificate, the certificate holder shall report the conditions or  
5 circumstances to the Department.

## 2. Land Use Conditions

6 36 The certificate holder shall consult with area landowners and lessees during construction  
7 and operation of the facility and shall implement measures to reduce or avoid any adverse  
8 impacts to farm practices on surrounding lands and to avoid any increase in farming costs.

9 37 The certificate holder shall design and construct the facility using the minimum land area  
10 necessary for safe construction and operation. The certificate holder shall locate access  
11 roads and temporary construction laydown and staging areas to minimize disturbance with  
12 farming practices and, wherever feasible, shall place turbines and transmission  
13 interconnection lines along the margins of cultivated areas to reduce the potential for  
14 conflict with farm operations.

15 38 During construction and operation of the facility, the certificate holder shall implement a  
16 plan to control the introduction and spread of noxious weeds. The certificate shall develop  
17 the weed control plan consistent with the Gilliam County Weed Control Program.  
18 [Amendment #1 (SFWF)]

19 39 Before beginning construction of the facility, the certificate holder shall record in the real  
20 property records of Gilliam County a Covenant Not to Sue with regard to generally  
21 accepted farming practices on adjacent farmland consistent with Gilliam County Zoning  
22 Ordinance 7.020(T)(4)(a)(5).

23 40 The certificate holder shall construct all facility components in compliance with the  
24 following setback requirements:

25 (a) All facility components must be at least 3,520 feet from the property line of properties  
26 zoned residential use or designated in the Gilliam County Comprehensive Plan as  
27 residential.

28 (b) Where (a) does not apply, the certificate holder shall maintain a minimum distance of  
29 110-percent of maximum blade tip height, measured from the centerline of the turbine  
30 tower to the nearest edge of any public road right-of-way. The certificate holder shall  
31 assume a minimum right-of-way width of 60 feet.

32 (c) Where (a) does not apply, the certificate holder shall maintain a minimum distance of  
33 1,320 feet, measured from the centerline of the turbine tower to the center of the nearest  
34 residence existing at the time of tower construction.

35 (d) Where (a) does not apply, the certificate holder shall maintain a minimum distance of  
36 110-percent of maximum blade tip height, measured from the centerline of the turbine  
37 tower to the nearest boundary of the certificate holder's lease area, except as provided in  
38 (e).

39 (e) The turbine tower setback distance described in (d) does not apply to one isolated area  
40 excluded from the certificate holder's lease with the landowner identified as "Area A" in  
41 the *Final Order on Amendment #1*.

42 [Amendment #1]

1 41 Within 90 days after beginning operation, the certificate holder shall provide to the  
2 Department and to the Planning Director of Gilliam County the actual latitude and  
3 longitude location or Stateplane NAD 83(91) coordinates of each turbine tower, connecting  
4 lines and transmission lines. In addition, the certificate holder shall provide to the  
5 Department and to the Planning Director of Gilliam County, a summary of as-built changes  
6 in the facility compared to the original plan, if any. [Amendment #1 (SFWF)]

7 42 The certificate holder shall install gates on all private facility access roads in Gilliam  
8 County, in accordance with Gilliam County Zoning Ordinance Section 7.020(T)(4)(d)(6).

### 3. Cultural Resource Conditions

9 43 Before beginning construction, the certificate holder shall provide to the Department a map  
10 showing the final design locations of all components of the facility and areas that would be  
11 temporarily disturbed during construction. In addition, the certificate holder shall comply  
12 with the following requirements:

13 (a) The certificate holder shall avoid disturbance within a 30-meter buffer around the  
14 historic-period archaeological sites within the facility boundary identified by AINW as  
15 “possibly eligible” for listing in the National Register of Historic Places (NRHP) as  
16 described in the Final Order on the Application for the Shepherds Flat Wind Farm.

17 (b) The certificate holder shall avoid disturbance of the stacked rock features within the  
18 facility boundary identified by AINW as “possibly eligible” for listing in the NRHP as  
19 described in the Final Order on the Application for the Shepherds Flat Wind Farm and  
20 shall, to the extent practicable, maintain a 30-meter no-construction buffer around these  
21 features. If a 30-meter buffer cannot be maintained, the certificate holder shall consult with  
22 the State Historic Preservation Office (SHPO) and the Department to determine appropriate  
23 action to preserve or document the feature.

24 (c) The certificate holder shall label “no entry” areas around all identified historic,  
25 cultural or archaeological resource sites on construction maps and drawings, and if  
26 construction activities will occur within 200 feet of an identified site, the certificate holder  
27 shall flag a 30-meter buffer around the site.

28 (d) The certificate holder shall hire qualified personnel to conduct pre-construction field  
29 investigation for historic, cultural or archaeological resources in any areas of potential  
30 construction disturbance that AINW did not previously survey.

31 (e) The certificate holder shall provide written reports of the field investigation required  
32 under (d) to the Department and to the SHPO. If any historic, cultural or archaeological  
33 resources are found that the SHPO determines to be significant, the certificate holder shall  
34 consult with the Department and the SHPO to develop plan to avoid disturbance of the  
35 resources during construction and operation of the facility. The certificate holder shall  
36 instruct all construction personnel to avoid areas where the resources were found and shall  
37 implement other appropriate measures to protect the resources.

38 [Amendment #1 (SFWF)]

39 44 The certificate holder shall ensure that a qualified archeologist, as defined in OAR 736-051-  
40 0070, instructs construction personnel in the identification of cultural materials and  
41 avoidance of accidental damage to identified resource sites.

42 45 The certificate holder shall ensure that construction personnel cease all ground-disturbing  
43 activities in the immediate area if any archaeological or cultural resources are found during

1 construction of the facility until a qualified archeologist can evaluate the significance of the  
2 find. The certificate holder shall notify the Department and the State Historic Preservation  
3 Office (SHPO) of the find. If the SHPO determines that the resource is significant, the  
4 certificate holder shall make recommendations to the Council for mitigation, including  
5 avoidance, field documentation and data recovery, in consultation with the Department,  
6 SHPO, interested tribes and other appropriate parties. The certificate holder shall not restart  
7 work in the affected area until the certificate holder has demonstrated to the Department  
8 and the SHPO that it has complied with archaeological resource protection regulations.

9 46 [Condition removed by Amendment #1 (SFWF)]

#### 4. Geotechnical Conditions

10 47 Before beginning construction, the certificate holder shall conduct a site-specific  
11 geotechnical investigation and shall report its findings to the Oregon Department of  
12 Geology & Mineral Industries (DOGAMI) and the Department. The certificate holder shall  
13 conduct the geotechnical investigation after consultation with DOGAMI and in general  
14 accordance with DOGAMI open file report 00-04 “Guidelines for Engineering Geologic  
15 Reports and Site-Specific Seismic Hazard Reports.”

16 48 The certificate holder shall design and construct the facility in accordance with  
17 requirements set forth by the State of Oregon’s Building Code Division and any other  
18 applicable codes and design procedures. The certificate holder shall design facility  
19 structures to meet or exceed the minimum standards required by the 2003 International  
20 Building Code.

21 49 The certificate holder shall design, engineer and construct the facility to avoid dangers to  
22 human safety presented by non-seismic hazards. As used in this condition, “non-seismic  
23 hazards” include settlement, landslides, flooding and erosion.

#### 5. Hazardous Materials, Fire Protection & Public Safety Conditions

24 50 The certificate holder shall handle hazardous materials used on the site in a manner that  
25 protects public health, safety and the environment and shall comply with all applicable  
26 local, state and federal environmental laws and regulations. The certificate holder shall not  
27 store diesel fuel or gasoline on the facility site.

28 51 If a spill or release of hazardous material occurs during construction or operation of the  
29 facility, the certificate holder shall notify the Department within 72 hours and shall clean up  
30 the spill or release and dispose of any contaminated soil or other materials according to  
31 applicable regulations. The certificate holder shall make sure that spill kits containing items  
32 such as absorbent pads are located on equipment and at the field workshop. The certificate  
33 holder shall instruct employees about proper handling, storage and cleanup of hazardous  
34 materials. [Amendment #1 (SFWF)]

35 52 During construction, the certificate holder shall ensure that construction personnel are  
36 trained in fire prevention and response, that construction vehicles and equipment are  
37 operated on graveled areas to the extent possible and that open flames, such as cutting  
38 torches, are kept away from dry grass areas.

- 1 53 During operation, the certificate holder shall ensure that all on-site employees receive  
2 annual fire prevention and response training, including tower rescue training, by qualified  
3 instructors or members of the local fire district. The certificate holder shall ensure that all  
4 employees are instructed to keep vehicles on roads and off dry grassland, except when off-  
5 road operation is required for emergency purposes. The certificate holder shall encourage  
6 employees to become volunteer members of local fire departments and shall facilitate  
7 appropriate training. [Amendment #1 (SFWF)]
- 8 54 During construction and operation of the facility, the certificate holder shall ensure that the  
9 field workshop and all service vehicles are equipped with shovels and portable fire  
10 extinguishers of a 4A50BC or equivalent rating. [Amendment #1 (SFWF)]
- 11 55 During construction and operation of the facility, the certificate holder shall develop and  
12 implement fire safety plans in consultation with the North Gilliam County Rural Fire  
13 Protection District to minimize the risk of fire and to respond appropriately to any fires that  
14 occur on the facility site. In developing the fire safety plans, the certificate holder shall take  
15 into account the dry nature of the region and shall address risks on a seasonal basis. The  
16 certificate holder shall meet annually with local fire protection agency personnel to discuss  
17 emergency planning and shall invite local fire protection agency personnel to observe any  
18 emergency drill or tower rescue training conducted at the facility. [Amendment #1 (SFWF)]
- 19 56 Upon the beginning of operation of the facility, the certificate holder shall provide a site  
20 plan to the North Gilliam County Rural Fire Protection District. The certificate holder shall  
21 indicate on the site plan the identification number assigned to each turbine and the location  
22 of all facility structures and shall provide an updated site plan if additional turbines or other  
23 structures are later added to the facility. During operation, the certificate holder shall ensure  
24 that appropriate fire protection agency personnel have an up-to-date list of the names and  
25 telephone numbers of facility personnel available to respond on a 24-hour basis in case of  
26 an emergency on the facility site. [Amendment #1 (SFWF)]
- 27 57 Before beginning construction, the certificate holder shall submit a Notice of Proposed  
28 Construction or Alteration to the Federal Aviation Administration (FAA) and the Oregon  
29 Department of Aviation identifying the proposed final locations of turbine towers and  
30 meteorological towers. The certificate holder shall promptly notify the Department of the  
31 responses from the FAA and the Oregon Department of Aviation. [Amendment #1 (SFWF)]
- 32 58 The certificate holder shall construct turbines on concrete foundations and shall surround  
33 the base of each tower with a ten-foot pad area of washed crushed rock on all sides. The  
34 certificate holder shall cover turbine pad areas with non-erosive, non-flammable material as  
35 soon as possible following exposure during construction and shall maintain the pad area  
36 covering during operation of the facility.
- 37 59 The certificate holder shall follow manufacturers' recommended handling instructions and  
38 procedures to prevent damage to turbine or turbine tower components that could lead to  
39 failure.
- 40 60 The certificate holder shall install and maintain self-monitoring devices on each turbine,  
41 connected to a fault annunciation panel or supervisory control and data acquisition  
42 (SCADA) system at the field workshop to alert operators to potentially dangerous  
43 conditions. The certificate holder shall maintain automatic equipment protection features in

1 each turbine that would shut down the turbine and reduce the chance of a mechanical  
2 problem causing a fire. [Amendment #1 (SFWF)]

3 61 The certificate holder shall construct turbine towers with no exterior ladders or access to the  
4 turbine blades and shall install locked tower access doors. The certificate holder shall keep  
5 tower access doors locked at all times except when authorized personnel are present.

6 62 The certificate holder shall have an operational safety-monitoring program and shall inspect  
7 all turbine and turbine tower components on a regular basis. All turbine and turbine tower  
8 components will be inspected within 6 months of being repowered. The certificate holder  
9 shall maintain or repair turbine and turbine tower components as necessary to protect public  
10 safety. [Amendment #2]

11 63 For turbine types having pad-mounted step-up transformers, the certificate holder shall  
12 install the transformers at the base of each tower in locked cabinets designed to protect the  
13 public from electrical hazards and to avoid creation of artificial habitat for raptor prey.

14 64 To protect the public from electrical hazards, the certificate holder shall enclose the facility  
15 substation with appropriate fencing and locked gates. [Amendment #1 (SFWF)]

16 65 The certificate holder shall construct access roads with a finished width of approximately  
17 16 feet, a compacted base of native soil and a gravel surface to a depth of four to ten inches.  
18 [Amendment #1 (SFWF); Amendment #1]

19 66 During construction, the certificate holder shall implement measures to reduce traffic  
20 impacts, including:

21 (a) Providing notice to the City of Arlington Road Department, the Gilliam County Road  
22 Department and the Gilliam County Sheriff's Office in advance of deliveries that could  
23 cause traffic disruption in Arlington.

24 (b) Providing notice to the residents of Arlington in advance of deliveries that could  
25 cause traffic disruption.

26 (c) Requiring flaggers to be at appropriate locations at appropriate times during  
27 construction to direct traffic.

28 67 The certificate holder shall cooperate with the Gilliam County Road Department to ensure  
29 that any unusual damage or wear to county roads that is caused by construction of the  
30 facility is repaired by the certificate holder. Upon completion of construction, the certificate  
31 holder shall restore county roads to pre-construction condition or better, to the satisfaction  
32 of the county Road Department. If required by Gilliam County, the certificate holder shall  
33 post bonds to ensure funds are available to repair and maintain roads affected by the  
34 proposed facility. [Amendment #1 (SFWF)]

35 68 During construction, the certificate holder shall require that all on-site construction  
36 contractors develop and implement a site health and safety plan that informs workers and  
37 others on-site what to do in case of an emergency and that includes the locations of fire  
38 extinguishers and nearby hospitals, important telephone numbers and first aid techniques.  
39 The certificate holder shall ensure that construction contractors have personnel on-site who  
40 are trained and equipped for tower rescue and who are first aid and CPR certified.

41 69 During operation, the certificate holder shall develop and implement a site health and safety  
42 plan that informs employees and others on-site what to do in case of an emergency and that

1 includes the locations of fire extinguishers and nearby hospitals, important telephone  
2 numbers and first aid techniques.

3 70 During construction and operation of the facility, the certificate holder shall provide for on-  
4 site security and shall establish good communications between on-site security personnel  
5 and the Gilliam County Sheriff's Office. During operation, the certificate holder shall  
6 ensure that appropriate law enforcement agency personnel have an up-to-date list of the  
7 names and telephone numbers of facility personnel available to respond on a 24-hour basis  
8 in case of an emergency on the facility site. [Amendment #1 (SFWF)]

9 71 The certificate holder shall notify the Department and the Gilliam County Planning Director  
10 within 72 hours of any accidents including mechanical failures on the site associated with  
11 construction or operation of the facility that may result in public health and safety concerns.  
12 [Amendment #1 (SFWF)]

## 6. Water, Soils, Streams & Wetlands Conditions

13 72 [Condition removed by Amendment #1 (SFWF)]

14 73 The certificate holder shall conduct all construction work, including the repowering  
15 activities associated with RFA2, in compliance with an Erosion and Sediment Control Plan  
16 (ESCP) satisfactory to the Oregon Department of Environmental Quality and as required  
17 under the National Pollutant Discharge Elimination System (NPDES) Storm Water  
18 Discharge General Permit #1200-C. The certificate holder shall include in the ESCP any  
19 procedures necessary to meet local erosion and sediment control requirements or storm  
20 water management requirements. [Amendment #2]

21 74 During construction, the certificate holder shall limit truck traffic to designated existing and  
22 improved road surfaces to avoid soil compaction, to the extent practicable.

23 75 During construction, the certificate holder shall implement best management practices to  
24 control any dust generated by construction activities, such as applying water to roads and  
25 disturbed soil areas. [Amendment #2]

26 76 During construction, the certificate holder shall reduce temporary disturbance impacts by  
27 making use of previously disturbed areas, including roadways and tracks, and by preserving  
28 vegetation rootstalks by crushing, rather than scraping, vegetation in areas of temporary  
29 disturbance. [Amendment #2]

30 77 During facility operation, the certificate holder shall routinely inspect and maintain all  
31 roads, pads and trenched areas and, as necessary, maintain or repair erosion and sediment  
32 control measures. The certificate holder shall restore areas that are temporarily disturbed  
33 during facility maintenance or repair activities to pre-disturbance condition or better.  
34 [Amendment #2]

35 78 During facility operation, the certificate holder shall obtain water for on-site uses from a  
36 well at the field workshop, subject to compliance with applicable permit requirements. The  
37 certificate holder shall not use more than 5,000 gallons of water per day from the facility's  
38 on-site well. [Amendment #1 (SFWF)]

## 7. Transmission Line & EMF Conditions

- 1 79 The certificate holder shall install the 34.5-kV collector system underground. The  
2 certificate holder shall install underground lines at a minimum depth of three feet.  
3 [Amendment #1 (SFWF); Amendment #1]
- 4 80 The certificate holder shall ground appropriate sections of fencing that parallel transmission  
5 lines to reduce the risk of shock from induced voltage. [Amendment #1 (SFWF)]
- 6 81 The certificate holder shall take reasonable steps to reduce or manage human exposure to  
7 electromagnetic fields, including but not limited to:  
8 (a) Constructing all aboveground transmission lines at least 200 feet from any residence  
9 or other occupied structure, measured from the centerline of the transmission line.  
10 (b) [Text removed by Amendment #1]  
11 (c) Constructing all aboveground 230-kV transmission lines with a minimum clearance of  
12 24 feet from the ground.  
13 (d) Fencing the areas near the facility substation to ensure that substation equipment is  
14 not accessible to the public.  
15 (e) Providing to landowners a map of underground and overhead transmission lines on  
16 their property and advising landowners of possible health risks.  
17 (f) Designing and maintaining all transmission lines so that alternating current electric  
18 fields do not exceed 9 kV per meter at one meter above the ground surface in areas  
19 accessible to the public.  
20 [Amendment #1 (SFWF); Amendment #1]
- 21 82 In advance of, and during, preparation of detailed design drawings and specifications for  
22 230-kV and 34.5-kV transmission lines, the certificate holder shall consult with the Utility  
23 Safety and Reliability Section of the Oregon Public Utility Commission to ensure that the  
24 designs and specifications are consistent with applicable codes and standards.

## 8. Plants, Wildlife & Habitat Protection Conditions

- 25 83 The certificate holder shall conduct wildlife monitoring as described in the Wildlife  
26 Monitoring and Mitigation Plan that is incorporated in the Final Order on Amendment #1  
27 for the Shepherds Flat Wind Farm as Attachment SFN-A and as amended from time to  
28 time. [Amendment #1 (SFWF)]
- 29 84 The certificate holder shall restore areas disturbed by facility construction but not occupied  
30 by permanent facility structures according to the methods and monitoring procedures  
31 described in the Revegetation Plan that is incorporated in the Final Order on Amendment  
32 #1 for the Shepherds Flat Wind Farm as Attachment SFN-B and as amended from time to  
33 time. [Amendment #1 (SFWF)]
- 34 85 The certificate holder shall acquire the legal right to create, enhance, maintain and protect a  
35 habitat mitigation area as long as the site certificate is in effect by means of an outright  
36 purchase, conservation easement or similar conveyance and shall provide a copy of the  
37 documentation to the Department. Within the habitat mitigation area, the certificate holder  
38 shall improve the habitat quality as described in the Habitat Mitigation Plan that is  
39 incorporated in the Final Order on Amendment #1 for the Shepherds Flat Wind Farm as  
40 Attachment SFN-C and as amended from time to time. [Amendment #1 (SFWF)]

1 86 The certificate holder shall avoid permanent and temporary disturbance to the areas  
2 described in (a) through (g) and, during the times indicated, shall avoid construction  
3 disturbance in the areas described in (h) through (k). The certificate holder shall flag these  
4 areas for the duration of construction activities nearby and shall ensure that construction  
5 personnel avoid disturbance of the areas. The avoidance areas are:

6 (a) All Category 1 habitat and those areas of Category 2 habitat shown on the “ODFW-2”  
7 Figures 1 through 12 in the Shepherds Flat Wind Farm Application. [Amendment #1 (SFWF)]

8 (b) [text removed by Amendment #1 (SFWF)]

9 (c) All seeps, riparian areas and vernal pools.

10 (d) All water sources for wildlife, including perennial and intermittent streams, stock  
11 ponds and watering stations.

12 (e) All faces of bluffs or rock outcroppings.

13 (f) All trees or other structures that contain active raptor nests.

14 (g) For the facility substation and field workshop, all Category 3 habitat. [Amendment #1  
15 (SFWF)]

16 (h) [text removed by Amendment #1 (SFWF)]

17 (i) The area within 0.5 miles of Category 3 curlew nesting habitat and the area within 0.5  
18 miles the BLM Horn Butte Wildlife Area during the nesting season (March 8 through June  
19 15). Before beginning construction, the certificate holder shall provide to the Department a  
20 map showing these avoidance areas relative to areas of potential construction disturbance.  
21 The certificate holder may engage in construction activities in these areas at times other  
22 than the nesting season.

23 (j) The area within 1,000 feet of any essential, limited and irreplaceable Washington  
24 ground squirrel (WGS) habitat within the new areas added to the site by Amendment #1  
25 (excluding the areas within the site boundaries of Shepherds Flat North, Shepherds Flat  
26 Central and Shepherds Flat South as approved on September 11, 2009) during the period in  
27 which the squirrels are active. The certificate holder shall hire a qualified independent  
28 professional biologist to conduct pre-construction surveys for State-listed threatened,  
29 endangered or sensitive wildlife species in these new areas within 1,000 feet of any area  
30 potentially disturbed by facility construction. To determine whether WGS habitat exists and  
31 to determine whether WGS are active, the biologist shall search for WGS in suitable habitat  
32 using a two-survey protocol approved by the Oregon Department of Fish and Wildlife  
33 (ODFW). The certificate holder shall submit the results of the survey to ODFW and to the  
34 Department. If signs of WGS activity are observed, the certificate holder shall flag the  
35 avoidance area and ensure that construction personnel avoid disturbance of the area until  
36 the biologist has determined that the WGS are no longer active.

37 (k) Areas within a suitable buffer around confirmed populations of Laurent’s milk-vetch  
38 or any other State-listed threatened or endangered plant species within the new areas added  
39 to the site by Amendment #1 (excluding the area within the site boundaries of Shepherds  
40 Flat North, Shepherds Flat Central and Shepherds Flat South as approved on September 11,  
41 2009). The certificate holder shall not install facility components or cause temporary  
42 disturbance within these areas. The certificate holder shall hire a qualified independent  
43 professional biologist to conduct pre-construction surveys for State-listed threatened or  
44 endangered plant species in these new areas within 1,000 feet of any area potentially  
45 disturbed by facility construction. The certificate holder shall submit the results of the  
46 survey to the Department.

1 [Amendment #1]

2 87 The certificate holder shall microsite the facility in conformance with the industry’s best  
3 practices. The certificate holder shall follow the recommendations of a qualified wildlife  
4 biologist to avoid building turbine towers in the following locations:

5 (a) Areas of increased risk to avian species due to constricted flight paths, such as narrow  
6 ridge saddles and gaps between hilltops.

7 (b) Areas on slopes greater than 20 percent.

8 (c) Areas within a 250-foot setback from the bluff edge along the north site boundary.

9 (d) Areas within a 250-foot setback from bluff edges along the eastern site boundary  
10 above the Willow Creek Valley.

11 88 During construction, the certificate holder shall avoid construction activities in areas around  
12 active nests of the following species during the sensitive period, as provided in this  
13 condition:

<u>Species</u>	<u>Sensitive Period</u>	<u>Early Release Date</u>
Swainson’s hawk	April 1 to August 15	May 31
Ferruginous hawk	March 15 to August 15	May 31
Burrowing owl	April 1 to August 15	July 15

14 The certificate holder shall conduct pre-construction surveys, using a protocol approved by  
15 the Oregon Department of Fish and Wildlife (ODFW) to determine whether there are any  
16 active nests of these species within 0.5 miles of any areas that would be disturbed during  
17 construction. The certificate holder shall search the scheduled construction areas and all  
18 areas within 0.5 miles of the construction areas. If a nest is occupied by any of these species  
19 after the beginning of the sensitive period, the certificate holder will flag the boundaries of  
20 a 0.5-mile buffer area around the nest and shall instruct construction personnel to avoid  
21 disturbance of the area. The certificate holder shall hire a qualified independent  
22 professional biologist to observe the active nest sites during the sensitive period for signs of  
23 disturbance and to notify the Department of any non-compliance with this condition. If the  
24 biologist observes nest site abandonment or other adverse impact to nesting activity, the  
25 certificate holder shall implement appropriate mitigation, in consultation with ODFW and  
26 subject to the approval of the Department, unless the adverse impact is clearly shown to  
27 have a cause other than construction activity. The certificate holder may begin or resume  
28 construction activities within a buffer area before the ending day of the sensitive period if  
29 any known nest site is not occupied by the early release date. If a nest site is occupied, then  
30 the certificate holder may begin or resume construction before the ending day of the  
31 sensitive period with the approval of ODFW, after the young are fledged. The certificate  
32 holder shall use a protocol approved by ODFW to determine when the young are fledged  
33 (the young are independent of the core nest site).

34 89 The certificate holder shall not remove any trees that are greater than three feet in height.

35 90 The certificate holder shall design all aboveground transmission line support structures  
36 following the most current suggested practices for avian protection on power lines  
37 published by the Avian Power Line Interaction Committee.

38 91 The certificate holder shall reduce the risk of injuries to avian species by:

39 (a) Installing turbine towers that are smooth steel structures that lack features that would  
40 allow avian perching.

1 (b) Installing meteorological towers that are non-guyed structures to eliminate the risk of  
2 avian collision with guy-wires.

3 (c) Avoiding installation of aboveground transmission lines across narrow saddles,  
4 ravines and similar features and, where such crossings cannot be avoided, installing line-  
5 markers to make the lines more visible to avian species.

6 92 The certificate holder shall impose and enforce construction and operation speed limits of 5  
7 miles per hour on roads within 1,000 feet of Category 1 or Category 2 Washington ground  
8 squirrel habitat identified in the preconstruction survey required under Condition 86 and 20  
9 miles per hour on all other facility roads and shall ensure that all construction and  
10 operations personnel are instructed on the importance of cautious driving practices while on  
11 facility roads. [Amendment #1 (SFWF); Amendment #1]

## 9. Visual Effects Conditions

12 93 To reduce the visual impact of the facility, the certificate holder shall:

13 (a) Mount nacelles on smooth, steel structures, painted uniformly in a matte-finish,  
14 neutral white color.

15 (b) Paint substation structures in a neutral color to blend with the surrounding landscape.

16 (c) Not allow any advertising to be used on any part of the facility.

17 (d) Use only those signs required for facility safety, required by law or otherwise required  
18 by this site certificate, except that the certificate holder may erect a sign to identify the  
19 facility near the field workshop, may paint turbine numbers on each tower and may allow  
20 unobtrusive manufacturers' logos on turbine nacelles.

21 (e) Not locate any facility signs along Highway 74.

22 (f) Design signs in accordance with Gilliam County Zoning Ordinance Section 8.030.

23 (g) Maintain any signs allowed under this condition in good repair.

24 [Amendment #1 (SFWF)]

25 94 The certificate holder shall design and construct the field workshop to be generally  
26 consistent with the character of similar buildings used by commercial farmers or ranchers in  
27 the area and shall paint the building in a neutral color to blend with the surrounding  
28 landscape. [Amendment #1 (SFWF)]

29 95 The certificate holder shall not use exterior nighttime lighting except:

30 (a) The minimum turbine tower lighting required or recommended by the Federal  
31 Aviation Administration.

32 (b) Security lighting at the field workshop and substation, provided that such lighting is  
33 shielded or downward-directed to reduce glare.

34 (c) Minimum lighting necessary for repairs or emergencies.

35 (d) Minimum lighting necessary for nighttime construction. The certificate holder may  
36 use lighting only at the work location and only directed downward to illuminate the work  
37 area at the turbine base or upward from the base to illuminate the turbine tower;  
38 construction lighting shall not be directed outward. The certificate holder shall use  
39 nighttime lighting only with the approval of the owner of the property on which the work is  
40 conducted and shall provide notice of nighttime construction to occupants of all residences  
41 within one-half mile of the construction site.

42 [Amendment #1 (SFWF)]

**10. Noise Control Conditions**

1 96 To reduce noise impacts at nearby residences, the certificate holder shall:  
2 (a) Confine the noisiest operation of heavy construction equipment to the daylight hours.  
3 (b) Require contractors to install and maintain exhaust mufflers on all combustion  
4 engine-powered equipment; and  
5 (c) Establish a complaint response system at the construction manager’s office to address  
6 noise complaints.

7 97 Before beginning construction, the certificate holder shall provide to the Department:  
8 (a) Information that identifies the final design locations of all turbines to be built at the  
9 facility.  
10 (b) The maximum sound power level for the substation transformers and the maximum  
11 sound power level and octave band data for the turbines selected for the facility based on  
12 manufacturers’ warranties or confirmed by other means acceptable to the Department.  
13 (c) The results of noise analysis of the facility to be built according to the final design  
14 performed in a manner consistent with the requirements of OAR 340-035-0035  
15 (1)(b)(B)(iii)(IV) and (VI) demonstrating to the satisfaction of the Department that the total  
16 noise generated by the facility (including the noise from turbines and substation  
17 transformers) would meet the ambient degradation test and maximum allowable test at the  
18 appropriate measurement point for all potentially-affected noise sensitive properties.  
19 (d) For each noise-sensitive property where the certificate holder relies on a noise waiver  
20 to demonstrate compliance in accordance with OAR 340-035-0035 (1)(b)(B)(iii)(III), a  
21 copy of the a legally effective easement or real covenant pursuant to which the owner of the  
22 property authorizes the certificate holder’s operation of the facility to increase ambient  
23 statistical noise levels L<sub>10</sub> and L<sub>50</sub> by more than 10 dBA at the appropriate measurement  
24 point. The legally-effective easement or real covenant must: include a legal description of  
25 the burdened property (the noise sensitive property); be recorded in the real property  
26 records of the county; expressly benefit the certificate holder; expressly run with the land  
27 and bind all future owners, lessees or holders of any interest in the burdened property; and  
28 not be subject to revocation without the certificate holder’s written approval.

29 98 During operation, the certificate holder shall maintain a complaint response system to  
30 address noise complaints. The certificate holder shall promptly notify the Department of  
31 any complaints received regarding facility noise and of any actions taken by the certificate  
32 holder to address those complaints. In response to a complaint from the owner of a noise  
33 sensitive property regarding noise levels during operation of the facility, the Council may  
34 require the certificate holder to monitor and record the statistical noise levels to verify that  
35 the certificate holder is operating the facility in compliance with the noise control  
36 regulations. [Amendment #1 (SFWF)]

**11. Waste Management Conditions**

37 99 The certificate holder shall provide portable toilets for on-site sewage handling during  
38 construction and shall ensure that they are pumped and cleaned regularly by a licensed  
39 contractor who is qualified to pump and clean portable toilet facilities.

40 100 During operation, the certificate holder shall discharge sanitary wastewater generated at the  
41 field workshop to a licensed on-site septic system in compliance with county permit

1 requirements. The certificate holder shall design the septic system for a discharge capacity  
2 of less than 2,500 gallons per day. [Amendment #1 (SFWF)]

3 101 The certificate holder shall implement a waste management plan during construction that  
4 includes but is not limited to the following measures:

5 (a) Recycling steel and other metal scrap.

6 (b) Recycling wood waste.

7 (c) Recycling packaging wastes such as paper and cardboard.

8 (d) Collecting non-recyclable waste for transport to a local landfill by a licensed waste  
9 hauler or by using facility equipment and personnel to haul the waste.

10 (e) Segregating all hazardous wastes such as used oil, oily rags and oil-absorbent  
11 materials, mercury-containing lights and lead-acid and nickel-cadmium batteries for  
12 disposal by a licensed firm specializing in the proper recycling or disposal of hazardous  
13 wastes.

14 (f) Discharging all concrete truck rinse water into foundation holes and completing truck  
15 wash-down off-site.

16 102 The certificate holder shall implement a waste management plan during operation that  
17 includes but is not limited to the following measures:

18 (a) Training employees to minimize and recycle solid waste.

19 (b) Recycling paper products, metals, glass and plastics.

20 (c) Recycling used oil and hydraulic fluid.

21 (d) Collecting non-recyclable waste for transport to a local landfill by a licensed waste  
22 hauler or by using facility equipment and personnel to haul the waste.

23 (e) Segregating all hazardous, non-recyclable wastes such as used oil, oily rags and oil-  
24 absorbent materials, mercury-containing lights and lead-acid and nickel-cadmium batteries  
25 for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous  
26 wastes.

27 103 Before beginning construction, the certificate holder shall determine whether any  
28 construction disturbance would occur in locations not previously investigated for potential  
29 jurisdictional waters as described in the *Final Order on Amendment #1*. The certificate  
30 holder shall conduct pre-construction investigations in these new areas within 1,000 feet of  
31 any area potentially disturbed by facility construction to determine whether any State-  
32 jurisdictional waters exist in those locations. The certificate holder shall submit a written  
33 report on the pre-construction investigation to the Department of Energy and to the  
34 Department of State Lands for approval before beginning construction and shall ensure that  
35 construction would have no impact on any jurisdictional water identified in the report.  
36 [Amendment #1]

## **12. New Conditions applicable to proposed RFA2 facility repower**

37 104 The certificate holder shall begin construction of the Shepherds Flat North facility  
38 modifications, as approved in the Second Amended Site Certificate, within three years after  
39 the effective date of the amended site certificate [TBD]. The certificate holder shall notify  
40 the Department when construction of the of the facility modifications, as approved in  
41 Request for Amendment 2, commences. Under OAR 345-015-0085(8), the amended site  
42 certificate is effective upon execution by the Council Chair and the certificate holder.  
43 [Amendment #2]

1 105 The certificate holder shall complete construction of the Shepherds Flat North facility  
2 modifications, as approved in the Second Amended Site Certificate, within three years  
3 following the date of construction commencement [TBD]. The certificate holder shall  
4 promptly notify the Department of the date of completion of construction of the Shepherds  
5 Flat North facility modifications, as approved in Request for Amendment 2.  
6 [Amendment #2]

7 106 Prior to RFA2 facility repower activities, the certificate holder shall provide the Department  
8 with the foundation uprate analysis on facility turbines. If the analysis results identify  
9 necessary mitigation and remediation measures, or operational timing recommendations,  
10 the certificate holder shall implement the identified measures and recommendations prior to  
11 beginning the repowering activities unless otherwise approved by the Department.  
12 [Amendment #2]

13 107 Prior to RFA2 facility repower activities, the certificate holder shall:

14 (a) Pay the requisite fee and obtain a Zoning Permit/Conditional Use Permit with  
15 Alterations, without any local proceedings, from Gilliam County for facility  
16 modifications approved in RFA2 to incorporate conditions imposed in the second  
17 amended site certificate under the Council’s Land Use standard; and

18 (b) Obtain all other necessary local permits, including access and haul permits.  
19 [Amendment #2]

20 108 Prior to RFA2 facility repower activities, the certificate holder shall submit to the  
21 Department and Gilliam County Road Department, for review, a Transportation System  
22 Plan. The Transportation System Plan shall include, but is not limited to, the following:

23 (a) Impact Assessment on Local Road Systems

24 (b) Maps identifying the size, number, location and nature of vehicle access points

25 (c) Evaluation of consistency with Gilliam County’s Transportation System Plan  
26 Guidelines

27 (d) Results of Consultation with Gilliam County Roadmaster, including a copy of  
28 executed Road Use Agreement

29 (e) Traffic Control Measures

30 (f) Local Notification Procedures

31 [Amendment #2]

32 109 Prior to RFA2 facility repower activities, the certificate holder shall submit to the  
33 Department and Gilliam County Weed Department Supervisor, for review and approval, a  
34 Roadway Weed Control Plan. The Roadway Weed Control Plan shall include, but not be  
35 limited to, identification of county-listed weeds of economic concern, methods for  
36 evaluating weeds within impact area, results of weed assessment, control methods specific  
37 to roadway weed control and timing, agency consultation protocol, and process for  
38 evaluating success of weed control.

39 [Amendment #2]

40 108110 Prior to RFA2 facility repower construction, the certificate holder shall submit

1 documentation, with maps and distance tables, to the Department demonstrating that the  
2 wind turbines selected for repowering would comply with the following setback  
3 requirements:

4 (a) All facility components must be at least 3,520 feet from the property line of  
5 properties zoned residential use or designated in the Gilliam County Comprehensive  
6 Plan as residential.

7 (b) Where (a) does not apply, the certificate holder shall maintain a minimum distance of  
8 110-percent of maximum blade tip height, measured from the centerline of the turbine  
9 tower to the:

10 ii. Nearest edge of any public road right-of-way. The certificate holder shall  
11 assume a minimum right-of-way width of 60 feet.

12 iii. Any overhead utility lines;

13 iv. All property lines; if adjacent landowner agrees in writing to a lesser distance,  
14 this requirement may be waived.

15 v. Any existing guy wire, anchor, or small wind energy tower on the property.

16 vi. Any residence including those outside the project boundary. If a landowner  
17 agrees in writing to a lesser distance, this requirement may be waived.

18 (c) Where (a) does not apply, the certificate holder shall maintain a minimum distance of  
19 150% of the maximum total turbine height from blade tip height, measured from the  
20 centerline of the turbine tower, from federal transmission line. If affected parties  
21 agree in writing to a lesser distance, this requirement may be waived.

22 [Amendment #2]

23 111 The certificate holder shall:

24 (c) Prior to RFA2 facility repower activities:

25 i. Provide an updated habitat assessment of areas of disturbance, based on a  
26 protocol approved by the Department in consultation with ODFW.

27 ii. Identify monitoring and reference sites, including sites within each habitat  
28 category and subtype impacted, and the methodology utilized for selecting the  
29 number of monitoring and reference sites should be included.

30 iii. Consult with the Department, ODFW and Gilliam County Weed Control  
31 Department on timing and methods for revegetation and weed control.

32 (d) Following completion of RFA2 facility repower activities:

33 i. Restore areas temporarily disturbed by RFA2 facility repower activities  
34 according to the methods and monitoring procedures described in the  
35 Revegetation Plan that is incorporated in the Final Order on Amendment 2 for  
36 Shepherds Flat North as Attachment D and as amended from time to time.

37 ii. Consult with the Department, ODFW and Gilliam County Weed Control  
38 Department on timing and methods for revegetation and weed control.

39 [Amendment #2]

1 112 The certificate holder shall:

2 (a) Prior to RFA2 facility repower activities, the certificate holder shall conduct a pre-  
3 construction raptor nest survey, using a protocol approved by the Oregon Department of  
4 Fish and Wildlife (ODFW) to determine whether there are any active nests of state  
5 sensitive species within 0.5 miles of any areas that would be disturbed.

6 (b) During RFA2 repower activities, if active raptor nests were identified within 0.5-mile of  
7 RFA2 repower activities per (a) of this condition or become active during the sensitive  
8 season, per (c) below, the certificate holder shall avoid construction activities within  
9 0.25 mile buffer in areas around active nests of the following species during the  
10 sensitive period, as provided in this condition:

<u>Species</u>	<u>Sensitive Period</u>	<u>Early Release Date</u>
<u>Swainson's hawk</u>	<u>April 1 to August 15</u>	<u>May 31</u>
<u>Ferruginous hawk</u>	<u>March 15 to August 15</u>	<u>May 31</u>
<u>Burrowing owl</u>	<u>April 1 to August 15</u>	<u>July 15</u>

12  
13 (c) During RFA2 repower activities, if a nest becomes occupied by any of these species  
14 after the beginning of the sensitive period, the certificate holder will flag the boundaries  
15 of a 0.25-mile buffer area around the nest and shall instruct construction personnel to  
16 avoid disturbance of the area.

17 (d) During RFA2 repower activities, if active nest sites are observed per (b) or (c) of this  
18 condition, the certificate holder shall hire a qualified independent professional biologist  
19 to observe the active nest sites during the sensitive period for signs of disturbance and  
20 to notify the Department of any non-compliance with this condition. If the biologist  
21 observes nest site abandonment or other adverse impact to nesting activity, the  
22 certificate holder shall implement appropriate mitigation, in consultation with ODFW  
23 and subject to the approval of the Department, unless the adverse impact is clearly  
24 shown to have a cause other than construction activity. The certificate holder may begin  
25 or resume construction activities within a buffer area before the ending day of the  
26 sensitive period if any known nest site is not occupied by the early release date. If a nest  
27 site is occupied, then the certificate holder may begin or resume construction before the  
28 ending day of the sensitive period with the approval of ODFW, after the young are  
29 fledged. The certificate holder shall use a protocol approved by ODFW to determine  
30 when the young are fledged (the young are independent of the core nest site).

31 [Amendment 2]

32 ~~113~~ Following completion of RFA2 facility repower activities, the certificate holder shall  
33 conduct two years of fatality monitoring, as described in the *Wildlife Monitoring and*  
34 *Mitigation Plan*, or based on protocol otherwise approved by the Department in  
35 consultation with ODFW, that is incorporated in the *Final Order on Amendment #2* as  
36 Attachment E as amended from time to time.. [Amendment #2]

37 114 During RFA2 facility repower activities, the certificate holder shall, or ensure its  
38 third-party contractors, reuse or recycle wind turbine blades, hubs and other removed  
39 wind turbine components to the extent practicable. The certificate holder shall report in  
40 its semi-annual report to the Department the quantities of removed wind turbine

1 components recycled, reused, sold for scrap, and disposed of in a landfill. [Amendment  
2 2]

3 115 Prior to the RFA2 facility repower activities, the certificate holder shall submit a  
4 Notice of Proposed Construction or Alteration to the Federal Aviation Administration  
5 (FAA) and the Oregon Department of Aviation identifying the new maximum blade tip  
6 height of 150 meters. The certificate holder shall promptly notify the Department of the  
7 responses from the FAA and the Oregon Department of Aviation. [Amendment #2]

8 116 Prior to RFA2 facility repower activities, the certificate holder shall provide to the  
9 Department:

10 (a) The maximum sound power level and octave band for the modified wind turbines  
11 based on manufacturer' warranties or confirmed by other means acceptable to the  
12 Department.

13 (b) The results of noise analysis for the proposed RFA2 facility repower, as approved  
14 in the Second Amended Site Certificate, performed in a manner consistent with  
15 the requirements of OAR 340-035-0035(1)(b)(B)(iii)(IV) and (VI) demonstrating  
16 to the satisfaction of the Department that the total noise generated (including the  
17 noise from repowered wind turbines and existing substation transformers) would  
18 meet the ambient degradation test and maximum allowable test at the appropriate  
19 measurement point for all potentially-affected noise sensitive properties.

20 (c) For each noise-sensitive property where the certificate holder relies on a noise  
21 waiver to demonstrate compliance in accordance with OAR 340-035-0035  
22 (1)(b)(B)(iii)(III) related to site certificate amendment 2 activities, a copy of the a  
23 legally effective easement or real covenant pursuant to which the owner of the  
24 property authorizes the certificate holder's operation of the facility to increase  
25 ambient statistical noise levels L10 and L50 by more than 10 dBA at the  
26 appropriate measurement point. The legally-effective easement or real covenant  
27 must: include a legal description of the burdened property (the noise sensitive  
28 property); be recorded in the real property records of the county; expressly benefit  
29 the certificate holder; expressly run with the land and bind all future owners,  
30 lessees or holders of any interest in the burdened property; and not be subject to  
31 revocation without the certificate holder's written approval.

32 [Amendment #2]

## VI. SUCCESSORS AND ASSIGNS

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

## VII. SEVERABILITY AND CONSTRUCTION

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

**VIII. GOVERNING LAW AND FORUM**

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

**IX. EXECUTION AND EFFECTIVE DATE**

3 This site certificate may be executed in counterparts and will become effective upon  
4 signature by the Chair of the Energy Facility Siting Council and the authorized representative of  
5 the certificate holder. [Amendment #1 (SFWF); Amendment #1].

6 **IN WITNESS WHEREOF**, this site certificate has been executed by the State of Oregon, acting  
7 by and through its Energy Facility Siting Council, and by North Hurlburt Wind, LLC.

ENERGY FACILITY SITING COUNCIL

NORTH HURLBURT WIND, LLC

By: \_\_\_\_\_  
~~Robert Shipraek~~Hanley Jenkins II, Chair  
Oregon Energy Facility Siting Council

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

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

Date: \_\_\_\_\_  
~~Derrel A. Grant, Vice President~~  
~~North Hurlburt Wind, LLC~~

~~Date: March 12, 2010~~

~~Date: March 12, 2010~~

**Attachment B: Reviewing Agency Comments on preliminary RFA2**

## MEMORANDUM

---

TO: Chase McVeigh - Walker  
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: November 12, 2019

RE: Oregon Department of Fish and Wildlife (ODFW) Comments on the Request for Amendment 2 for Shepherds Flat North wind facility

---

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 appreciates the Applicant working with ODFW and our concerns on the proposed amendment. The Applicant has incorporated our comments from earlier consultation into their current application. ODFW would however make one comment regarding the proposed amendment.

SPECIFIC COMMENTS: ODFW would recommend that the Applicant complete two years of fatality monitoring on the project after the turbines have been retrofitted with the larger blades to look at mortality effects from the larger turbine sizes. ODFW's recommendation is based on the fact that we understand that mortality surveys can vary from year to year and that one year of monitoring may not be completely indicative of the fatality effects for the 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.

## MCVEIGH-WALKER Chase \* ODOE

---

**From:** LAWYER Matthew A <Matthew.A.LAWYER@aviation.state.or.us>  
**Sent:** Wednesday, November 13, 2019 3:15 PM  
**To:** MCVEIGH-WALKER Chase \* ODOE  
**Cc:** PECK Heather  
**Subject:** FW: Shepherds Flat North, Central, and South pRFA review and comments (ODA)

Chase,

With regards to the proposed amendments to the Shepherds Flat North, Central and South Facilities, Oregon Department of Aviation requests that site certificate conditions for all of these proposed amendments include:

“Prior to construction or modification of Turbines, the certificate holder shall submit a Notice of Proposed Construction or Alteration to the Federal Aviation Administration (FAA) and the Oregon Department of Aviation identifying the new maximum blade tip height not to exceed 150 meters. The certificate holder shall promptly notify the Department of the responses from the FAA and the Oregon Department of Aviation.”

So long as a condition of approval as stated above is present in each of the proposed amendments and any changes do not exceed 150 meters, the Oregon Department of Aviation has no further comment.

**Matt Lawyer**  
OREGON DEPARTMENT OF AVIATION  
PROGRAM COORDINATOR



**OFFICE** 503-378-4888 **CELL** 503-983-0275  
**EMAIL** matthew.a.lawyer@aviation.state.or.us  
**3040 25<sup>TH</sup> STREET SE, SALEM, OR 97302**  
**WWW.OREGON.GOV/AVIATION**

\*\*\*\*\*CONFIDENTIALITY NOTICE\*\*\*\*\*

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---

**From:** PECK Heather <heather.peck@aviation.state.or.us>  
**Sent:** Wednesday, November 13, 2019 2:49 PM  
**To:** LAWYER Matthew A <Matthew.A.LAWYER@aviation.state.or.us>  
**Subject:** FW: Shepherds Flat North, Central, and South pRFA review and comments (ODA)

Best,  
Heather

*Heather Peck* | Planning & Projects Division Manager  
503.378.3168 | 503.881.6966 (Cell) | [Heather.peck@aviation.state.or.us](mailto:Heather.peck@aviation.state.or.us)

[www.Oregon.gov/aviation](http://www.Oregon.gov/aviation)

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**From:** MCV EIGH-WALKER Chase \* ODOE <[Chase.McVeigh-Walker@oregon.gov](mailto:Chase.McVeigh-Walker@oregon.gov)>  
**Sent:** Wednesday, October 30, 2019 3:22 PM  
**To:** PECK Heather <[heather.peck@aviation.state.or.us](mailto:heather.peck@aviation.state.or.us)>  
**Subject:** Shepherds Flat North, Central, and South pRFA review and comments (ODA)

Good afternoon Heather,

The Department has received three preliminary Requests for Amendments (pRFA's) from Caithness Energy, LLC, the parent company of each facility's certificate holder for the three Shepherds Flat facilities; Shepherds Flat North (SFN), Shepherds Flat Central (SFC), and Shepherds Flat South (SFS).

For reference, all three facilities are operational wind generation facilities. SFN is located entirely in Gilliam County, with 106 wind turbines and a maximum generating capacity of 265 megawatts. SFC is located in both Gilliam and Morrow counties, and has 116 wind turbines with a maximum generating capacity of 290 megawatts. Lastly, SFS is also located in both Gilliam and Morrow counties, and includes 116 wind turbines and has a maximum generating capacity of 290 megawatts.

As mentioned above, the Department has received three individual pRFA's (one per facility) for the three Shepherds Flat Facilities. All three of the requests seek approval from the Energy Facility Siting Council for wind turbine repowering upgrades that would include replacing the wind turbine blades with slightly longer new blades, and modifications to the nacelles. The upgrades would require amending one condition in the site certificate to allow lowering the minimum aboveground wind turbine blade tip clearance from 25 to 21.5 meters.

For context, at the October 25, 2019 EFSC meeting, Council reviewed and approved an amendment to SFC to allow the same change (i.e., a repowering project, and amending the site certificate to reduce minimum aboveground clearance) for two specific wind turbines. The current request at SFC seeks Council approval to make the same modifications to the remaining 114 wind turbines at the facility.

Shepherds Flat North Project Page:  
<https://www.oregon.gov/energy/facilities-safety/facilities/Pages/SFN.aspx>

Shepherds Flat Central Project Page:  
<https://www.oregon.gov/energy/facilities-safety/facilities/Pages/SFC.aspx>

Shepherds Flat South Project Page:  
<https://www.oregon.gov/energy/facilities-safety/facilities/Pages/SFS.aspx>

We would like to request ODA's review and comment all three amendment requests by **November 12, 2019**. I will follow up tomorrow with a phone call, to discuss the scope of the Amendments, and anticipated review schedule.

Thanks,  
Chase



**Chase McVeigh-Walker**

Senior Siting Analyst

550 Capitol St. NE | Salem, OR 97301

P: 503-934-1582

P (In Oregon): 800-221-8035



Stay connected!

## MCVEIGH-WALKER Chase \* ODOE

---

**From:** Michelle Colby <michelle.colby@co.gilliam.or.us>  
**Sent:** Friday, November 15, 2019 10:39 AM  
**To:** MCVEIGH-WALKER Chase \* ODOE  
**Subject:** RE: Shepherds Flat North, Central, and South pRFA review and comments (Gilliam Co.)

Chase –

Good morning, below are a few comments regarding repowering of Shepherds Flat Wind Farm in its entirety.

Gilliam County would encourage the existing conditions be reviewed and that particular attention be given to words and phrases about construction, although the wind farm is constructed there are several original construction conditions that may reapply to this situation. Throughout the Final Order and Conditions listed Gilliam County would emphasize that the word(s) 'during construction and/or construction' should apply to the repower installation; this may require rewording the conditions to ensure clarity that repower is in fact a type of construction.

A few examples are outlined below.

Please ensure landowners and lessees are informed of the repower project prior to commencing (No. 36)  
Weed control plan may need to be reviewed to determine if any additional measures/precautions need to take place during the repower (No. 38)  
Please ensure / double check there is no issue with sets backs and the new proposed longer blades (No. 40 b and d)  
Ensure local fire protection district and emergency service is informed of when repower construction will commence (No. 54, 55, 56, 68)  
Ensure Gilliam County Road Department is consulted regarding whether a road use agreement is necessary for this phase of repower construction (No. 66, 67)  
Ensure notification to local law enforcement specifically Gilliam County Sheriff's Office of when repower will commence and for how long the repower project is anticipated (No. 70)  
Suggest conducting wildlife monitoring to assess if the new longer blades impact area raptors and bats and coordinating repower construction with ODFW .  
Restore vegetation (No. 11)

Has the wind farm commented or proposed a timeframe for the repower? Or is the time frame prescribed by EFSC? (No. 24, 25, 26)

Thank you for your consideration.

---

**From:** MCVEIGH-WALKER Chase \* ODOE <Chase.McVeigh-Walker@oregon.gov>  
**Sent:** Tuesday, November 12, 2019 3:34 PM  
**To:** Michelle Colby <michelle.colby@co.gilliam.or.us>  
**Subject:** FW: Shepherds Flat North, Central, and South pRFA review and comments (Gilliam Co.)

FYI.

---

**From:** MCVEIGH-WALKER Chase \* ODOE  
**Sent:** Wednesday, October 30, 2019 3:20 PM

To: 'michelle.colby@co.gilliam.or.us' <[michelle.colby@co.gilliam.or.us](mailto:michelle.colby@co.gilliam.or.us)>

Subject: Shepherds Flat North, Central, and South pRFA review and comments (Gilliam Co.)

Good afternoon Michelle,

The Department has received three preliminary Requests for Amendments (pRFA's) from Caithness Energy, LLC, the parent company of each facility's certificate holder for the three Shepherds Flat facilities; Shepherds Flat North (SFN), Shepherds Flat Central (SFC), and Shepherds Flat South (SFS).

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For context, at the October 25, 2019 EFSC meeting, Council reviewed and approved an amendment to SFC to allow the same change (i.e., a repowering project, and amending the site certificate to reduce minimum aboveground clearance) for two specific wind turbines. The current request at SFC seeks Council approval to make the same modifications to the remaining 114 wind turbines at the facility.

Shepherds Flat North Project Page:

<https://www.oregon.gov/energy/facilities-safety/facilities/Pages/SFN.aspx>

Shepherds Flat Central Project Page:

<https://www.oregon.gov/energy/facilities-safety/facilities/Pages/SFC.aspx>

Shepherds Flat South Project Page:

<https://www.oregon.gov/energy/facilities-safety/facilities/Pages/SFS.aspx>

We would like to request Gilliam County's review and comment all three amendment requests by **November 12, 2019**. I will follow up tomorrow with a phone call, to discuss the scope of the Amendments, and anticipated review schedule.

Thanks,  
Chase



**Chase McVeigh-Walker**

Senior Siting Analyst

550 Capitol St. NE | Salem, OR 97301

P: 503-934-1582

P (In Oregon): 800-221-8035



Stay connected!

## MCVEIGH-WALKER Chase \* ODOE

---

**From:** Michelle Colby <michelle.colby@co.gilliam.or.us>  
**Sent:** Monday, November 18, 2019 9:00 AM  
**To:** MCVEIGH-WALKER Chase \* ODOE  
**Subject:** Shepherds flat

Chase –

Good morning, Dewey Kennedy the Gilliam County Road Master was on vacation all last week and I just had a conversation with him, in response to my phone message and emails I sent him about Shepherd's Flat repower. He is very concerned that Shepherd's Flat repower must have a pre-construction meeting about roads prior to repower and yes, he will require a road use agreement be in affect prior to the repower construction starting. So whether or not these items are addressed in the amendment it sounds like the Road Master will ensure it gets done one way or another.

Just wanted to share.

*Michelle Colby*  
Planning Director  
Gilliam County  
221 S. Oregon St.  
Condon, OR 97823  
Ph. 541-384-2381  
[Michelle.colby@co.gilliam.or.us](mailto:Michelle.colby@co.gilliam.or.us)

**Attachment C: [Reserved for Draft Proposed Order Comments]**

**Attachment D: Revegetation Plan**

# Shepherds Flat North: Revegetation Plan

[SEPTEMBER 11, 2009]

---

1 **I. Introduction**

2 This plan describes methods and standards for restoration of areas of construction  
3 disturbance. This plan applies to the areas surrounding the permanent facility components of  
4 Shepherds Flat North (SFN).<sup>1</sup> The objective of revegetation is to restore the disturbed areas to  
5 pre-disturbance condition or better. The site certificate for the facility requires restoration of  
6 these areas. This plan has been developed in consultation with the Oregon Department of Fish  
7 and Wildlife (ODFW).

8 The areas of construction disturbance include areas of grassland, shrub-steppe habitat and  
9 other habitat subtypes (wildlife habitat areas). The intensity of construction impact will vary. In  
10 some areas, the impact will be relatively light, but in other areas, heavy construction activity will  
11 remove all vegetation, remove topsoil and compact the remaining subsoil. Where vegetation has  
12 been damaged or removed during construction, the certificate holder must restore suitable  
13 vegetation. In addition, the certificate holder shall maintain erosion and sediment control  
14 measures put in place during construction until the affected areas are restored as described in this  
15 plan and the risk of erosion has been eliminated. The plan specifies monitoring procedures to  
16 evaluate revegetation success of disturbed wildlife habitat areas. Remedial action may be  
17 necessary for wildlife habitat areas that do not show revegetation progress. Additional mitigation  
18 may be necessary if revegetation is unsuccessful.

19 **II. Description of the Project Area**

20 The SFN site lies within Gilliam County (approximately 8,103 acres) in an area  
21 characterized by shallow soils. The area is used primarily for grazing of sheep, but low rainfall  
22 (approximately 9 inches of precipitation annually) limits forage, and sheep are typically removed  
23 from the area from May to November. There is no cultivated cropland within the site boundary.  
24 The site contains areas of bare sand, exposed rock and bare soil, and there are numerous  
25 unimproved roads and off-road vehicle tracks as well as several electrical transmission line  
26 corridors. Some locations are highly disturbed from congregation of sheep around watering and  
27 transport sites. Invasive species (such as cheatgrass and spring-Whitlow grass) are the  
28 predominant grass species in most areas, but native species (such as Sandberg's bluegrass,  
29 needle-and-thread grass, bluebunch wheatgrass and six-weeks fescue) are also present.

30 **III. Revegetation Methods**

31 The certificate holder shall begin restoration of disturbed areas as soon as possible after  
32 completion of facility construction activity in the area to be restored. Restoration measures  
33 include soil preparation and seeding as described below. Planting should be done at the  
34 appropriate time of year to facilitate seed germination, based on weather conditions. The  
35 certificate holder shall choose planting methods based on site-specific factors such as slope,  
36 erosion potential and the size of the area in need of revegetation.

---

<sup>1</sup> This plan is incorporated by reference in the site certificate for Shepherds Flat North and must be understood in that context. It is not a "stand-alone" document. This plan does not contain all mitigation required of the certificate holder.

# Shepherds Flat North: Revegetation Plan

[SEPTEMBER 11, 2009]

## 1. Correction for Compaction

The soils in the affected areas are generally too shallow to become compacted by construction activities. The certificate holder shall examine disturbed areas as soon as construction is finished in the area. Areas that appear to be affected by compaction will be treated by deep tillage or ripping (scarification) using the method preferred by the landowner. In some areas, compaction might not become evident until vegetation indicates the condition through poor seed sprouting, stunting or plant death. Where that occurs, the area will be tilled or ripped and then re-seeded.

## 2. Revegetation of Wildlife Habitat Areas

The predominant wildlife habitat subtype that will be disturbed by facility construction is grassland. The seed mix used for revegetation in these areas will contain a mixture of species expected to perform well in the affected soils and including, as available, seed adapted to the local environment. The certificate holder will select a seed mix through consultation with the parcel landowner and the grazing right lessee, ODFW, the Oregon State University Extension Service, the Oregon Department of Agriculture, The Nature Conservancy and the Oregon Department of Energy (Department). The certificate holder shall use seed provided by a reputable supplier and complying with the Oregon Seed Law.

After construction activities are completed, disturbed areas will be evaluated to determine whether restoration seeding is needed. In some areas where existing vegetation has been crushed but not removed during construction, recovery is likely to occur in a reasonable time without intervention. Seeding will not be done in areas where the pre-construction condition was exposed rock, bare soil or sand that is unlikely to support vegetation.

Narrow areas of soil disturbance due to off-road trenching, off-road crane paths and other limited disturbance may be seeded and left without mulch. Hand seeding, rather than mechanical seeding, will be used in small areas where the use of planting equipment is likely to increase the area of disturbance. Larger disturbed areas will be seeded followed by application of weed-free straw or other mulch to protect against erosion and preserve moisture. No-till methods, such as drilling or broadcast seeding, will be employed.

In the arid climate of the site, successful seeding is limited to mid-fall through very early spring. If seeding of large disturbance areas cannot be accomplished within this optimal seeding period within two months after construction disturbance, the areas will be mulched or otherwise treated to minimize erosion until seeding can be done in the fall.

## 3. Weed control

In the spring and early summer (approximately April through June), weeds commonly found on the site can be identified before they seed. After construction, all disturbed areas (except areas of exposed rock, bare soil and sand) will be evaluated annually in the spring for the presence of invasive weed species. The certificate holder shall implement weed control measures recommended by the Gilliam County Weed Control Program. Annual weed inspection and treatment of revegetation areas will be discontinued in areas that are determined to be successfully revegetated, but the certificate holder shall continue to implement a weed control program during facility operation, as required by Condition 38 of the site certificate.

# Shepherds Flat North: Revegetation Plan

[SEPTEMBER 11, 2009]

## 1 IV. Monitoring

### 2 1. Revegetation Record

3 The certificate holder shall maintain a record of revegetation work. In the record, the  
4 certificate holder shall include the date that construction activity was completed in the area to be  
5 restored, a description of the affected area (location, acres affected and pre-disturbance  
6 condition), the date that revegetation work began and a description of the work done within the  
7 affected area. The certificate shall update the revegetation records from time to time, as  
8 revegetation work occurs. The certificate holder shall provide copies of these records to the  
9 Department at the time of submitting the annual report required under the site certificate.

### 10 2. Monitoring Procedures

11 The certificate holder shall monitor the revegetation of wildlife habitat areas as described  
12 in this section, unless the landowner has converted the area to a use inconsistent with the success  
13 criteria. The certificate holder shall employ a qualified investigator (an independent botanist or  
14 revegetation specialist) to examine all non-cropland revegetation areas to assess vegetation cover  
15 (species, structural stage, etc.) and progress toward meeting the success criteria described below  
16 in subsection (3). Within representative sample plots, the investigator will estimate the  
17 percentages of the area that are covered by bare soil, desirable native vegetation or invasive weed  
18 species. The investigator will qualitatively assess the degree of erosion at each site. The  
19 investigator will compare the sample plots with representative reference plots of the same habitat  
20 category and subtype.

21 The investigator will survey at least 20 percent of the disturbed area. The investigator  
22 will select sample plots that are representative of all habitat subtypes disturbed. Sample plots  
23 must proportionally represent areas of light disturbance (crushed vegetation) and areas of heavier  
24 disturbance (scraped or heavily compacted soil). Reference plots will be selected from nearby  
25 undisturbed areas within the same habitat subtype and category. Reference plots should have  
26 similar slopes, soil depth and prevalence of rock outcrops as the sample plots to which they will  
27 be compared.

28 The investigator shall use the same reference and sample plots for every survey, unless  
29 the investigator finds that a plot is no longer suitable for survey purposes. If the investigator  
30 finds a plot is no longer suitable, the investigator will select a suitable replacement plot and  
31 report the reasons for the replacement to the certificate holder, the Department and ODFW.

32 Revegetation monitoring surveys will be conducted annually beginning one year after  
33 initial restoration seeding and continuing until there is sufficient evidence of progress for the  
34 Department to conclude that additional revegetation efforts in the area are not necessary.  
35 Thereafter, the restored areas will be surveyed at five-year intervals for the life of the facility.<sup>2</sup>

36 The investigator will report to the certificate holder, the Department and ODFW  
37 following each inspection. In the report, the investigator shall include an assessment of whether  
38 the revegetated areas are trending toward meeting the success criteria. The investigator will  
39 include in the report any remedial actions recommended. The investigator shall include a report  
40 on the success of weed control measures.

---

<sup>2</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.

## Shepherds Flat North: Revegetation Plan

[SEPTEMBER 11, 2009]

1 Within each revegetation area, the investigator shall evaluate the progress of habitat  
2 recovery in comparison to the reference area. The investigator shall evaluate the following site  
3 conditions (both within the revegetation area and within the reference area):

- 4 • Degree of erosion due to disturbance activities (high, moderate or low).
- 5 • Vegetation density.
- 6 • Relative proportion of desirable vegetation as determined by the average number  
7 of stems of desirable vegetation per square foot or by a visual scan of the area,  
8 noting overall recovery status.
- 9 • Species diversity of desirable vegetation.

### 10 3. Success Criteria

11 A wildlife habitat area is successfully revegetated when its habitat quality is equal to, or  
12 better than, the habitat quality of the reference area as measured by the site conditions listed  
13 above in subsection (2). When the Department finds that the condition of a revegetated wildlife  
14 habitat area satisfies the criteria for revegetation success, the Department will conclude that the  
15 certificate holder has met its restoration obligations for that area. If the Department finds that the  
16 landowner has converted a wildlife habitat area to a use that is inconsistent with the success  
17 criteria, the Department may conclude that the certificate holder has no further obligation to  
18 restore the area for wildlife habitat uses.

19 Revegetation will be considered successful when:

- 20 1. The percentage of vegetation cover by desirable native species in the sample plot  
21 is greater than or equal to the percentage of desirable native species cover in the  
22 reference plots.
- 23 2. The percentage of cover by invasive weed species in the sample plot is less than  
24 10 percent; and
- 25 3. The percentage of bare soil in the sample plot is not greater than the percentage  
26 of bare soil in the reference plot, unless the percentage of desirable native species  
27 cover in the sample plot exceeds the percentage of desirable native species cover  
28 in the reference plots as described in #4 below.
- 29 4. If the percentage of desirable native species cover in the sample plot exceeds the  
30 percentage of desirable native species cover in the reference plots by 10 percent  
31 or more, then the percentage of bare soil in the sample plot may exceed the  
32 percentage of bare soil in the reference plot by up to 20 percent.

### 33 4. Remedial Action in Wildlife Habitat Areas

34 After each monitoring visit, the certificate holder's qualified investigator shall report to  
35 the certificate holder regarding the revegetation progress of each wildlife habitat area. The  
36 investigator shall make recommendations to the certificate holder for reseeded or other remedial  
37 measures for areas that are not showing progress toward achieving revegetation success.

38 Indications that an area is not showing progress toward achieving revegetation success  
39 include emergence of comparatively few plants one year after disturbance or low vegetation

## Shepherds Flat North: Revegetation Plan

[SEPTEMBER 11, 2009]

1 cover in the second monitoring year compared to reference plots and little increase in vegetation  
2 between the first and second monitoring year.

3 The certificate holder shall take appropriate action to meet the objectives of this  
4 revegetation plan. If soil compaction is suspected as the reason for lack of progress, the  
5 compacted areas may be deep tilled or scarified to reduce compaction, followed by re-seeding.  
6 The certificate holder's qualified investigator shall assess the vegetation that has appeared in the  
7 disturbed area to determine specific recommendations for remediation.

8 On an annual basis as part of the annual report on the facility, the certificate holder shall  
9 report to the Department the investigator's recommendations and the remedial actions taken. The  
10 Department may require re-seeding or other remedial measures in those areas that do not meet  
11 the success criteria.

12 If a wildlife habitat area is damaged by wildfire, the certificate holder shall work with the  
13 landowner to restore the damaged area. The certificate holder shall report to the Department on  
14 the damage caused by wildfire and the cause of the fire, if known. The certificate holder shall  
15 continue to report on revegetation progress as described in this plan.

16 If an area is not trending toward meeting the success criteria by the fifth monitoring year  
17 (and has not been converted by the landowner to an inconsistent use), the certificate holder may  
18 conclude that revegetation of the area was unsuccessful and propose appropriate mitigation for  
19 the loss of habitat quality or quantity. The certificate holder shall carry out mitigation actions  
20 approved by the Department, subject to review by the Oregon Energy Facility Council (Council).

### 21 **V. Amendment of the Plan**

22 This Revegetation Plan may be amended from time to time by agreement of the  
23 certificate holder and the Council. Such amendments may be made without amendment of the  
24 site certificate. The Council authorizes the Department to agree to amendments to this plan. The  
25 Department shall notify the Council of all amendments, and the Council retains the authority to  
26 approve, reject or modify any amendment of this plan agreed to by the Department.

**Attachment E: Wildlife Monitoring and Mitigation Plan**

# Shepherds Flat North: Wildlife Monitoring and Mitigation Plan

[SEPTEMBER 11, 2009]

---

1           This plan describes wildlife monitoring that the certificate holder shall conduct during  
2 operation of Shepherds Flat North (SFN).<sup>1</sup> The monitoring objectives are to determine whether  
3 the facility causes significant fatalities of birds and bats and to determine whether the facility  
4 results in a loss of habitat quality.

5           SFN consists of up to 106 wind turbines, two non-guyed meteorological (met) towers, a  
6 substation and other related or supporting facilities as described in the site certificate. The  
7 permanent facility components occupy a combined area of up to 53 acres.<sup>2</sup> The affected habitat  
8 lies within a micro-siting area of approximately 8,103 acres.

9           The certificate holder shall use experienced and properly trained personnel (the  
10 “investigators”) to conduct the monitoring required under this plan. The professional  
11 qualifications of the investigators are subject to approval by the Oregon Department of Energy  
12 (Department). For all components of this plan, the certificate holder shall hire independent third  
13 party investigators (not employees of the certificate holder) to perform monitoring tasks. The  
14 monitoring will be performed in a manner that minimizes agricultural crop loss and interference  
15 with agricultural and ranching activities.

16           The Wildlife Monitoring and Mitigation Plan for SFN has the following components:

17                   1) Fatality monitoring program including:

- 18                           a) Removal trials
- 19                           b) Searcher efficiency trials
- 20                           c) Fatality search protocol
- 21                           d) Statistical analysis

22                   2) Raptor nest monitoring

23                   3) Ongoing monitoring, reporting and handling of wildlife injuries and fatalities

24           Based on the results of the monitoring programs, mitigation of significant impacts may be  
25 required. The selection of the mitigation actions should allow for flexibility in creating  
26 appropriate responses to monitoring results that cannot be known in advance. If the Department  
27 determines that mitigation is needed, the certificate holder shall propose appropriate mitigation  
28 actions to the Department and shall carry out mitigation actions approved by the Department,  
29 subject to review by the Oregon Energy Facility Council (Council).

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<sup>1</sup> This plan is incorporated by reference in the site certificate for Shepherds Flat North and must be understood in that context. It is not a “stand-alone” document. This plan does not contain all mitigation required of the certificate holder.

<sup>2</sup> Estimates of the area that the facility components would occupy are shown in Tables 7 and 8 of the *Final Order on Amendment #1* for the Shepherds Flat Wind Farm (SFWF).

# Shepherds Flat North: Wildlife Monitoring and Mitigation Plan

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## 1. Fatality Monitoring

### (a) Definitions and Methods

#### Seasons

This plan uses the following dates for defining seasons:

Season	Dates and Duration
Spring	March 16 to May 15 (2 months)
Summer	May 16 to August 15 (3 months)
Fall Migration	August 16 to October 31 (2 ½ months)
Winter	November 1 to March 15 (4 ½ months)

#### Schedule

The investigators shall perform fatality monitoring for two years for each phase of construction. For each phase of construction, the first monitoring year will begin one month after the beginning of commercial operation of that phase; the second monitoring year will begin directly following the first 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:

Season	Frequency
Spring	2 searches per month (4 searches)
Summer	1 search per month (3 searches)
Fall	2 searches per month (5 searches)
Winter	1 search per month (4 searches)

#### Search Plots

The investigators shall conduct fatality monitoring within search plots. The certificate holder, in consultation with the investigators and the Oregon Department of Fish and Wildlife (ODFW), 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 circular. Circular search plots will be centered on the turbine location and will have a radius equal to the maximum blade tip height of the turbine contained within the plot. "Maximum blade tip height" is the turbine hub-height plus one-half the rotor diameter. The certificate holder shall provide maps of the search plots to the Department before beginning fatality monitoring at the facility. The investigators shall use the same search plots for each search conducted during a single monitoring year.

#### Sample Size

The sample size for fatality monitoring is the number of turbines searched per phase per monitoring year. For each phase of construction, the investigators shall search a representative sample of the turbines that are built in that phase, according to the following schedule:

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Number of Turbines Built	Sample Size: First Year	Sample Size: Second Year
50 to 106	50	50
less than 50	all turbines	all turbines

1 If 50 to 106 turbines are built in a phase, the investigators shall search a different  
2 representative sample of 50 turbines in the second year, to the extent possible based on the total  
3 number of turbines built.

## 4 (b) Removal Trials

5 The objective of the removal trials is to estimate the length of time avian and bat  
6 carcasses remain in the search area. Estimates of carcass removal rates will be used to adjust  
7 carcass counts for removal bias. “Carcass removal” is the disappearance of a carcass from the  
8 search area due to predation, scavenging or other means such as farming activity.

9 The investigators shall conduct carcass removal trials within each of the seasons defined  
10 above during the years in which fatality monitoring occurs. For each trial, the investigators shall  
11 use 10 to 15 carcasses of small, medium and large-bodied species.<sup>3</sup> Trial carcasses shall be  
12 placed at least 1,000 feet from any search plots and distributed proportionately within habitat  
13 categories and subtypes similar to the search plots.

14 The investigators shall use game birds or other legal sources of avian species as test  
15 carcasses for the removal trials, and the investigators may use carcasses found in fatality  
16 monitoring searches. The investigators shall select species with the same coloration and size  
17 attributes as species found within the site boundary. If suitable trial carcasses are available, trials  
18 during the fall season will include several small brown birds to simulate bat carcasses. Legally  
19 obtained bat carcasses will be used if available.

20 Trial carcasses will be marked discreetly for recognition by searchers and other  
21 personnel. Carcasses will be placed in a variety of postures to simulate a range of conditions. For  
22 example, birds will be: 1) placed in an exposed posture (e.g., thrown over the shoulder), 2)  
23 hidden to simulate a crippled bird (e.g., placed beneath a shrub or tuft of grass) or 3) partially  
24 hidden. The planted carcasses will be located randomly within the carcass removal trial plots.  
25 Trial carcasses will be left at the location until the end of the carcass removal trial.

26 An approximate schedule for assessing removal status is once daily for the first 4 days,  
27 and on days 7, 10, 14, 21, 30 and 45. This schedule may be adjusted depending on actual carcass  
28 removal rates, weather conditions and coordination with the other survey work. The condition of  
29 scavenged carcasses will be documented during each assessment, and at the end of the trial all  
30 traces of the carcasses will be removed from the site. Scavenger or other activity could result in  
31 complete removal of all traces of a carcass in a location or distribution of feathers and carcass  
32 parts to several locations. This distribution will not constitute removal if evidence of the carcass  
33 remains within an area similar in size to a search plot and if the evidence would be discernable to  
34 a searcher during a normal survey.

35 Before beginning removal trials for the second year of fatality monitoring, the certificate  
36 holder shall report the results of the first year removal trials to the Department and ODFW. In the

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<sup>3</sup> To reduce the combined number of carcasses used in the removal trials and searcher efficiency trials, these trials may be coordinated with similar trials for Shepherds Flat Central and Shepherds Flat South if the trials take place in the same year and after consultation with ODFW and approval by the Department.

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1 report, the certificate holder shall analyze whether four removal trials per year, as described  
2 above, provides sufficient data to accurately estimate adjustment factors for carcass removal. The  
3 number of removal trials for the second year of fatality monitoring may be adjusted up or down,  
4 subject to the approval of the Department.

### 5 (c) Searcher Efficiency Trials

6 The objective of searcher efficiency trials is to estimate the percentage of bird and bat  
7 fatalities that searchers are able to find. The certificate holder shall conduct searcher efficiency  
8 trials on the fatality monitoring search plots in both grassland/shrub-steppe and cultivated  
9 agriculture habitat types. A pooled estimate of searcher efficiency will be used to adjust carcass  
10 counts for detection bias.

11 The investigators shall conduct searcher efficiency trials within each of the seasons  
12 defined above during the years in which the fatality monitoring occurs. Each trial will involve  
13 approximately 40 carcasses (approximately 160 carcasses per year). The searchers will not be  
14 notified of carcass placement or test dates. The investigators shall vary the number of trials per  
15 season and the number of carcasses per trial so that the searchers will not know the total number  
16 of trial carcasses being used in any trial.

17 For each trial, the investigators shall use small, medium and large-bodied species. The  
18 investigators shall use game birds or other legal sources of avian species as test carcasses for the  
19 efficiency trials, and the investigators may use carcasses found in fatality monitoring searches.  
20 The investigators shall select species with the same coloration and size attributes as species  
21 found within the site boundary. If suitable test carcasses are available, trials during the fall  
22 season will include several small brown birds to simulate bat carcasses. Legally obtained bat  
23 carcasses will be used if available. The investigators shall mark the test carcasses to differentiate  
24 them from other carcasses that might be found within the search plot and shall use methods  
25 similar to those used to mark removal test carcasses as long as the procedure is sufficiently  
26 discreet and does not increase carcass visibility.

27 The certificate holder shall distribute trial carcasses in varied habitat in rough proportion  
28 to the habitat types within the facility site. On the day of a standardized fatality monitoring  
29 search (described below) but before the beginning of the search, investigators will place  
30 efficiency trial carcasses randomly within search plots (one to three trial carcasses per search  
31 plot) within areas to be searched. If scavengers appear attracted by placement of carcasses, the  
32 carcasses will be distributed before dawn.

33 Efficiency trials will be spread over the entire season to incorporate effects of varying  
34 weather and vegetation growth. Carcasses will be placed in a variety of postures to simulate a  
35 range of conditions. For example, birds will be: 1) placed in an exposed posture (thrown over the  
36 shoulder), 2) hidden to simulate a crippled bird or 3) partially hidden.

37 The number and location of the efficiency trial carcasses found during the carcass search  
38 will be recorded. The number of efficiency trial carcasses available for detection during each  
39 trial will be determined immediately after the trial by the person responsible for distributing the  
40 carcasses. Following plot searches, all traces of test carcasses will be removed from the site.

41 If new searchers are brought into the search team, additional searcher efficiency trials  
42 will be conducted to ensure that detection rates incorporate searcher differences. The certificate

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1 holder shall include a discussion of any changes in search personnel and any additional detection  
2 trials in the reporting required under Section 4 of this plan.

3 Before beginning searcher efficiency trials for the second year of fatality monitoring, the  
4 certificate holder shall report the results of the first year efficiency trials to the Department and  
5 ODFW. In the report, the certificate holder shall analyze whether the efficiency trials as  
6 described above provides sufficient data to accurately estimate adjustment factors for carcass  
7 removal. The number of removal trials for the second year of fatality monitoring may be adjusted  
8 up or down, subject to the approval of the Department.

### 9 (d) Fatality Monitoring Search Protocol

10 The objective of fatality monitoring is to estimate the number of bird and bat fatalities  
11 that are attributable to facility operation as an indicator of the impact of the facility on habitat  
12 quality. The goal of bird and bat fatality monitoring is to estimate fatality rates and associated  
13 variances. The certificate holder shall conduct fatality monitoring using standardized carcass  
14 searches according to the schedule described above.

15 Personnel trained in proper search techniques (“the searchers”) will conduct the carcass  
16 searches by walking parallel transects approximately 20 feet apart within the search plots. A  
17 searcher will walk at a rate of approximately 45 to 60 meters per minute along each transect  
18 searching both sides out to three meters for casualties. Search area and speed may be adjusted by  
19 habitat type after evaluation of the first searcher efficiency trial.

20 Searchers shall flag all avian or bat carcasses discovered. Carcasses are defined as a  
21 complete carcass or body part, 10 or more feathers, or three or more primary feathers in one  
22 location. When parts of carcasses and feathers from the same species are found within a search  
23 plot, searchers shall make note of the relative positions and assess whether or not these are from  
24 the same fatality.

25 All carcasses (avian and bat) found during the standardized carcass searches will be  
26 photographed, recorded and labeled with a unique number. Searchers shall make note of the  
27 nearest two or three structures (turbine, power pole, fence, building or overhead line) and the  
28 approximate distance from the carcass to these structures. The species and age of the carcass will  
29 be determined when possible. Searchers shall make note of the extent to which the carcass is  
30 intact and an estimation of time since death. Searchers shall describe all evidence that might  
31 assist in determination of cause of death, such as evidence of electrocution, vehicular strike, wire  
32 strike, predation or disease, will be described. When assessment of the carcass is complete, all  
33 traces of it will be removed from the site.

34 Each carcass will be bagged and frozen for future reference and possible necropsy. A  
35 copy of the data sheet for each carcass will be kept with the carcass at all times. For each carcass  
36 found, searchers will record species, sex and age when possible, date and time collected,  
37 location, condition (e.g., intact, scavenged, feather spot) and any comments that may indicate  
38 cause of death. Searchers will photograph each carcass as found and will map the find on a  
39 detailed map of the search area showing the location of the wind turbines and associated  
40 facilities. The certificate holder shall coordinate collection of state endangered, threatened,  
41 sensitive or other state protected species with ODFW. The certificate holder shall coordinate  
42 collection of federally-listed endangered or threatened species and Migratory Bird Treaty Act

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1 protected avian species with the U.S. Fish and Wildlife Service (USFWS). The certificate holder  
2 shall obtain appropriate collection permits from ODFW and USFWS.

3 The investigators shall calculate fatality rates using the statistical methods described in  
4 Section (f), except that the investigators may use different notation or methods that are  
5 mathematically equivalent with prior approval of the Department. In making these calculations,  
6 the investigators may exclude carcass data from the first search of each turbine (to eliminate  
7 possible counting of carcasses that were present before the turbine was operating).

8 The investigators shall estimate the number of avian and bat fatalities attributable to  
9 operation of the facility based on the number of avian and bat fatalities found at the facility site.  
10 All carcasses located within areas surveyed, regardless of species, will be recorded and, if  
11 possible, a cause of death determined based on blind necropsy results. If a different cause of  
12 death is not apparent, the fatality will be attributed to facility operation. The total number of  
13 avian and bat fatalities will be estimated by adjusting for removal and searcher efficiency bias.

14 On an annual basis, the certificate holder shall report an estimate of fatalities in eight  
15 categories: 1) all birds, 2) small birds, 3) large birds, 4) raptors, 5) grassland birds, 6) nocturnal  
16 migrants, 7) State Sensitive Species listed under OAR 635-100-0040 and 8) bats. The certificate  
17 holder shall report annual fatality rates on both a per-MW and per-turbine basis.

### 18 (e) Incidental Finds and Injured Birds

19 The searchers might discover carcasses incidental to formal carcass searches (e.g., while  
20 driving within the project area). For each incidentally discovered carcass, the searcher shall  
21 identify, photograph, record data and collect the carcass as would be done for carcasses within  
22 the formal search sample during scheduled searches. If the incidentally discovered carcass is  
23 found within a formal search plot, the fatality data will be included in the calculation of fatality  
24 rates. If the incidentally discovered carcass is found outside a formal search plot, the data will be  
25 reported separately. The certificate holder shall coordinate collection of incidentally discovered  
26 state endangered, threatened, sensitive or other state protected species with ODFW. The  
27 certificate holder shall coordinate collection of incidentally discovered federally-listed  
28 endangered or threatened species and Migratory Bird Treaty Act protected avian species with the  
29 USFWS.

30 The certificate holder shall develop and follow a protocol for handling injured birds. Any  
31 injured native birds found on the facility site will be carefully captured by a trained project  
32 biologist or technician and transported to a qualified rehabilitation specialist approved by the  
33 Department.<sup>4</sup> The certificate holder shall pay costs, if any, charged for time and expenses related  
34 to care and rehabilitation of injured native birds found on the site, unless the cause of injury is  
35 clearly demonstrated to be unrelated to the facility operations.

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<sup>4</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 Department approval before using other specialists.

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### 1 (f) Statistical Methods for Fatality Estimates<sup>5</sup>

2 The estimate of the total number of wind facility-related fatalities is based on:

- 3 (1) The observed number of carcasses found during standardized searches during the  
4 two monitoring years for which the cause of death is attributed to the facility.<sup>6</sup>
- 5 (2) Searcher efficiency expressed as the proportion of planted carcasses found by  
6 searchers.
- 7 (3) Removal rates expressed as the estimated average probability a carcass is expected  
8 to remain in the study area and be available for detection by the searchers during  
9 the entire survey period.

### 10 Definition of Variables

11 The following variables are used in the equations below:

12	$c_i$	the number of carcasses detected at plot $i$ for the study period of interest (e.g., one
13		year) for which the cause of death is either unknown or is attributed to the facility
14	$n$	the number of search plots
15	$k$	the number of turbines searched (includes the turbines centered within each
16		search plot and a proportion of the number of turbines adjacent to search plots to
17		account for the effect of adjacent turbines on the search plot buffer area)
18	$\bar{c}$	the average number of carcasses observed per turbine per year
19	$s$	the number of carcasses used in removal trials
20	$s_c$	the number of carcasses in removal trials that remain in the study area after 40
21		days
22	$se$	standard error (square of the sample variance of the mean)
23	$t_i$	the time (days) a carcass remains in the study area before it is removed
24	$\bar{t}$	the average time (days) a carcass remains in the study area before it is removed
25	$d$	the total number of carcasses placed in searcher efficiency trials
26	$p$	the estimated proportion of detectable carcasses found by searchers
27	$I$	the average interval between searches in days
28	$\hat{\pi}$	the estimated probability that a carcass is both available to be found during a
29		search and is found
30	$m_t$	the estimated annual average number of fatalities per turbine per year, adjusted
31		for removal and observer detection bias
32	$C$	nameplate energy output of turbine in megawatts (MW)

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<sup>5</sup> These statistical methods derive from the *Draft Avian and Bat Monitoring Plan for the Stateline Wind Project*, January 10, 2001 (prepared by FPL Energy, WEST Inc. and Northwest Wildlife Consultants). The present form of the description of statistical methods is based on revisions by the Council in the *Klondike III Wildlife Monitoring and Mitigation Plan*, June 30, 2006.

<sup>6</sup> If a different cause of death is not apparent, the fatality will be attributed to facility operation.

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### 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 40 days are collected, yielding censored observations at 40 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:

$$m_t = \frac{\bar{c}}{\hat{\pi}}, \quad (3)$$

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:

$$\hat{\pi} = \frac{\bar{t} \cdot p}{I} \cdot \left[ \frac{\exp\left(\frac{I}{\bar{t}}\right) - 1}{\exp\left(\frac{I}{\bar{t}}\right) - 1 + p} \right]. \quad (4)$$

The estimated per MW annual fatality rate ( $m$ ) is calculated by:

$$m = \frac{m_t}{C}. \quad (5)$$

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1 The final reported estimates of  $m$ , associated standard errors and 90% confidence  
2 intervals will be calculated using bootstrapping (Manly 1997). Bootstrapping is a computer  
3 simulation technique that is useful for calculating point estimates, variances and confidence  
4 intervals for complicated test statistics. For each iteration of the bootstrap, the plots will be  
5 sampled with replacement, trial carcasses will be sampled with replacement and  $\bar{c}$ ,  $\bar{t}$ ,  $p$ ,  $\hat{\pi}$  and  
6  $m$  will be calculated. A total of 5,000 bootstrap iterations will be used. The reported estimates  
7 will be the means of the 5,000 bootstrap estimates. The standard deviation of the bootstrap  
8 estimates is the estimated standard error. The lower 5<sup>th</sup> and upper 95<sup>th</sup> percentiles of the 5000  
9 bootstrap estimates are estimates of the lower limit and upper limit of 90% confidence intervals.

### 10 Nocturnal Migrant and Bat Fatalities

11 Differences in observed nocturnal migrant and bat fatality rates for lit turbines, unlit  
12 turbines that are adjacent to lit turbines and unlit turbines that are not adjacent to lit turbines will  
13 be compared graphically and statistically.

### 14 (g) Mitigation

15 The certificate holder shall use a worst-case analysis to resolve any uncertainty in the  
16 results and to determine whether the data indicate that additional mitigation should be  
17 considered. The Department may require additional, targeted monitoring if the data indicate the  
18 potential for significant impacts that cannot be addressed by worst-case analysis and appropriate  
19 mitigation.

20 Mitigation may be appropriate if fatality rates exceed a “threshold of concern.”<sup>7</sup> For the  
21 purpose of determining whether a threshold has been exceeded, the certificate holder shall  
22 calculate the average annual fatality rates for species groups after two years of monitoring. Based  
23 on current knowledge of the species that are likely to use the habitat in the area of the facility, the  
24 following thresholds apply to SFN:

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<sup>7</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 WMMP to guide consideration of additional mitigation based on two years of monitoring data.”

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Species Group	Threshold of Concern (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 and any federal threatened or endangered raptor species.)	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

1 If the data show that a threshold of concern for a species group has been exceeded, the  
2 certificate holder shall implement additional mitigation if the Department determines that  
3 mitigation is appropriate based on analysis of the data, consultation with ODFW and  
4 consideration of any other significant information available at the time. In addition, the  
5 Department may determine that mitigation is appropriate if fatality rates for individual avian or  
6 bat species (especially State Sensitive Species) are higher than expected and at a level of  
7 biological concern. If the Department determines that mitigation is appropriate, the certificate  
8 holder, in consultation with the Department and ODFW, shall propose mitigation measures  
9 designed to benefit the affected species. The certificate holder shall implement mitigation as  
10 approved by the Department, subject to review by the Council. The Department may recommend  
11 additional, targeted data collection if the need for mitigation is unclear based on the information  
12 available at the time. The certificate holder shall implement such data collection as approved by  
13 the Council.

14 Mitigation should be designed to benefit the affected species group. Mitigation may  
15 include, but is not limited to, protection of nesting habitat for the affected group of native species  
16 through a conservation easement or similar agreement. Tracts of land that are intact and  
17 functional for wildlife are preferable to degraded habitat areas. Preference should be given to  
18 protection of land that would otherwise be subject to development or use that would diminish the  
19 wildlife value of the land. In addition, mitigation measures might include: enhancement of a  
20 protected tract that is degraded by weed removal and control; increasing the diversity of native  
21 grasses and forbs; planting sagebrush or other shrubs; constructing and maintaining artificial nest  
22 structures for raptors; improving wildfire response; and conducting or making a contribution to  
23 research that will aid in understanding more about the affected species and its conservation needs  
24 in the region.

## 25 2. Raptor Nest Monitoring

26 The objectives of raptor nest surveys are: (1) to estimate the size of the local breeding  
27 populations of raptor species that nest on the ground or aboveground in trees or other  
28 aboveground nest locations in the vicinity of the facility; and (2) to determine whether operation  
29 of the facility results in a reduction of nesting activity or nesting success in the local populations  
30 of the following raptor species: Swainson's hawk, golden eagle, ferruginous hawk and burrowing  
31 owl.

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1 The certificate holder shall conduct short-term and long-term monitoring. The certificate  
2 holder's qualified investigators will use aerial and ground surveys to evaluate nest success by  
3 gathering data on active nests, on nests with young and on young fledged. The investigators will  
4 analyze the data as described in Section 3(c) and will share the data with state and federal  
5 biologists.

### 6 (a) Short-Term Monitoring

7 Short-term monitoring will be done in two monitoring seasons. The first monitoring  
8 season will be in the first raptor nesting season after completion of construction of SFN. The  
9 second monitoring season will be in the fourth year after construction is completed. The  
10 investigators will analyze two years of data after the second monitoring season.

#### 11 Survey Protocol for Raptor Species that Nest Aboveground

12 During each monitoring season, the investigators will conduct a thorough ground survey  
13 for raptor nests in late May or early June and additional surveys as described in this section. The  
14 survey area is the area within the SFN site and a 2-mile buffer around the site. All nests  
15 discovered during pre-construction surveys and any nests discovered during post-construction  
16 surveys, whether active or inactive, will be given identification numbers. Nest locations will be  
17 recorded on U.S. Geological Survey 7.5-minute quadrangle maps. Global positioning system  
18 coordinates will be recorded for each nest. Locations of inactive nests will be recorded because  
19 they could become occupied during future years.

20 Determining nest *occupancy* will likely require at least two visits to each nest. For  
21 occupied nests, the certificate holder will determine nesting *success* by a minimum of one  
22 ground visit to determine species, number of young and young fledged. "Nesting success" means  
23 that the young have successfully fledged (the young are independent of the core nest site). Nests  
24 that cannot be monitored due to the landowner denying access will be checked from a distance  
25 where feasible.

#### 26 Survey Protocol for Burrowing Owls

27 The investigators will monitor burrowing owl nests according to the following protocol.  
28 The investigators will monitor all nests discovered during pre-construction surveys and any  
29 additional burrowing owl nest sites that are discovered during any wildlife monitoring tasks  
30 conducted under this plan. All nests will be given identification numbers. Nest locations will be  
31 recorded on U.S. Geological Survey 7.5-minute quadrangle maps. Global positioning system  
32 coordinates will be recorded for each nest site. Coordinates for ancillary burrows used by one  
33 nesting pair or a group of nesting pairs will also be recorded. Locations of inactive nests will be  
34 recorded because they could become occupied during future years.

35 For occupied nests, the certificate holder will determine nesting *success* by a minimum of  
36 one ground visit to determine species, number of young and young fledged. "Nesting success"  
37 means that the young have successfully fledged (the young may or may not be independent of  
38 the core nest site). Three visits to the nest sites may be necessary to determine outcome. Nests  
39 that cannot be monitored due to the landowner denying access will be checked from a distance  
40 where feasible.

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### 1 (b) Long-Term Monitoring

2 In addition to the two years of post-construction raptor nest surveys described above, the  
3 certificate holder will conduct long-term raptor nest surveys at five-year intervals for the life of  
4 the facility.<sup>8</sup> Investigators will conduct the first long-term raptor nest survey in the raptor nesting  
5 season of the ninth year after construction is completed and will repeat the survey at five-year  
6 intervals thereafter. In conducting long-term surveys, the investigators will follow the same  
7 survey protocols as described above in Section 3(a) unless the investigators propose alternative  
8 protocols that are approved by the Department. In developing an alternative protocol, the  
9 investigators will consult with ODFW. The investigators will analyze the data after each year of  
10 long-term raptor nest surveys.

### 11 (c) Analysis

12 The investigators will analyze the raptor nesting data to determine whether a reduction in  
13 either nesting success or nest use has occurred in the survey area. If the analysis indicates a  
14 reduction in nesting success or nest use by Swainson's hawks, golden eagles, ferruginous hawks  
15 or burrowing owls, then the certificate holder will propose appropriate mitigation for the affected  
16 species as described in Section 3(d) and will implement mitigation as approved by the  
17 Department, subject to review by the Council

18 Any reduction in nesting success or nest use could be due to operation of SFN or some  
19 other cause. The investigators will attribute the reduction to operation of SFN unless the  
20 investigators demonstrate, and the Department agrees, that the reduction was due to a different  
21 cause. At a minimum, if the analysis shows that a Swainson's hawk, golden eagle, ferruginous  
22 hawk or burrowing owl has abandoned a nest territory within the facility site or within ½ mile of  
23 the facility site or has not fledged any young over two successive surveys within that same area,  
24 the investigators will assume the abandonment or unsuccessful fledging is due to operation of the  
25 facility unless another cause can be demonstrated convincingly.

26 Given the low raptor nesting densities in the area, statistical power to detect a relationship  
27 between distance from a wind turbine and nesting parameters (e.g., number of fledglings per  
28 reproductive pair) will be very low. Therefore, impacts may have to be judged based on trends in  
29 the data, results from other wind energy facility monitoring studies and literature on what is  
30 known regarding the populations in the region.

### 31 (d) Mitigation

32 The certificate holder will propose mitigation for the affected species in consultation with  
33 the Department and ODFW and will implement mitigation as approved by the Council. In  
34 proposing appropriate mitigation, the certificate holder will advise the Department if any other  
35 wind project in the area is obligated to provide mitigation for a reduction in raptor nesting  
36 success at the same nest site. Mitigation should be designed to benefit the affected species or  
37 contribute to overall scientific knowledge and understanding of what causes nest abandonment or  
38 nest failure. Mitigation may be designed to proceed in phases over several years. It may include,  
39 but is not limited to, additional raptor nest monitoring, protection of natural nest sites from  
40 human disturbance or cattle activity (preferably within the general area of the facility) or

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<sup>8</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.

# Shepherds Flat North: Wildlife Monitoring and Mitigation Plan

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1 participation in research projects designed to improve scientific understanding of the needs of the  
2 affected species.

### 3 **3. Ongoing Reporting and Handling of Wildlife Injuries and Fatalities**

4 The certificate holder will implement an ongoing monitoring program for avian and bat  
5 casualties found during operation of the facility. The certificate holder will train facility  
6 personnel in the methods and practices needed to carry out this program. Facility personnel shall  
7 monitor the areas around all facility structures that may present a collision risk to avian and bat  
8 species, including turbine towers, meteorological towers, aboveground transmission lines, the  
9 substation and the field workshop. The monitoring program will include initial response,  
10 handling and reporting of bird and bat carcasses discovered incidental to maintenance operations  
11 (“incidental finds”). Maintenance personnel will follow the certificate holder’s protocol for  
12 handling injured birds as described in Section 1(d).

13 All avian and bat carcasses discovered by maintenance personnel will be photographed  
14 and data will be recorded as would be done for carcasses within the formal search sample during  
15 scheduled searches as described in Section 1(d). Maintenance personnel will notify a project  
16 biologist of incidental finds. The project biologist must be a qualified independent professional  
17 biologist who is not an employee of the certificate holder. The project biologist (or the project  
18 biologist’s experienced wildlife technician) will collect the carcass or will instruct maintenance  
19 personnel to have an on-site carcass handling permittee collect the carcass. The certificate  
20 holder’s on-site carcass handling permittee must be a person who is listed on state and federal  
21 scientific or salvage collection permits and who is available to process (collect) the find on the  
22 day it is discovered. The find must be processed on the same day as it is discovered. The  
23 certificate holder shall coordinate collection of state endangered, threatened, sensitive or other  
24 state protected species with ODFW. The certificate holder shall coordinate collection of  
25 federally-listed endangered or threatened species and Migratory Bird Treaty Act protected avian  
26 species with the USFWS.

27 During the years in which fatality monitoring occurs, if there are incidental finds outside  
28 the search plots for the fatality monitoring searches, the data will be reported separately from  
29 fatality monitoring data. Data on incidental finds within search plots will be included in the  
30 calculation of fatality rates.

31 The Department may determine that mitigation is appropriate if avian or bat fatalities are  
32 higher than expected and at a level of biological concern. If the Department determines that  
33 mitigation is appropriate, the certificate holder, in consultation with the Department and ODFW,  
34 shall propose mitigation measures designed to benefit the affected species. The certificate holder  
35 shall implement mitigation as approved by the Department, subject to review by the Council.

### 36 **4. Data Reporting**

37 The certificate holder will report wildlife monitoring data and analysis to the Department.  
38 The certificate holder shall notify USFWS and ODFW immediately if any federal or state  
39 endangered or threatened species are killed or injured on the facility site. The certificate holder  
40 shall report fatality monitoring program data, raptor nest monitoring data and data on avian and  
41 bat casualties found by facility personnel. The certificate holder may include the reporting of  
42 wildlife monitoring data and analysis in the annual report required under OAR 345-026-0080 or  
43 submit this information as a separate document at the same time the annual report is submitted.

## Shepherds Flat North: Wildlife Monitoring and Mitigation Plan

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1 In addition, the certificate holder shall provide to the Department any data or record generated by  
2 the investigators in carrying out this monitoring plan upon request by the Department.

### 3 **5. Amendment of the Plan**

4 This Wildlife Monitoring and Mitigation Plan may be amended from time to time by  
5 agreement of the certificate holder and the Council. Such amendments may be made without  
6 amendment of the site certificate. The Council authorizes the Department to agree to  
7 amendments to this plan and to mitigation actions that may be required under this plan. The  
8 Department shall notify the Council of all amendments and mitigation actions, and the Council  
9 retains the authority to approve, reject or modify any amendment of this plan or mitigation action  
10 agreed to by the Department.

**Attachment F: Habitat Mitigation Plan**

# Shepherds Flat North: Habitat Mitigation Plan

[REVISED DECEMBER 9, 2011]

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1 **I. Introduction**

2 This plan describes methods and standards for preservation and enhancement of an area  
3 of land near Shepherds Flat North (SFN) to mitigate for the impacts of the facility on wildlife  
4 habitat.<sup>1</sup> This plan addresses mitigation for both the permanent impacts of facility components  
5 and the temporal impacts of facility construction. The certificate holder shall protect and enhance  
6 the mitigation area as described in this plan. This plan specifies habitat enhancement actions and  
7 monitoring procedures to evaluate the success of those actions. This plan does not address  
8 additional mitigation that might be required under the SFN Wildlife Monitoring and Mitigation  
9 Plan.

10 **II. Description of the Impacts Addressed by the Plan**

11 The SFN footprint (area covered by permanent facility components) occupies areas of  
12 Category 2, Category 3 and Category 4 grassland, Category 5 habitat and Category 6 habitat. In  
13 compliance with Condition 86 of the site certificate, the certificate holder must avoid any  
14 permanent or temporary impact on “all Category 1 habitat and those areas of Category 2 habitat  
15 shown on the “ODFW-2” Figures 1 through 12 in the Shepherds Flat Wind Farm Application.”  
16 The final design of the facility complied with this requirement. Affected areas of Category 2  
17 habitat had been classified as Category 3 habitat at the time of the Shepherds Flat Wind Farm  
18 application in 2007 but were reclassified as Category 2 in May 2010 during the pre-construction  
19 habitat survey. The habitat quality of these reclassified areas had improved due to the passage of  
20 time and the absence of wildfire.

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

22 The habitat mitigation area (HMA) must be large enough to achieve, within a reasonable  
23 time, the habitat mitigation goals and standards of the Oregon Department of Fish and Wildlife  
24 (ODFW) described in OAR 635-415-0025. For the footprint impacts, the mitigation area must  
25 include two acres for every one acre of Category 2 habitat affected (a 2:1 ratio) and one acre for  
26 every acre of impact to Category 3 and 4 habitat (a 1:1 ratio). The 2:1 ratio for Category 2 is  
27 intended to meet the ODFW goals of “no net loss” of Category 2 habitat and “net benefit” of  
28 habitat quantity. The ODFW goals require mitigation to achieve “no net loss” of habitat in  
29 Categories 3 and 4 (acre-for-acre mitigation). For Category 5 impacts, mitigation is achieved by  
30 a “net benefit in habitat quantity or quality.” To mitigate for Category 5 impacts, ODFW  
31 recommends that “the applicant enhance at least ½ acre of Category 3, 4, or 5 habitat” for every  
32 acre of impact on Category 5 habitat.<sup>2</sup> For Category 6, mitigation is achieved by actions that  
33 minimize direct habitat loss and avoid impacts to off-site habitat.

34 To address the temporal loss of habitat quality during the recovery of Category 3 shrub-  
35 steppe-sage (SS-S) habitat temporarily disturbed during construction of SFN (outside the  
36 footprint), the HMA must include ½ acre for every acre of Category 3 SS-S habitat affected (a

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<sup>1</sup> This plan is incorporated by reference in the site certificate for Shepherds Flat North and must be understood in that context. It is not a “stand-alone” document. This plan does not contain all mitigation required of the certificate holder.

<sup>2</sup> Email from Jon Germond, ODFW, February 26, 2008.

## Shepherds Flat North: Habitat Mitigation Plan

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1 0.5:1 ratio). If the revegetation success criteria are not met in the affected areas of temporarily  
2 disturbed SS-S habitat, as determined under the SFN Revegetation Plan, then the Council may  
3 require the certificate holder to provide additional mitigation.

4 Before beginning construction of the facility, the certificate holder provided to the  
5 Oregon Department of Energy (Department) and ODFW maps showing the final design  
6 configuration of the facility and a table showing the acres of permanent impacts and construction  
7 area impacts on habitat (by category, habitat types and habitat subtypes).<sup>3</sup>

8 Based on the final design habitat assessment, SFN has had the following footprint  
9 impacts:

Habitat Category	Footprint Impact (acres)
Category 2	4
Category 3	33.5
Category 4	9.5
Category 5	0.3
Category 6	0.9
Total area	48.2

10 The overall minimum size of the HMA, the area of impact within each affected habitat  
11 category and the corresponding mitigation area requirements are shown below, based on the final  
12 design of SFN:

13 Category 2

14 Footprint impacts: 4 acres

15 Mitigation area: (4 acres x 2) = 8 acres

16

17 Category 3

18 Footprint impacts: 33.5 acres

19 Temporal impacts to SS-S: 1.9 acres

20 Mitigation area requirement: 33.5 acres + (1.9 acres x 0.5) = 34.45 acres

21 Category 4

22 Footprint impacts: 9.5 acres

23 Mitigation area requirement: 9.5 acres

24 Category 5

25 Footprint impacts: 0.3 acres

26 Mitigation area requirement: (0.3 acres x 0.5) = 0.15 acres of Category 3, 4 or 5 habitat<sup>4</sup>

27 **Total mitigation area (rounded to nearest whole acre): 52 acres**

28 Before beginning construction, the certificate holder determined the final size and  
29 boundaries of the mitigation area in consultation with ODFW and the affected landowners and

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<sup>3</sup> The pre-construction habitat survey is described in "SFN Disturbance.pdf" (email from Patricia Pilz, May 24, 2010).

<sup>4</sup> ODFW has advised the Department that the Category 5 "net benefit" goal "recognizes that Category 5 habitats are generally in a 'degraded' state, but have high restoration potential" and that "fish and wildlife species would not benefit much from mitigation taking place on Category 5 habitat" (email from Jon Germond, ODFW, February 26, 2008).

## Shepherds Flat North: Habitat Mitigation Plan

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1 with the approval of the Department. The certificate holder acquired the legal right to create,  
2 maintain and protect the HMA for the life of the facility by means of a conservation easement  
3 and provided a copy of the documentation to the Department.<sup>5</sup>

### 4 **IV. Description of the Mitigation Area**

5 The ODFW standards require mitigation for Category 2 and Category 3 impacts to be “in  
6 proximity” to SFN, and the HMA must be located where habitat protection and enhancement are  
7 feasible consistent with this plan.<sup>6</sup> The applicant for the Shepherds Flat Wind Farm identified a  
8 435-acre parcel in proximity to SFN but outside the site boundary. The baseline habitat  
9 characteristics of the 435-acre parcel are described in Section IV.4(b)(F) of the *Final Order on*  
10 *the Application for the Shepherds Flat Wind Farm* (July 25, 2008). This parcel, however, was  
11 not available to the certificate holder when construction of SFN was ready to begin. The  
12 certificate holder identified a replacement parcel, and the Department approved the parcel.  
13 ODFW determined that the replacement parcel was suitable for mitigation.<sup>7</sup> The HMA for SFN  
14 is contiguous with the HMAs for Shepherds Flat Central and Shepherds Flat South and is  
15 bordered on the north by lands held by The Nature Conservancy.<sup>8</sup> It is located east of Highway  
16 74 north of Cecil. The HMA for SFN consists of approximately 67 acres containing grasslands,  
17 sage steppe and ranch roads.<sup>9</sup> There are no trees and no observed raptor nests within the HMA.  
18 The terrain consists of ridges separated by ravines perpendicular to and sloping down towards  
19 Willow Creek. The HMA includes approximately 32 acres of Category 2 grassland and SS-S  
20 habitat and 21 acres of Category 3 grassland and SS-S habitat. The landowner has used the area  
21 for cattle grazing.

### 22 **V. Habitat Enhancement Actions**

23 The certificate holder shall implement the habitat enhancement actions described in this  
24 plan. The objectives of the plan are to protect the habitat within the HMA for the life of the  
25 facility and to enhance the baseline condition of the habitat to meet the ODFW mitigation goals.

26 To achieve “no net loss” of habitat quantity or quality to mitigate for the permanent  
27 impacts of SFN in Category 2, 3 and 4 habitats and to achieve a “net benefit in habitat quantity  
28 or quality” to mitigate for the permanent impacts in Category 2 and 5 habitat, the certificate  
29 holder shall protect the habitat within the HMA for the life of the facility and shall implement the  
30 enhancement actions.<sup>10</sup> The certificate holder began the enhancement actions described in this  
31 section after the final design configuration of SFN was known and the location, size and

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<sup>5</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.

<sup>6</sup> OAR 635-415-0005 defines “in-proximity habitat mitigation” as follows: “habitat mitigation measures undertaken within or in proximity to areas affected by a development action. For the purposes of this policy, ‘in proximity to’ means within the same home range, or watershed (depending on the species or population being considered) whichever will have the highest likelihood of benefiting fish and wildlife populations directly affected by the development.”

<sup>7</sup> Email from Steve Cherry, ODFW, May 5, 2010.

<sup>8</sup> A more detailed description of the HMA, including maps and photographs, may be found in “Habitat mitigation area. pdf” (email from Patricia Pilz, May 21, 2010).

<sup>9</sup> Revised acreage calculations (email from Patricia Pilz, November 4, 2011).

<sup>10</sup> ODFW has advised the Department that protection of habitat alone (without enhancement activity) will not meet the intent of ODFW’s Fish and Wildlife Mitigation Policy (Letter from Rose Owens, November 9, 2006, in reference to the Leaning Juniper II Wind Power Facility).

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1 boundaries of the HMA were determined and approved by the Department. Specific  
2 enhancement actions are described below.

- 3 1. Modification of Livestock Grazing Practices. The certificate holder shall restrict  
4 grazing within the habitat mitigation area. Limited livestock grazing in the  
5 mitigation area will enable recovery of native bunchgrass and sagebrush in areas  
6 where past grazing has occurred, resulting in better vegetative structure and  
7 complexity for wildlife. Reduced livestock grazing may be used as a vegetation  
8 management tool, limited to the period from November 15 to May 15.
- 9 2. Weed Control and Area Seeding. The certificate holder shall implement a weed  
10 control program. Under the weed control program, the certificate holder shall  
11 monitor the mitigation area to locate weed infestations. The certificate holder shall  
12 continue weed control monitoring, as needed, for the life of the facility. As needed,  
13 the certificate holder shall use appropriate methods to control weeds. Weed control  
14 on the mitigation site will reduce the spread of noxious weeds within the habitat  
15 mitigation area and on any nearby grassland, CRP or cultivated agricultural land.  
16 Weed control will promote the growth of desirable native vegetation. Where  
17 substantial areas of soil (greater than 100 ft<sup>2</sup>) are left bare from weed control  
18 activities, the certificate holder shall hand-seed the area in the appropriate time of  
19 year with a mixture containing native grass and shrub seeds. The certificate holder  
20 may consider weeds to be successfully controlled when weed clusters have been  
21 eradicated or reduced to a non-competing level. Weeds may be controlled with  
22 herbicides or hand-pulling. The certificate holder shall notify the landowner of the  
23 specific chemicals to be used on the site and when spraying will occur. To protect  
24 locations where young desirable forbs may be growing, spot-spraying may be used  
25 instead of total area spraying.
- 26 3. Fire Control. The certificate holder shall implement a fire control plan for wildfire  
27 suppression within the HMA. The certificate holder shall provide a copy of the fire  
28 control plan to the Department before starting habitat enhancement actions. The  
29 certificate holder shall include in the plan appropriate fire prevention measures,  
30 methods to detect fires that occur and a protocol for fire response and suppression.  
31 The certificate holder shall maintain fire control for the life of the facility. If wildfire  
32 damages any part of the HMA during the life of the facility, the certificate holder  
33 shall assess the extent of the damage and implement appropriate actions to restore  
34 habitat quality in the damaged area.
- 35 4. Erosion Control. The certificate holder shall monitor the HMA to locate sites at  
36 which past livestock grazing or vegetation loss has caused soil erosion. As needed,  
37 the certificate holder shall control erosion by a combination of sediment barriers  
38 (such as hay bales, mulch or native rock) and seeding the affected area with a  
39 mixture containing native grasses and shrub seeds. The certificate holder may  
40 consider erosion control to be successful when eroded areas can support vegetation  
41 and no indications of new soil loss are evident.
- 42 5. Habitat Protection. For the life of the facility, the certificate holder shall restrict uses  
43 of the HMA that are inconsistent with achieving the habitat mitigation goals.

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- 1           6. Litter Removal. To protect wildlife from wind-blown litter, the certificate holder  
2           shall monitor the Highway 74 Oregon Trail Wayside on a monthly basis and shall  
3           remove litter from the wayside area and areas within the HMA.

### 4 **VI. Monitoring**

#### 5 **1. Monitoring Procedures**

6           The certificate holder shall hire a qualified investigator (an independent botanist, wildlife  
7           biologist or revegetation specialist) to conduct a comprehensive monitoring program for the  
8           HMA. The purpose of monitoring is to evaluate the protection of habitat quality, the results of  
9           enhancement actions and the use of the area by avian and mammal species, especially during the  
10          wildlife breeding season. The investigator shall conduct HMA monitoring beginning in the first  
11          year after enhancement actions begin and continuing for the life of the facility. The investigator  
12          shall visit the site as necessary to carry out the following monitoring procedures:

- 13           1) Annually assess the general quality of vegetation cover (species, structural stage, etc).  
14           2) Annually assess progress toward meeting the success criteria.  
15           3) Annually record environmental factors (such as precipitation at the time of surveys  
16           and precipitation levels for the year).  
17           4) Annually record any wildfire that occurs within the HMA and any remedial actions  
18           taken to restore habitat quality in the damaged area.  
19           5) Annually assess the success of the weed control (including area seeding) and erosion  
20           control programs and recommend remedial action, if needed.  
21           6) Assess the recovery of native bunchgrass and natural recruitment of sagebrush  
22           resulting from removal of livestock grazing pressure by comparing the quality of  
23           bunchgrass and sagebrush cover at the time of each monitoring visit with the quality  
24           observed in previous monitoring visits and as observed when the HMA was first  
25           established. The investigator shall establish photo plots of naturally recovering  
26           sagebrush and native bunchgrass during the first year following the beginning of  
27           enhancement actions. The investigator shall take comparison photos in the first year  
28           and every two years thereafter until desirable vegetation has achieved mature stature.  
29           The investigator shall determine the extent of successful recovery of native  
30           bunchgrass based on measurable indicators (such as signs of more abundant seed  
31           production) and shall report on the progress of recovery within in the monitoring  
32           plots. The investigator shall report on the timing and extent of any livestock grazing  
33           that has occurred within the mitigation area since the previous monitoring visit.  
34           7) Between April 21 and May 21 beginning in the first spring season after the beginning  
35           of construction of SFN, conduct an area search survey of avian species. An “area  
36           search” survey consists of recording all birds seen or heard in specific areas (for  
37           example, square or circular plots that are 5 to 10 acres in size). Area searches will be  
38           conducted during morning hours on days with low or no wind. The investigator shall  
39           determine the number searches and the number of search areas in consultation with  
40           ODFW. The investigator shall repeat the area search survey every five years during  
41           the life of the facility.

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- 1           8) Beginning in the first year after the beginning of construction of SFN and repeating  
2           every five years during the life of the facility, the investigator shall record  
3           observations of special status plant and wildlife species (federal or State threatened or  
4           endangered species and State sensitive species) during appropriate seasons for  
5           detection of these species.

## 6   **2. Reporting**

7           The certificate holder shall report the investigator’s findings and recommendations  
8           regarding the monitoring of the mitigation area to the Department and to ODFW on an annual  
9           basis. The certificate holder shall describe all habitat mitigation actions carried out during the  
10          reporting year and all additional work performed based on recommendations of the qualified  
11          investigator. The report shall include an evaluation of mitigation success, based on the success  
12          criteria described below, and a description of the methods used to perform the evaluation. The  
13          report to the Department may be included as part of the annual report on SFN that is required  
14          under Condition 21 of the site certificate.

## 15   **3. Success Criteria**

16          Mitigation of the permanent and temporal habitat impacts of the facility may be  
17          considered successful if the certificate holder protects and enhances sufficient habitat within the  
18          mitigation area to meet the ODFW goals of no net loss of habitat in Categories 2, 3 and 4 and a  
19          “net benefit” for impacts to habitat in Categories 2 and 5. The certificate holder must protect the  
20          quantity and quality of habitat within the HMA for the life of the facility. The mitigation goals  
21          are successfully achieved when the HMA contains a sufficient quantity of habitat in each  
22          category to meet the mitigation area requirements calculated under Section III. The certificate  
23          holder may count habitat of higher value toward meeting the acreage requirements for Category  
24          3, 4 and 5 habitat.

25          The certificate holder may demonstrate enhancement of habitat quality based on evidence  
26          of indicators such as increased avian use by a diversity of species, more abundant seed  
27          production of desirable native bunchgrass, natural recruitment of sagebrush and successful weed  
28          control.

29          If the certificate holder cannot demonstrate that the HMA is trending toward meeting the  
30          success criteria within five years after the date construction of SFN begins, the certificate holder  
31          shall propose remedial action. The Department may require supplemental planting or other  
32          corrective measures, which may include increasing the size of the HMA.

## 33   **VII. Amendment of the Plan**

34          This Habitat Mitigation Plan may be amended from time to time by agreement of the  
35          certificate holder and the Oregon Energy Facility Siting Council (“Council”). Such amendments  
36          may be made without amendment of the site certificate. The Council authorizes the Department  
37          to agree to amendments to this plan. The Department shall notify the Council of all amendments,  
38          and the Council retains the authority to approve, reject or modify any amendment of this plan  
39          agreed to by the Department.