

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

In the Matter of the Request for Amendment #4 of)
the Site Certificate for the Golden Hills Wind Project)

)
)
)
)

PROPOSED ORDER ON
AMENDMENT 4 AND REQUEST
FOR TRANSFER OF THE SITE
CERTIFICATE

March 2018

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- Attachment A: List of Existing, Amended, New, Removed, and Consolidated Site Certificate Conditions
- Attachment B: Amended Site Certificate [PLACEHOLDER – To be included in Final Order]
- Attachment C: Draft 2018 Habitat Mitigation and Revegetation Plan (Includes red-line and clean versions)
- Attachment D: Raptor Nest Survey Protocol (As Approved in the *Final Order on Amendment 2*)
- Attachment E: Wildlife Monitoring and Mitigation Plan (As Approved in May 2009)
- Attachment F: Request for Amendment Comment Summary Table

1 **I. INTRODUCTION**

2 The Oregon Department of Energy (Department) issues this proposed order in accordance with
3 Oregon Revised Statute (ORS) 469.405 and Oregon Administrative Rule (OAR) 345-027-0070 for
4 the request by Golden Hills Wind Farm, LLC (Golden Hills or certificate holder) for Amendment
5 #4 of the Golden Hills Wind Project Site Certificate and a transfer request. The Amendment
6 includes a transfer request reflecting a change in certificate holder ownership, but does not
7 change the certificate holder, Golden Hills Wind Farm, LLC. A change in certificate holder
8 ownership requires a site certificate transfer pursuant to OAR 345-027-0100(1)(a). Therefore,
9 this order addresses a change in the ownership of the certificate holder, from the current
10 parent company, Orion Renewable Energy Group, LLC, to Pacific Wind Development, LLC
11 (Pacific Wind), a new parent company and wholly-owned subsidiary of Avangrid Renewables,
12 LLC (Avangrid).

13
14 Pursuant to OAR 345-027-0100(1), “a transfer of ownership requires a transfer of the site
15 certificate when the person who will have the legal right to possession and control of the site or
16 the facility does not have authority under the site certificate to construct, operate or retire the
17 facility.” A “transferee” refers to the person who will become the new site certificate holder.

18
19 As described above, the transfer request does not change the certificate holder, Golden Hills
20 Wind Farm, LLC for the analysis presented in this order, “transferee” refers to both the
21 certificate holder and the new owner or parent company of the certificate holder; and, the
22 organizational expertise and financial assurance of the new parent company, Avangrid, is
23 evaluated for compliance with the applicable Council standards in accordance with OAR 345-
24 027-100.¹

25
26 In addition to the transfer request, the certificate holder requests the approval of the Energy
27 Facility Siting Council (EFSC or the Council) to authorize an extension of the construction
28 commencement deadline by an additional two years, from the current deadline of June 18,
29 2018 to June 18, 2020. The certificate holder has not requested to extend the construction
30 completion deadline, which is June 18, 2021. The Department issues this combined order
31 addressing both the site certificate transfer request and the amendment request to extend the
32 construction commencement deadline.

33

¹ In the transfer request, the transferee predominately relies upon the organizational expertise of Avangrid Renewables, LLC (Avangrid), to support the evaluation of compliance with the Council’s Division 27 rules and Division 22 Standards. Pacific Wind Development, LLC (Pacific Wind) is a wholly-owned subsidiary Avangrid. As presented in Section III.A.2. Organizational Expertise, of this order, the Department recommends that Council acknowledge the organizational expertise of Avangrid as representative of Pacific Wind’s access to technical resources in the construction, operation and management of wind facilities. In Section III.A.7 Retirement and Financial, the department also recommends that Council acknowledge the retirement and financial assurance of Avangrid as representative of Pacific Wind’s reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition.

1 Based upon review of this request for amendment (RFA) and the comments and
2 recommendations received by state agencies and local government, **the Department**
3 **recommends the Council approve and grant an amendment** to the Golden Hills Wind Project
4 Site Certificate (site certificate) and approve the site certificate transfer request subject to the
5 existing site certificate conditions and recommended new or modified conditions set forth in
6 this proposed order.

7
8 This RFA was submitted prior to EFSC changing the amendment rulemaking procedures. As
9 such, references to OARs are to those rules that existed at the time the amendment request
10 was submitted. The amendment rule change was both filed, and became effective on October
11 24, 2017.

12
13 **I.A Name and Address of Current Certificate Holder**

14 Golden Hills Wind Farm LLC

15
16 Orion Renewable Energy Group LLC
17 155 Grand Avenue, Suite 706
18 Oakland, CA 94612

19 Certificate Holder Contact:
20 Ryan McGraw, Head of Asset Management

21
22 *Current Parent Company of the Certificate Holder*
23 Orion Renewable Energy Group, LLC
24 155 Grand Ave, Suite 706
25 Oakland, CA 94612

26
27 **I.B Name and Address of Transferee**

28 Golden Hills Wind Farm, LLC
29 1125 NW Couch Street, Suite 700
30 Portland, OR 97209

31
32 *Transferee Contact/Individual Responsible for Submitting this Amendment Request:*
33 Brian Walsh, Senior Developer
34 Avangrid Renewables, LLC
35 1125 NW Couch Street, Suite 700
36 Portland, OR 97209

37
38 *Parent Company*
39 Pacific Wind Development, LLC
40 a wholly-owned subsidiary of Avangrid Renewables, LLC
41 The U.S. division of Iberdrola, S.A.
42 1125 NW Couch Street, Suite 700
43 Portland, OR 97209

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I.C Description of the Approved Facility

The Golden Hills Wind Project (facility) is an approved but not yet constructed wind energy generation facility to be located in Sherman County, with a peak generating capacity of up to 400 megawatts (MW) of electricity and an average electric generating capacity of about 133 MW. The facility would consist of up to 125 wind turbines as well as related and supporting facilities including: a power collection system, a substation, a 230-kilovolt (kV) transmission line, meteorological towers, supervisory control and data acquisition (“SCADA”) system, operations and maintenance facility, access roads, and temporary laydown areas.

The Council issued the site certificate for the Golden Hills Wind Project on May 15, 2009, and has previously approved amendments to the site certificate in May 2012, February 2015, and February 2017. The current deadline to begin construction is June 18, 2018 and the deadline to complete construction is June 18, 2021.

I.D Description of Approved Facility Site Location

The facility site boundary includes approximately 27,400 acres of private land, between the cities of Wasco and Moro in Sherman County, Oregon. The facility has not yet been constructed.

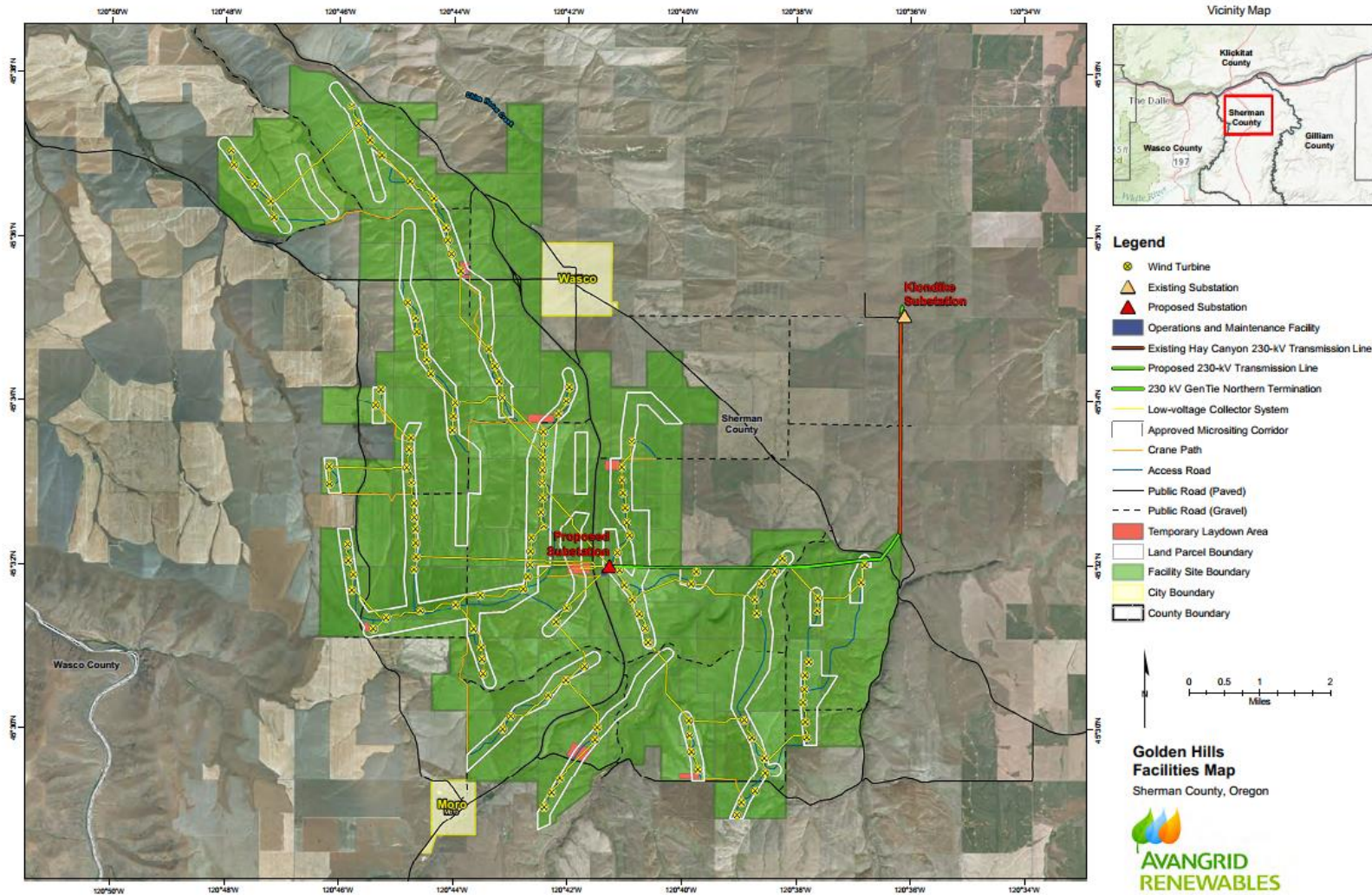
I.E Golden Hills Site Certificate History

The Council issued the Final Order on the Application for Site Certificate for the Golden Hills Wind Project on May 15, 2009. The site certificate became effective upon execution on June 18, 2009. In December 2011 the certificate holder submitted RFA #1 to the site certificate, requesting to extend the construction beginning and completion deadlines by two years. The Council issued the final order and amended site certificate in May 2012, approving the amendment request. That amendment extended the beginning construction date to June 18, 2014 and the construction completion date to June 18, 2016.

In June 2014, Golden Hills submitted RFA #2 to the site certificate, again requesting an extension of the construction deadlines and also requesting a transfer of ownership of the parent company to Orion Renewable Energy Group LLC from the previous parent company owner. Council issued a final order approving both requests in January 2015 and executed an amended site certificate in February 2015.

On December 17, 2015 Golden Hills submitted RFA #3, requesting an extension of the construction deadlines and also requesting a transfer of ownership of the parent company to Orion Renewable Energy Group LLC from the previous parent company owner. Council issued a final order approving both requests in January 2017 and executed an amended site certificate in February 2017.

1 Figure 1 – Golden Hills Site Boundary and Turbine Micrositing Corridors



2
3

1 **II. AMENDMENT PROCESS**
2

3 **II.A Description of the Amendment Requests**

4 Golden Hills requests an amendment to the site certificate to (1) transfer ownership of the
5 Golden Hills Wind Project Site Certificate holder from the current parent company, Orion
6 Renewable Energy Group, LLC (Orion) to Avangrid Renewables, LLC (Avangrid), a new parent
7 company and subsidiary of AVANGRID, Inc., the U.S. division of Iberdrola, S.A. IBERDROLA
8 group); and (2) extend the construction commencement deadline from June 18, 2018 to June
9 18, 2020 (requested amendments). Golden Hills submitted the request to extend the
10 construction commencement deadline at least six months prior to the construction
11 commencement deadline and therefore satisfies the deadline requirement pursuant to OAR
12 345-027-0030².

13
14 **II.A.1 Amendments to Site Certificate Conditions**

15 The certificate holder submitted a red-line version of the sections of the Site Certificate where
16 the certificate holder is proposing changes in its Request for Amendment dated October 19,
17 2017 (with new text shown in red ink and deletions shown with strikethroughs).
18 The Site Certificate for the Golden Hills Wind Project was originally issued by Council on May
19 27, 2009, and executed on June 18, 2009. As mentioned above in Section I.E. of this Order, the
20 previous three amendments all included construction deadline extensions. While reviewing
21 the certificate holder’s proposed changes to the site certificate (red-lined version of the site
22 certificate), the Department also proposes a number of administrative changes to conditions,
23 and also is proposing to reorganize the site certificate by project phase of implementation
24 (e.g., pre-construction, construction, operation, retirement) rather than in order by standard.
25 The majority of the administrative changes proposed either clarify specific submittal
26 requirements of conditions, or clarify the implementation schedule and timing of conditions
27 (aiding in the identification of phase, when unclear). The administrative changes are not
28 intended to change the substantive requirements of conditions. The Department has proposed
29 some substantive changes to conditions, and when this is the case, the substantive changes
30 are discussed in this proposed order. The proposed site certificate reorganization would align
31 the site certificate with current EFSC practices on site certificate organization and aid in future
32 compliance management during facility pre-construction, construction, operation, and
33 retirement. The Department organized and coded each condition in a way that indicates the
34 phase of implementation, the standard the condition is required to satisfy, and an
35 identification number.
36

² As described in the Introduction to this order, the amendment request was submitted prior to EFSC changing the rulemaking procedures. As such, references to OARs are to those rules that existed at the time the amendment request was submitted. Please note, under the new EFSC rules governing site certificate amendments, the requirement to submit a construction timeline extension request at least six months before the deadline was removed.

1 **II.B Procedural History**

2 On September 20, 2017, the certificate holder provided notice, pursuant to OAR 345-027-
3 01000(2), to the Department of a transfer of ownership of the certificate holder.³ On October
4 19, 2017, the certificate holder and transferee submitted RFA #4. Golden Hills satisfied the
5 requirement of OAR 345-027-0030 to submit a request for extension of construction deadlines
6 at least six months prior to the construction deadline, which was on June 18, 2018.⁴

7
8 The Department then distributed a notice of the receipt of RFA #4 to reviewing agencies, Tribal
9 Governments, the Special Advisory Group (Sherman County Board of Commissioners), the
10 EFSC general mailing list, the special mailing list maintained for the facility, and the adjacent
11 property owners as listed by Golden Hills in the amendment request on November 3, 2017.⁵
12 The amendment request was also posted to the ODOE website. The Department requested
13 receipt of comments from all interested parties by December 8, 2017. Public and agency
14 comments are, as applicable to Council standards, discussed in the appropriate Council
15 standard sections in Section IV of this final order.

16
17 On November 3, 2017, the department notified the certificate holder and transferee that the
18 proposed order would be issued no later than May 2, 2018.⁶

19
20 On December 30, 2017, the certificate holder submitted a supplemental information report to
21 ODOE providing additional information regarding the amendment request. The supplement
22 also included information in response to ODOE and reviewing agency questions.

23
24 **II.C Reviewing Agency Comments**

25 Substantive Reviewing Agency comments received are summarized below and to the extent
26 the comments on the amendment request relate to compliance with an applicable Council
27 standard, the comments are evaluated in the findings related to those Council standards as
28 presented in Section III.B of this order.

29
30 The Department received four reviewing agency comment letters on the proposed order. One,
31 dated December 8, 2017 from Georgia L. Macnab, Sherman County Planning Director, written
32 on behalf of the Special Advisory Group for Sherman County, stating that Sherman County has

³ Mandatory Condition 15 (Site Certificate Condition VII.15) requires that the certificate holder, prior to any transfer of ownership of the facility or ownership of the certificate holder, inform the Department of the proposed new owners.

⁴ As noted elsewhere in this Order, the Council's new amendment rules do not include the six month deadline for requesting a construction extension. The reference to OAR 345-027-0030 is to the Council rule that was in place at the time the Golden Hills RFA 4 was received.

⁵ The Council appointed the Sherman County Board of Commissioners as the Special Advisory Group for the Golden Hills Wind Facility Project on August 17, 2007 following receipt of the Application for Site Certificate in July 2007.

⁶ GH1AMD4Doc4 Transmittal Certificate Holder Receipt letter 2017-11-03

1 no objections to the amendment itself regarding the transfer of ownership and the request of
2 an extension to the construction start deadline.⁷

3
4 The second comment letter, dated December 18, 2017, was received from Jeremy Thompson,
5 the Mid-Columbia District Wildlife Biologist for the Oregon Department of Fish and Wildlife
6 (ODFW). His comment letter, written on behalf of ODFW, requested confirmation that the
7 Habitat Mitigation and Revegetation Plan (HMRP) would be reviewed and updated prior to
8 facility construction. Also requested was the ability to suggest modifications to the final
9 construction design of the facility, based on updated raptor survey results.⁸

10
11 In a comment letter dated January 3, 2018, Yumei Wang, P.E., the lead for the Oregon
12 Department of Geology and Mineral Industries (DOGAMI) stated that she didn't have any
13 geologic hazards related concerns at this stage of the project.⁹

14
15 On January 22, 2018, the Department received a third comment letter from Sarah Reif, written
16 on behalf of ODFW. The comment letter contained recommended revisions to the
17 Revegetation Plan, and the Draft Habitat Mitigation Plan. The letter also mentioned that
18 ODFW is currently working on some guidelines for Temporary Impacts, but that the guidelines
19 are taking longer to develop, and that a draft may not be ready to share in time for the Golden
20 Hills Proposed Order. Lastly, the letter acknowledged that the Habitat categorization provided
21 for Golden Hills Amendment 3 was still accurate for Amendment 4, and that no recommended
22 changes are needed to the applicant's categorization.¹⁰

23 24 **II.D Public Comments**

25 Substantive public comments received are summarized below and to the extent the comments
26 on the amendment request relate to compliance with an applicable Council standard, the
27 comments are evaluated in the findings related to those Council standards as presented in
28 Section III.B of this order.

29
30 During the comment period, the Department received one written public comment. On
31 November 10, 2017, Mr. John Fields commented on the Public Notice for the Golden Hills
32 Wind Project Request for Amendment 4, issued on November 3, 2017. Mr. Fields requested
33 clarification of the location of facility components as represented on the map provided within
34 the Public Notice. The comment was not related to a Council standard and is not addressed in
35 this order.¹¹

36

⁷ GH1AMD4Doc7 RFA4 Sherman County SAG Comment Macnab 2017-12-08

⁸ GH1AMD4Doc8 RFA4 Agency Comment ODFW Thompson 2017-12-08

⁹ GH1AMD4Doc14 RFA4 Agency Comment DOGAMI Wang 2018-01-03

¹⁰ GH1AMD4Doc15 RFA4 Agency Comment ODFW Reif 2018-01-22

¹¹ GH1AMD4Doc5 ODOE response to John Fields Comment 2017-11-14

1 **II.E Applicable Division 27 Rules¹²**

2
3 **II.E.1 Review of Request to Extend Construction Deadlines (OAR 345-027-0030 and 345-**
4 **027-0070)**

5 Under ORS 469.405, “a site certificate may be amended with the approval of the Energy
6 Facility Siting Council.” The Council has adopted rules for determining when a site certificate
7 amendment is necessary (OAR 345-027-0030 and -0050) and setting out the procedure for
8 amending or transferring a site certificate (OAR 345-027-0060, -0070, and -0100). Consistent
9 with OAR 345-027-0100(12), the Council may act concurrently on a request to transfer a site
10 certificate and any other RFA. However, the Council must follow the procedures described in
11 OAR 345-027-0100 for the transfer request and the procedures described in OAR 345-027-
12 0030 and 345-027-0070 for the extension of the construction deadline.

13
14 OAR 345-027-0030 addresses “Amendments to Extend Construction Beginning and Completion
15 Deadlines.” Under OAR 345-027-0030, a site certificate holder may request an amendment to
16 extend the deadlines for beginning or completing the construction of a facility. The certificate
17 holder must submit the request “no later than six months before the date of the applicable
18 deadline, or, if the certificate holder demonstrates good cause for the delay in submitting the
19 request, no later than the applicable deadline.” If the Council grants such a request, the
20 Council must specify new deadlines for beginning or completing construction that are not
21 more than two years from the current deadlines. In this instance, the certificate holder
22 submitted the request to extend the construction deadline on October 19, 2017—more than
23 six months before the June 18, 2018 deadline for construction commencement—and
24 therefore the demonstration of good cause for the delay in submitting the request is not
25 required.

26
27 **OAR 345-027-0070 Review of a Request for Amendment**

28 ***

29 *(10) In making a decision to grant or deny issuance of an amended site certificate, the*
30 *Council shall apply the applicable substantive criteria, as described in OAR 345-022-0030, in*
31 *effect on the date the certificate holder submitted the request for amendment and all other*
32 *state statutes, administrative rules, and local government ordinances in effect on the date*
33 *the Council makes its decision. The Council shall consider the following:*

34 *(a) For an amendment that would change the site boundary or the legal description of the*
35 *site, the Council shall consider, for the area added to the site by the amendment,*
36 *whether the facility complies with all Council standards;*

37 *(b) For an amendment that extends the deadlines for beginning or completing*
38 *construction, the Council shall consider:*

39 *A. Whether the Council has previously granted an extension of the deadline;*

¹² The rules referenced in this section related to Division 27 and the Council’s procedures for processes site certificate amendments are to those rules that were in place at the time the RFA #4 was submitted.

- 1 B. *Whether there has been any change of circumstances that affects a previous Council*
2 *finding that was required for issuance of a site certificate or amended site*
3 *certificate; and*
- 4 C. *Whether the facility complies with all Council standards, except that the Council*
5 *may choose not to apply a standard if the Council finds that:*
- 6 i. *The certificate holder has spent more than 50 percent of the budgeted costs on*
7 *construction of the facility;*
- 8 ii. *The inability of the certificate holder to complete the construction of the facility*
9 *by the deadline in effect before the amendment is the result of unforeseen*
10 *circumstances that are outside the control of the certificate holder;*
- 11 iii. *The standard, if applied, would result in an unreasonable financial burden on the*
12 *certificate holder; and*
- 13 iv. *The Council does not need to apply the standard to avoid a significant threat to*
14 *the public health, safety or the environment;*
- 15 (c) *For any amendment not described above, the Council shall consider whether the*
16 *amendment would affect any finding made by the Council in an earlier order.*
- 17 (d) *For all amendments, the Council shall consider whether the amount of the bond or*
18 *letter of credit required under OAR 345-022-0050 is adequate.*
- 19

20 OAR 345-027-0070(10)(a) requires that for amendments that change the site boundary or legal
21 description of the site, the Council is required to consider, for the area added to the site by the
22 amendment, whether the facility complies with all Council standards. In this case, RFA #4 does
23 not include a change to the site boundary, and as such subsection (a) does not apply.¹³

24

25 OAR 345-027-0070(10)(b)(A) requires the Council to consider whether the Council has
26 previously granted an extension of the construction commencement and completion
27 deadlines. The request made in RFA #4 to extend the construction commencement deadline
28 would be the fourth extension request for the Golden Hills Wind Project, as Council has
29 previously considered and granted construction commencement and completion deadline
30 extensions in RFA #1 (2012), RFA #2 (2015), and RFA #3 (2017).

31

32 OAR 345-027-0070(10)(b)(B) requires that for an amendment extending the construction
33 commencement and completion deadlines, the Council consider “whether there has been any
34 change of circumstances that affects a previous Council finding that was required for issuance
35 of a site certificate or amended site certificate.” The Department interprets OAR 345-027-
36 0070(10)(b)(B) as applying generally to any changes in facility design as well as changes in the
37 existing environment (e.g., changes within the applicable analysis areas related to land uses,
38 habitat categorization, noise receptors, recreation areas, etc.).

39

¹³ In response to the Departments RAI-1, the certificate holder explained that “the text in RFA 4 Section 1 is a rounding error [and that] (t)he acreage reported in the site certificate is correct.”
GH1AMD4Doc Supplement – RAI Response, RAI-1, p. 1. 2017-12-30

1 OAR 345-027-0070(1)(b)(C) requires that for an amendment requesting extension of the
2 construction commencement and completion deadlines the Council consider whether the
3 facility, as amended, complies with all Council standards. Compliance with the applicable
4 Council standards is discussed in Section III.B, *Evaluation of Council Standards* below.

5
6 **II.F Transfer of a Site Certificate (OAR 345-027-0100)**

7 OAR 345-027-0100 describes the procedures and process for transferring a site certificate.
8 Under OAR 345-027-0100(1)(a) a transfer of ownership requires a transfer of the site
9 certificate when the person who will have the legal right to possession and control of the site
10 or the facility does not have authority under the site certificate to construct, operate, or retire
11 the facility.

12
13 To request a transfer, a transferee must submit a written request to the Department that
14 includes the information described in OAR 345-021-0010(1)(a), (d), (f) and (m); a certification
15 that the transferee agrees to abide by all terms and conditions of the site certificate currently
16 in effect and; if known, the date of the transfer of ownership. Additionally, the Council must
17 hold a public informational hearing during a Council meeting before acting on the transfer
18 request. To approve the transfer, the Council must find that the transferee complies with the
19 standards described in OAR 345-022-0010 (Organizational Expertise standard), OAR 345-022-
20 0050 (Retirement and Financial Assurance standard), and, if applicable, OAR 345-024-0710(1)
21 (the Monetary Path Payment Requirement for facilities subject to the carbon dioxide
22 emissions). Because the facility is a wind facility, carbon dioxide standards and monetary path
23 payment requirements are not applicable to this transfer request. Council must also find that
24 the transferee is or will be lawfully entitled to possession or control of the site or the facility
25 described in the site certificate (OAR 345-027-0100(8)). As described in more detail in Section
26 III.B.2, *Organizational Expertise* and Section III.B.7, *Retirement and Financial Assurance* of this
27 proposed order, Golden Hills Wind Farm, LLC, as the transferee, joined in filing RFA #4 and
28 provided the necessary information to demonstrate Golden Hills Wind Farm, LLC's compliance
29 with the applicable Council standards, and is discussed below.

30
31 Based on the evidence on the record and analysis provided in this order, the Department
32 recommends that the Council find that the transfer request satisfies the requirements under
33 OAR 345-027-0100, including compliance with the standards described in OAR 345-022-0010
34 and OAR 345-022-0050, and issue an amended site certificate that acknowledges Avangrid
35 Renewables, LLC, as the new parent company, and Golden Hills Wind Farm, LLC as the
36 certificate holder.

37
38 **III. REVIEW OF THE REQUESTED AMENDMENTS AND TRANSFER**

39 A site certificate amendment is necessary under OAR 345-027-0030 because the certificate
40 holder is requesting to extend the deadlines for beginning and completing construction of the
41 facility. The Council must consider the factors for extension of construction deadlines at OAR
42 345-027-0070(10)(b) and must consider whether the requested amendment affects any
43 finding made by the Council in an earlier order pursuant to OAR 345-027-0070(10)(c). The

1 transfer request requires an amendment to the site certificate pursuant to OAR 345-027-0100.
2 In order to approve the transfer request, the Council must make the findings required by OAR
3 345-027-0100(8).
4

5 **III.A Applicable Division 22 Standards**

6 A site certificate amendment is necessary under OAR 345-027-0050 because the certificate
7 holder proposes to operate the facility in a manner different from the description in the site
8 certificate, and the change could result in a significant adverse impact that the Council had not
9 addressed in an earlier order and could require new conditions or modification to existing
10 conditions in the site certificate. OAR 345-027-0070(10) establishes the Council’s scope of
11 review in making its decision on this RFA.
12

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

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

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

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

32 ***

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

40 **Findings of Fact**

41 The requirements of OAR 345-022-0000 are discussed in the sections that follow. The
42 Department consulted with other state agencies and Sherman County during review of RFA #4
43 to aid in the evaluation of whether the facility, as amended, would maintain compliance with

1 statutes, rules and ordinances otherwise administered by other agencies. Additionally, in many
2 circumstances the Department relied upon these reviewing agencies' special expertise in
3 evaluating compliance with the requirements of Council standards. The Council finds that with
4 existing, and amended site certificate conditions, the facility, as amended, would maintain
5 compliance with all applicable statutes, administrative rules and ordinances under Council
6 jurisdiction.

7
8 Certificate Expiration (OAR 345-027-0000)

9 Under OAR 345-015-0085(9), the site certificate is effective upon execution by the Council
10 Chair and the certificate holder. ORS 469.370(12) requires the Council to "specify in the
11 certificate the date by which construction of the facility must begin." ORS 469.401(2) requires
12 that the site certificate contain a condition "for the time for completion of construction."
13 Under OAR 345-027-0000, the certificate holder must begin construction on the facility no
14 later than the construction beginning date specified by Council in the site certificate, unless an
15 amendment is requested and granted. "Construction" is defined in ORS 469.300(6) to mean
16 "work performed on a site, excluding surveying, exploration or other activities to define or
17 characterize the site, the cost of which exceeds \$250,000." OAR 345-001-0010(12) adopts the
18 statutory definition.

19
20 As discussed above and as provided in the RFA, the certificate holder requests to extend the
21 construction start date an additional two years to June 18, 2020 (but not to amend the
22 construction completion deadline, June 18, 2021).¹⁴ The certificate holder requests this
23 extension in order to renegotiate leases with related landowners, redesign the facility, and
24 verify (and if needed, supplement) the environmental studies performed at the site.¹⁵ Also, the
25 certificate holder explains that required upgrades to the interconnection point at the Biglow
26 Substation will not be completed by the Bonneville Power Administration (BPA) in time to
27 allow for an optimized construction schedule starting in June 2018.¹⁶

28
29 Again, as discussed above, OAR 345-027-0070(10)(b)(A) requires the Council to consider
30 whether the Council has previously granted an extension of the deadline. The Council has
31 previously considered and approved three construction deadline extensions in RFA #1, RFA #2,
32 and RFA #3. For the first amendment, a construction deadline extension was requested due to
33 a site certificate transfer resulting from a change in the certificate holder's parent company.
34 The certificate holder explained that the first deadline extension was requested to allow the
35 transferee suitable time to comply with preconstruction conditions. For the second
36 amendment, the certificate holder explained that a deadline extension was warranted because
37 the facility was under new ownership. The certificate holder further justified the deadline
38 extension request by explaining that the site is an excellent and well-documented wind
39 resource and holds a Large Generator Interconnection Agreement with BPA.

¹⁴ The certificate holder requests to only amend the construction start date in this RFA. The construction completion date of June 18, 2021 that Council previously approved in Amendment 3, will continue to apply.

¹⁵ GH1AMD4Doc2 Request for Amendment, p.1-3. 2017-10-19

¹⁶ GH1AMD4Doc2 Request for Amendment, p. 6-2. 2017-10-19

1 As explained in RFA #3, additional time was necessary due to unforeseen delays in
2 construction, including federal aviation issues, and to allow the certificate holder time to
3 request approval for use of new, more efficient and economical turbines at the facility.
4

5 As discussed above, RFA #4 constitutes the fourth construction deadline extension request.
6 However, the certificate holder explains that the transfer of ownership limits the ability of
7 Golden Hills to proceed to construction by the June 18, 2018 start date.¹⁷ Specifically, the
8 certificate holder claims that an extension is needed in order to renegotiate leases with related
9 landowners, redesign the facility, and verify (and if needed, supplement) the environmental
10 studies performed at the site. Additionally, required upgrades to the interconnection point at
11 the Biglow Substation will not be completed by the Bonneville Power Administration (BPA) in
12 time to allow for an optimized construction schedule starting in June 2018. Furthermore, the
13 certificate holder explains that the required upgrades to the Biglow Substation are not
14 expected to begin until 2020. If a construction commencement extension is not granted by
15 Council, and the facility must be constructed under the current terms of the site certificate,
16 the facility will sit idle until BPA has completed its upgrades to the Biglow Substation. As one of
17 the leading providers of renewable energy in the U.S., Avangrid states that a facility redesign is
18 needed to design and operate the facility in a manner consistent with Avangrid’s design and
19 operational standards.¹⁸ The certificate holder is evaluating whether greater wind resources
20 are available outside the approved micrositing corridors, and if the analysis determines greater
21 energy generation outside of the approved micrositing corridors, additional studies and
22 surveys would need to be conducted. The certificate holder plans to file a subsequent Request
23 for Amendment #5 to modify the previously approved facility design.
24

25 OAR 345-027-0070(1)(b)(B) requires that the Council consider “whether there has been any
26 change of circumstances that affects a previous Council finding that was required for issuance
27 of a site certificate or amended site certificate.” The Department interprets OAR 345-027-
28 0070(10)(b)(B) as applying generally to any changes in facility design as well as changes in the
29 existing environment (e.g., changes within the applicable analysis areas related to land uses,
30 habitat categorization, noise receptors, recreation, etc.).
31

32 Accordingly, and in compliance with OAR 345-027-0000 and OAR 345-027-0020(4), the
33 Department agrees with the certificate holder’s reasoning for a construction commencement
34 extension request. The Department concludes that the construction commencement
35 extension request is warranted because not only are the upgrades to the Biglow Substation
36 and interconnection point out of the control of the certificate holder, but the sale of the
37 certificate holder to Avangrid warrants additional time to both revise and renegotiate with
38 landowners, and to verify whether the redesign of the facility will require additional surveying
39 and analysis. As such, the Department recommends that the Council grant the construction
40 commencement deadline extension, and amend Condition III.D.1 as follows:

¹⁷ GH1AMD4Doc2 Request for Amendment, p. 1-3. 2017-10-19

¹⁸ GH1AMD4Doc2-1 Supplement – RAI Response. RAI-16, p.11. 2017-12-30

1
2 **Recommended Amended Condition III.D.1:**

3 The certificate holder shall begin construction of the facility ~~within~~ by June 18, 2018
4 2020. Under OAR 345-015-0085(9), an amended site certificate is effective upon
5 execution by the Council Chair and the certificate holder. The Council may grant an
6 extension of the deadline to begin construction in accordance with OAR 345-027-0030
7 or any successor rule in effect at the time the request for extension is submitted. On or
8 before June 18, 2020, the certificate holder shall provide written notification to the
9 Department that it has met the construction commencement deadline. Construction is
10 defined in OAR 345-001-0010.

11 [Final Order on ASC, Condition III.D.1; Amended in Final Order on AMD2, AMD3, AMD4]

12
13 Based on the following analysis, the Department recommends the Council amend several
14 existing conditions in the site certificate, as presented in Attachment A (Proposed Amended
15 Site Certificate) of the proposed order. Based upon compliance with the existing,
16 recommended amended, new and deleted site certificate conditions, the Department
17 recommends that the Council find that the facility, as amended, satisfies the requirements of
18 OAR 345-022-0000.

19
20 **Conclusion of Law**

21 Based on the following analysis of applicable Council standards, and subject to compliance
22 with the existing, amended, and new conditions identified in this Order, the Department
23 recommends that the Council find that the facility continues to satisfy the requirements of
24 OAR 345-022-0000.

25
26 **III.A.2 Organizational Expertise: OAR 345-022-0010**

- 27 (1) *To issue a site certificate, the Council must find that the applicant has the*
28 *organizational expertise to construct, operate and retire the proposed facility in*
29 *compliance with Council standards and conditions of the site certificate. To conclude*
30 *that the applicant has this expertise, the Council must find that the applicant has*
31 *demonstrated the ability to design, construct and operate the proposed facility in*
32 *compliance with site certificate conditions and in a manner that protects public health*
33 *and safety and has demonstrated the ability to restore the site to a useful, non-*
34 *hazardous condition. The Council may consider the applicant’s experience, the*
35 *applicant’s access to technical expertise and the applicant’s past performance in*
36 *constructing, operating and retiring other facilities, including, but not limited to, the*
37 *number and severity of regulatory citations issued to the applicant.*
- 38 (2) *The Council may base its findings under section (1) on a rebuttable presumption that an*
39 *applicant has organizational, managerial and technical expertise, if the applicant has*
40 *an ISO 9000 or ISO 14000 certified program and proposes to design, construct and*
41 *operate the facility according to that program.*
- 42 (3) *If the applicant does not itself obtain a state or local government permit or approval for*
43 *which the Council would ordinarily determine compliance but instead relies on a permit*

1 *or approval issued to a third party, the Council, to issue a site certificate, must find that*
2 *the third party has, or has a reasonable likelihood of obtaining, the necessary permit or*
3 *approval, and that the applicant has, or has a reasonable likelihood of entering into, a*
4 *contractual or other arrangement with the third party for access to the resource or*
5 *service secured by that permit or approval.*

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

13
14 **Findings of Fact**

15 The Council addressed the Organizational Expertise Standard in section IV.B of the *Final Order*
16 *on the Application*. The Council imposed eight conditions (IV.B.1 to IV.B.8) to the Site
17 Certificate to address issues related to the Organizational Expertise Standard.

18
19 To evaluate whether the transferee satisfies the Council’s Organizational Expertise standard,
20 the Council may consider the transferee’s experience and past performance in constructing,
21 operating, and retiring other facilities. Neither the Certificate holder nor the transferee
22 propose to design, construct, or operate the facility in accordance with an International
23 Organization for Standardization (ISO) 9000 or ISO 14000 certified program. In the *Final Order*
24 *on the ASC, Final Order on Amendment 1, Final Order on Amendment 2, and Final Order on*
25 *Amendment 3*, the Council found that, based upon compliance with Conditions (IV.B.2),
26 (IV.B.5), (IV.B.6), and (IV.D.19), the certificate holder has the expertise to operate and retire
27 the facility in compliance with Council Standards and that third parties either have any
28 necessary permits, or has a reasonable likelihood of obtaining any necessary permits.

29
30 As applicable to this RFA and transfer request, Subsections (1) and (2) of the Council’s
31 Organizational Expertise standard require that the transferee demonstrate its ability to design,
32 construct and operate the facility in compliance with Council standards and all site certificate
33 conditions, as well as its ability to restore the site to a useful, non-hazardous condition. The
34 Council may consider the transferee’s experience and past performance in constructing,
35 operating and retiring other facilities in determining compliance with the Council’s
36 Organizational Expertise standard. Subsections (3) and (4) address third party permits.

37
38 Consistent with OAR 345-022-0010(1), Council considers the transferee’s access to its parent
39 company’s technical expertise in evaluating compliance with the standard. Moreover, as
40 described above, the Department recommends that Council amend Condition IV.B.1. requiring
41 the transferee (certificate holder) to submit to the Department, for review and approval, the
42 qualifications of the construction, operation, and facility decommissioning personnel prior to
43 the respective phase to allow the Department to confirm the standard is satisfied. The

1 Department also recommends that Council amend Condition IV.B.7. requiring the transferee
2 (certificate holder) to notify the Department of the contact information and qualifications of
3 the on-site construction manager or assistant construction manager prior to construction, the
4 contact information and qualifications of the facility manager prior top operation, and of the
5 contact information and qualifications of the personnel or entity responsible for facility
6 decommissioning and restoration activities prior to facility retirement.

7
8 Golden Hills Wind Farm, LLC is a project-specific LLC and therefore in the amendment request
9 relies upon the organizational expertise and experience of Avangrid, the parent company of
10 Pacific Wind (transferee) and Golden Hills Wind Farm LLC. As the new parent company of the
11 certificate holder, Pacific Wind Development, LLC relies upon the organizational expertise of
12 Avangrid (formally known as Iberdrola Renewables, LLC). Avangrid is a subsidiary of
13 AVANGRID, and part of the IBERDROLA Group.

14
15 Section 3.5 of the RFA states that Avangrid currently holds six site certificates for facilities
16 projects in Oregon. As a parent owner of six EFSC-issued site certificates in Oregon, Council has
17 previously evaluated Avangrid’s organizational expertise.¹⁹ For the six facilities that Avangrid
18 currently owns (as a parent owner), Council has determined that Avangrid has the expertise to
19 construct, operate and retire a facility in compliance with Council standards and that it has a
20 reasonable likelihood of obtaining all third party permits necessary. In response to the
21 Department’s request for additional information (RAI-20), the transferee provided compliance
22 documents including an Annual Report for the Klondike III Facility, an email from ODOE
23 confirming Avangrid’s successful completion of required monitoring of the Leaning Juniper II
24 mitigation site, and additional mitigation described by Avangrid to monitor avian fatality rates
25 at the Klondike Facility, after initial monitoring indicated an exceedance of the “threshold of
26 concern” for raptors described in the Wildlife Monitoring and Mitigation Plan for the Klondike
27 Facility. The transferee asserts that the documents provided are representative of Avangrid’s
28 ability to comply with annual reporting, monitoring at mitigation sites, and the ability to react
29 to unforeseen conditions relating to mitigation commitments. Lastly, Golden Hills plans to
30 mitigate unavoidable impacts of the facility on wildlife habitat by providing compensatory
31 mitigation via obtaining a conservation easement to nearby land, containing high quality
32 habitat. Golden Hills states in the RAI response that a conservation easement agreement with
33 a landowner for 51 acres has been executed, and that 51 acres is likely more land than needed
34 to offset the habitat impacts of the facility.

35
36 To ensure that the design, construction and operation of the facility is conducted in a manner
37 that protects public health and safety in accordance with the Organizational Expertise
38 standard, Council previously imposed the following conditions IV.B.1-IV.B.8 in the site
39 certificate, which would continue to apply to the transferee in the fourth amended site

¹⁹ The six facilities that Avangrid currently owns as a parent owner are Klondike III Wind Project, Leaning Juniper IIA Wind Project, Leaning Juniper IIB Wind Project, Klamath Generation Facility, Klamath Generation Peakakers, and Klamath Cogen. GH1AMD4Doc2. Section 3.5.1.A. 2017-10-19

1 certificate. The transferee's ability to restore the facility site to a useful, non-hazardous
2 condition is evaluated in Section III.A.7, *Retirement and Financial Assurance* of this order, in
3 which the Department recommends that Council find that the certificate holder would be able
4 to comply with the Retirement and Financial Assurance standard.

5
6 Existing Condition IV.B.1 of the site certificate requires the certificate holder to notify the
7 Department promptly of any change in the corporate relationship with Orion Renewable
8 Energy Group, LLC, the certificate holder's previous parent company. Due to the transferee's
9 reliance on the organizational expertise of its parent company to satisfy the requirements of
10 OAR 345-022-0010(1), the Department recommends that the Council amend Condition IV.B.1
11 as follows:

12
13 **Recommended Amended Condition IV.B.1:**

14 During construction, operation and facility retirement, tThe certificate holder shall report
15 ~~promptly~~ to the Department within 7 days, any change in its the structure of Avangrid
16 Renewables LLC (a subsidiary of Avangrid, Inc., and the parent company of Pacific Wind)
17 ~~corporate relationship with Orion Renewable Energy Group LLC.~~ The certificate holder shall
18 report promptly to the Department any change in its access to the resources, expertise and
19 personnel of ~~Orion Renewable Energy Group LLC~~ Avangrid Renewables LLC. The certificate
20 holder shall include in the report, for the Department's concurrence, an evaluation of
21 whether the change in corporate structure represents a change in ownership of the
22 certificate holder and whether a site certificate transfer is warranted.

23 [Final Order on ASC, Condition IV.B.1; Amended in Final Order on AMD2, AMD4]

24
25 Site Certificate Condition IV.B.7. requires the certificate holder to notify the Department of the
26 contact information of both the on-site construction manager and the facility manager.
27 Condition IV.B.3 requires the certificate holder to choose a third party contractor to operate
28 the facility, and requires the certificate holder to submit the identity of the contractor to the
29 Council for review. Accordingly, the Department recommends that Council incorporate the
30 requirements of Condition IV.B.3 into Condition IV.B.7, ultimately removing condition IV.B.3
31 from the amended site certificate. The Department recommends that Council amend
32 Condition IV.B.7. to reflect the requirements of Conditions IV.B.3 and to also clarify an
33 implementation schedule. The Department recommends that Condition IV.B.7 be amended as
34 follows:

35
36 **Recommended Amended Condition IV.B.7:**

37 ~~During construction, the certificate holder shall have an~~ The certificate holder shall:

- 38 (a) Prior to construction, notify the Department of the identity, telephone number, e-mail
39 address and qualifications of the on-site construction manager or assistant
40 construction manager who is qualified in environmental compliance to ensure
41 compliance with all construction related site certificate conditions. During operation,
42 ~~the certificate holder shall have a facility manager who is qualified in environmental~~
43 ~~compliance to ensure compliance with all ongoing site certificate conditions. The~~

1 ~~certificate holder shall~~. The construction manager or assistant construction manager
2 must be capable of managing a wind facility construction project, including permit and
3 regulatory compliance requirements.

4 (b) Prior to operation, notify the Department of the identity, telephone number, e-mail
5 address and qualifications of the facility operations manager. The facility operations
6 manager must be capable of managing permit and regulatory compliance requirements
7 and manage operation of a wind facility.

8 (c) Prior to facility retirement, notify the Department of the ~~name~~ identity, telephone
9 number, ~~fax number~~ and e-mail address and qualifications of these managers and shall
10 keep the Department informed of any change in this information the personnel or
11 entity responsible for facility decommissioning and restoration activities. The personnel
12 or entity responsible for facility decommissioning and restoration activities must be
13 capable of managing permit and regulatory compliance requirements and be qualified
14 to decommission a wind facility.

15
16 The certificate holder shall notify the Department within three business days upon any change
17 in personnel or contact information provided to satisfy Condition IV.B.7(a) through (c).

18 [Final Order on ASC, Condition IV.B.7; Amended in Final Order on AMD4]

19
20 The transferee certified that it agrees to abide by all the terms and conditions of the *Third*
21 *Amended Site Certificate* currently in effect and all terms and conditions imposed by the
22 Council as part of this amendment. Based on the evidence provided, the Department
23 recommends that Council find that the Transferee has demonstrated the ability to construct,
24 operate, and retire the facility, as amended, in compliance with Council standards and all
25 existing and amended site certificate conditions, as required by the Organizational Expertise
26 standard.

27
28 **Conclusion of Law**

29 Based on the foregoing findings of fact, and subject to compliance with the existing and
30 recommended site certificate conditions, the Department recommends that the Council find
31 that the transferee and new owner of the site certificate holder continues to satisfy the
32 Council's Organizational Expertise standard.

33
34 **III.A.3 Structural Standard: OAR 345-022-0020**

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

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

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

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

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

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

13 ***

14
15 **Findings of Fact**

16 As provided in section (1) above, the Structural Standard generally requires the Council to
17 evaluate whether the certificate holder has adequately characterized the potential seismic,
18 geological and soil hazards of the site, and can design, engineer and construct the facility to
19 avoid dangers to human safety from these hazards.²⁰ Under Section (2), the Council may issue
20 a site certificate for a wind energy facility without making findings regarding the Structural
21 Standard; however, the Council may apply the requirements of the standard to impose site
22 certificate conditions.

23
24 A structural and geologic rulemaking project was presented to Council at the August 18, 2017
25 Council Meeting, to amend the provisions in EFSC rules relating to the structural, geologic, and
26 seismic issues examined by Council when issuing site certificates or amendments to site
27 certificates for energy facilities and water disposal facilities within Council jurisdiction. The
28 amendments to the Structural Standard became effective on October 18, 2017, and any
29 applicable changes that had not been evaluated by the certificate holder were addressed in
30 response to the Department's RAI request (RAI-4). The certificate explains that disaster
31 resiliency and integration into the design of the facility, and an assessment of future climate
32 conditions were considered in consultation with the Department of Geology and Mineral
33 Industries (DOGAMI).

34
35 The Council addressed the Structural Standard in section V.A of the *Final Order on the*
36 *Application*. The Council imposed five conditions (V.A.1 to V.A.5) to the Site Certificate to
37 address issues related to the Structural Standard. These conditions would reduce the risk of
38 seismic and nonseismic hazards from the facility.
39

²⁰ OAR 345-022-0020(3) does not apply to this proposed facility because the facility is a not a special criteria facility under OAR 345-015-0310.

1 The Department recommends that the Council amend Condition V.A.1 to incorporate other
2 conditions that would rely upon information included in the site-specific geotechnical
3 investigation report (including Condition V.A.2). The Department recommends that Council
4 amend Condition V.A.1. as follows:

5
6 **Recommended Amended Condition V.A.1:**

7 Prior to construction, ~~the~~ certificate holder shall:

8 (a) Submit a draft site-specific geotechnical investigation report to the Department and
9 the Oregon Department of Geology & Mineral Industries (“DOGAMI”), for review. The
10 investigation and report shall conform to the Oregon State Board of Geologist
11 Examiners guidelines titled “Guidelines for Engineering Geologic Reports” and
12 “Guidelines for Site-Specific Seismic Hazard Reports for Essential and Hazardous
13 Facilities and Major and Special-Occupancy Structures in Oregon.” The site-specific
14 geotechnical investigation shall address native soil and bedrock stability concerns at
15 cuts, fills and culvert crossings, and shall include design and construction
16 recommendations to minimize the potential for destabilizing marginally stable slopes
17 and the potential for stream erosion.

18 (b) ~~The certificate holder~~ The Department shall ~~provide the Department~~ review and concur
19 with the report, and in consultation with evidence of concurrence by DOGAMI prior to
20 ~~start of~~ construction.

21 [Final Order on ASC, Condition V.A.1; Amended in Final Order on AMD4]

22
23 As previously mentioned in the preceding paragraphs, the Department recommends that
24 Condition V.A.2 be incorporated into amended Condition V.A.1. for clarification purposes, and
25 thus condition V.A.2 is recommended to be deleted.

26
27 RFA #4 does not request any changes to the facility design, and would not result in the
28 placement of facility components within geologic areas that have not been addressed by the
29 Council in the approval of site certificate application and, therefore will not require any change
30 or addition to the conditions imposed in the original site certificate.

31
32 **Conclusion of Law**

33 Based on the foregoing findings of fact, and subject to compliance with the existing and
34 recommended site certificate conditions, the Department recommends that the Council find
35 that the transferee and new owner of the site certificate holder continues to satisfy the
36 Council’s Structural standard.

37
38 **III.A.4 Soil Protection: OAR 345-022-0022**

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

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Findings of Fact

The Soil Protection standard requires the Council to find that the design, construction and operation of the facility are not likely to result in significant adverse impacts to soil. The Council addressed the Soil Protection standard in section IV.E. of the *Final Order on the Application*. The Council found that the design, construction, and operation of the facility, when taking into account mitigation, would not result in a significant adverse impact to soils. The site certificate includes specific conditions to control and mitigate potential adverse impact to soils and to mitigate the risk of soil contamination during construction and operation (Conditions IV.E.1 to IV.E.6).

As presented in RFA #4, the certificate holder confirmed with the Sherman County planning director that the entire site boundary is zoned as exclusive farm use, and that the primary land use is for dry-land farming.²¹ The construction deadline extension and transfer request, as proposed in RFA 4 will not alter the basis of Council’s previous findings.

Existing conditions in the site certificate (Conditions IV.E.1 to IV.E.6) require Golden Hills to construct the facility in compliance with an erosion and sediment control plan satisfactory to Oregon Department of Environmental Quality (DEQ) as per the requirements of a National Pollutant Discharge Elimination System (NPDES) 1200-C permit; salvage topsoil from areas of temporary impacts and stockpile for redistribution; implement a weed control plan to reduce the spread of noxious weeds; and, eliminate concrete wash water runoff, among other requirements. The existing site certificate conditions would apply to the entire facility, including the expanded temporary roads and the new site boundary areas. These conditions would help protect soils, in compliance with the Soil Protection standard.

The Council addressed the Soil Protection Standard in section IV.E of the *Final Order on the Application*. The Council imposed six conditions (IV.E.1 to IV.E.6) to the Site Certificate to address issues related to the Soil Protection Standard. These conditions were imposed to find that the construction, operation, and retirement of the facility is not likely to result in a significant adverse impact to soils.

The Department recommends administrative amendments to conditions IV.E.2 and IV.E.4, as presented in Attachment A of this order. The administrative amendments to the conditions clarify instructions to, and deliverables from the certificate holder, and will not substantively change the requirements of the conditions.

The Department recommends that the Council find that because RFA #4 does not change the facility design or site boundary, the proposed amendment would not result in any soil impacts that have not been addressed by the Council or otherwise affect the certificate holder’s ability to design, construct, and operate the facility without significant adverse impact to soils, and

²¹ GH1AMD4Doc2-1 RFA4 Supplement- RAI Response. RAI-6, p. 2 2017-12-30

1 that the certificate holder is subject to the same conditions and has certified that it would
2 abide by all requirements of the site certificate. As such, the Department recommends that
3 Council find that the certificate holder and new owner of the certificate holder (transferee)
4 continues to comply with the Council’s Soil Protection standard.

5
6 **Conclusion of Law**

7 Based on the findings presented above, and subject to continued compliance with the existing
8 and amended conditions in the site certificate, the Department recommends that the Council
9 find that the facility continues to comply with the Council’s Soil Protection standard.

10
11 **III.A.5 Land Use: OAR 345-022-0030**

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

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

16 *(a) The applicant elects to obtain local land use approvals under ORS 469.504(1)(a) and*
17 *the Council finds that the facility has received local land use approval under the*
18 *acknowledged comprehensive plan and land use regulations of the affected local*
19 *government; or*

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

22 *A. The proposed facility complies with applicable substantive criteria as described*
23 *in section (3) and the facility complies with any Land Conservation and*
24 *Development Commission administrative rules and goals and any land use*
25 *statutes directly applicable to the facility under ORS 197.646(3);*

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

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

34 *(3) As used in this rule, the “applicable substantive criteria” are criteria from the affected*
35 *local government’s acknowledged comprehensive plan and land use ordinances that are*
36 *required by the statewide planning goals and that are in effect on the date the*
37 *applicant submits the application. If the special advisory group recommends applicable*
38 *substantive criteria, as described under OAR 345-021-0050, the Council shall apply*
39 *them. If the special advisory group does not recommend applicable substantive criteria,*
40 *the Council shall decide either to make its own determination of the applicable*
41 *substantive criteria and apply them or to evaluate the proposed facility against the*
42 *statewide planning goals.*

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Findings of Fact

The Land Use standard requires the Council to find that the facility, as represented in RFA #4, would continue to comply with the statewide planning goals adopted by the Land Conservation and Development Commission (LCDC).²² In considering this amendment request, OAR 345-027-0070(10) requires the Council to apply the applicable substantive criteria in effect on the date the certificate holder submits a request for amendment, which was October 19, 2017, for RFA #4.

Local Applicable Substantive Criteria

On August 17, 2007, during the original ASC phase, the Council appointed the Sherman County Board of Commissioners as the Special Advisory Group for the facility. On behalf of and as authorized by the SAG, the Sherman County Planning Director identified applicable substantive criteria to be considered during the ASC phase and through subsequent amendment requests has identified changes in local code to be considered applicable substantive criteria. In RFA #4, the certificate holder describes consultation with the Sherman County Planning Director confirming that no changes in local code provisions have occurred since the Council’s review of RFA #3 in February 2017. The applicable substantive criteria previously identified, evaluated and that the Council determined the certificate holder could satisfy are summarized in Table LU-1, *Sherman County Applicable Substantive Criteria* below.

Table LU-1: Sherman County Applicable Substantive Criteria

Sherman County Zoning Ordinance (SCZO)	
<i>Article 3 – Use Zones</i>	
Section 3.1	Exclusive Farm Use, F-1 Zone
Section 3.1(1)	General Purpose
Section 3.1(2)	Uses Permitted
Section 3.1(3)	Conditional Uses Permitted
Section 3.1(4)	Dimensional Standards/Setback Requirements
Section 3.7	Natural Hazards Combining Zone
Section 3.7(1)	Purpose
Section 3.7(3)	Conditional Uses
Section 3.7(4)	Permit for Use or Development in NH Zone
Section 3.7(5)	Application Requirements for a Use in a NH Zone
Section 3.7(6)	Standards for Building Construction in NH Zone
Section 3.7(7)	Standards for an Access Route in NH Zone
<i>Article 4 – Supplementary Provisions</i>	
Section 4.9	Compliance with and Consideration of State and Federal Agency Rules and Regulations
Section 4.13	Additional Conditions to Development Proposals
<i>Article 5 – Conditional Uses</i>	

²² The Council must apply the Land Use standard in conformance with the requirements of ORS 469.504.

Section 5.2	General Criteria
Section 5.8	Standards Governing Specific Conditional Uses
Section 5.8(14)	Public Facilities and Services
Section 5.8(20)	Non-farm Uses in an F-1 Zone
Sherman County Ordinances	
Ordinance No. 39-2007 ²³	Setback Ordinance for Wind Power Generation Siting
Sherman County Comprehensive Plan	
Section VIII Planning Process and Citizen Involvement Goal I: Policy I, II	
Section XI Physical Characteristics Goal I: Policy I; Goal II; Goal III; Goal IV; Goal V; Goal VI, Policy VII; Goal VII; Goal VIII	
Section XII Social Characteristics Goal I, Policy I, IX, X; Goal II, Policy XI, XII	
Section XIV Economics Goal I	
Section XV Energy Goal I, Policy I	
Section XVI Land Use Goal I, Policy IV	

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Because RFA #4 does not include changes to the existing site boundary or any physical components of the facility, and because no new or amended applicable substantive criteria were identified by the SAG, the Department recommends that the Council rely on its previous findings to determine that the facility, as represented in RFA #4, continues to comply with Sherman County’s applicable substantive criteria as identified in Table LU-1, *Sherman County Applicable Substantive Criteria*.

The Department recommends edits to existing Condition IV.D.1 order to clarify submittal requirements, which were previously unclear, and also incorporate the requirements of Condition IV.D.21 into IV.D.1.

Additionally, Condition IV.D.21 was previously imposed to require the certificate holder to comply with the Sherman County Zoning Ordinance Section 4.14.4, Access Connection and Driveway Design, in connection with construction of the O&M facility and substations. The requirements of Condition IV.D.21 were incorporated into the Departments recommendation for amended Condition IV.D.1. as presented below:

Recommended Amended Condition IV.D.1:

Prior to construction, the certificate holder shall provide to the Department, Sherman County Planning Department, and Sherman County Transportation Department, as applicable, road design plans demonstrating that:

- (a) New or substantially modified public roads ~~The certificate holder shall construct the public road improvements described in the Application for a Site Certificate to meet or exceed road standards for the road classifications in the County’s Transportation System Plan and Zoning Ordinance because roads will require a more substantial section to bear the weight of the vehicles and turbine components than would usually be constructed by the County.~~

²³ Ordinance 35-2007 was amended on July 15, 2009.

1 (b) Private access connection and driveway design of the O&M facility and substation
2 comply with applicable requirements established in Sherman County Zoning Ordinance
3 Section 4.14.4.

4 [Final Order on ASC, Condition IV.D.1; Amended in Final Order on AMD4]

5
6 **Condition IV.D.21:**

7 ~~The certificate holder shall comply with Sherman County Zoning Ordinance Section 4.14.4,~~
8 ~~Access Connection and Driveway Design, in connection with construction of the O&M facility~~
9 ~~and substations.~~

10 [Final Order on ASC, Condition IV.D.21, Amended in Final Order on AMD4]

11
12 The requirements of Conditions IV.D.16 and IV.D.17 were incorporated into other conditions
13 and have been removed from the site certificate. The requirements of Condition IV.D.16 were
14 incorporated into the Departments recommendation for amended Condition IV.E.4., whilst the
15 requirements of Condition IV.D.17 were incorporated into the Departments recommendation
16 for amended Condition IV.D.19. The Department recommends that Council amend Conditions
17 IV.D.16, IV.D.17, IV.D.19 and IV.E.4. as follows:

18
19 **Recommended Amended Condition IV.D.16:**

20 ~~The certificate holder shall work with the Sherman County Weed Control manager to take~~
21 ~~appropriate measures to prevent the invasion, during and after the facility's construction, of~~
22 ~~any weeds on the Sherman County noxious weed list.~~

23 [Final Order on ASC, Condition IV.D.16; Amended in Final Order on AMD4]

24
25 **Recommended Amended Condition IV.D.17:**

26 ~~The certificate holder shall cooperate with the Sherman County Road Department to ensure~~
27 ~~that any unusual damage or wear caused by the use of the county's roads by the developer~~
28 ~~during the construction of the facility will be the responsibility of the developer. The Road~~
29 ~~Department will provide an assessment of road conditions in the facility area prior to the start~~
30 ~~of construction of the facility and an evaluation of the roads following completion of the~~
31 ~~facility to determine any significant change in condition. In addition, no equipment or~~
32 ~~machinery of the developers shall be parked or stored on any county road except while in use.~~

33 [Final Order on ASC, Condition IV.D.17; Amended in Final Order on AMD4]

34
35 **Recommended Amended Condition IV.D.19:**

36 ~~Prior to beginning construction,~~ The certificate holder will shall:

37 (a) Prior to beginning construction, provide evidence to the Department that both a pre-
38 construction road condition inspection and consultation with the Sherman County Road
39 Department has occurred. Through the consultation, the certificate holder shall, at a
40 minimum, obtain confirmation of the following or provide the following documentation to the
41 Sherman County Road Department:

1 (1) Final facility design maps identifying the ~~Designate a~~ route or routes for the transport
2 of wind turbine construction material (including water, aggregate, concrete, machinery and
3 tower pieces) ~~with the intention of minimizing damage to non-designated roads, and provide~~
4 ~~these designations to the County Road Master; and facility access for construction personnel;~~
5 and, concurrence on the pre-construction conditions of any routes using or crossing county
6 roads.

7 (2) ~~Provide to the County Road Master a~~ A written summary of possible anticipated
8 road damage to the designated route or routes, and an estimate of the cost of repair to the
9 designated route or routes;

10 (3) Communication protocol for reporting to the Sherman County Road Department
11 unusual damage or wear identified during facility construction and determined to be a result
12 of facility construction vehicle use.

13 (4) Establish and maintain an escrow account for so long as construction is ongoing,
14 funded in an amount equal to the estimated cost to repair the designated route or routes
15 consistent with the estimate provided in (b); and

16 (5) Conduct an inspection of the roads along the designated route or routes ~~before and~~
17 after construction with a representative of the Sherman County Road Department and an
18 independent third party with the required expertise to inspect and evaluate paved and
19 graveled roads. In the event a dispute arises, the third party shall be the final arbiter. The cost
20 of the hiring of the third party shall be borne by the ~~applicant~~ certificate holder.

21 (b) Following completion of construction and prior to operation, conduct the inspection of the
22 roads along the designated route or routes with a representative of the Sherman County Road
23 Department and an independent third party, as specified in sub(a)(5) of this condition.

24 [Final Order on ASC, Condition IV.D.19; Amended in Final Order on AMD4]

25
26 **Recommended Amended Condition IV.E.4:**

27 Prior to construction, the certificate holder shall develop a plan to control the introduction and
28 spread of noxious weeds during facility construction and operation. The plan shall be
29 developed in consultation with the Department, the Sherman County Weed Control manager,
30 and ODFW. The plan shall be approved by the Department prior to construction. The plan shall
31 focus on weed species listed on the Sherman County noxious weed list, but shall also include
32 preventative measures, based on consultation with the Sherman County Weed Control
33 Manager, to combat noxious weeds of concern in the area.

34 [Final Order on ASC, Condition IV.E.4; Amended in Final Order on AMD3, AMD4]

35
36 The Department recommends additional administrative amendments to Conditions IV.D.4,
37 IV.D.5, IV.D.7, IV.D.8, IV.D.9, IV.D.10, IV.D.12, IV.D.13, and IV.D.20, as presented in Attachment
38 A of this order.

39
40 Directly Applicable State Statutes and Administrative Rules

41
42 *ORS 215.283(1)(c) and 215.274 Associated Transmission Lines Necessary for Public Service*

1 As described in Section I.C *Description of the Approved Facility* of this order, the Council
2 previously approved as a related and supporting facility to the energy facility a 230 kV
3 transmission line. The previously approved 230 kV transmission line alignment would extend
4 approximately 5-miles and would interconnect the facility collector substation to the existing
5 Hay Canyon 230 kV transmission line. From there, electricity would be transmitted using the
6 existing Hay Canyon 230 kV line to the northernmost transmission pole structure near the
7 existing Klondike Substation where up to approximately 700 feet of new 230 kV transmission
8 line would be constructed along with associated structures and equipment necessary to
9 interconnect the facility to Bonneville Power Administration’s (BPA’s) transmission structure
10 located approximately 300 feet north of the Klondike Substation.

11
12 As evaluated in the Council’s *Final Order on Request for Amendment 3*, the previously
13 approved 230 kV transmission line meets the definition of an associated transmission line
14 pursuant to ORS 215.274 and ORS 469.300. ORS 469.300(3) defines an “associated
15 transmission line” as a “new transmission lines constructed to connect an energy facility to the
16 first point of junction of such transmission line or lines with either a power distribution system
17 or an interconnected primary transmission system or both or to the Northwest Power Grid,”
18 and that definition is incorporated by reference in ORS 215.274. Associated transmission lines
19 reviewed under ORS 215.274 are a subset of the transmission lines that could be evaluated as
20 utility facilities necessary for public service under ORS 215.283(1)(c). Sherman County has not
21 adopted local code provisions to implement ORS 215.274. Therefore, the requirements of the
22 statute apply directly to the facility.

23
24 As explained in RFA #4, the certificate holder is not requesting to modify the previously
25 approved facility, location of facility components, or site boundary; however, because RFA #4
26 includes a construction commencement deadline extension request, the evaluation of
27 “changes in circumstance” is triggered pursuant to OAR 345-027-0070(10)(b)(B). The
28 Department evaluated the criteria under ORS 215.274 to determine whether the Council could
29 rely upon its previous findings included in the *Final Order on Request for Amendment #3*, or if
30 additional analysis was needed based on potential changes in circumstance.

31 ORS 215.274(2) establishes the following:

32
33 *ORS 215.274(2) An associated transmission line is necessary for public service if an*
34 *applicant for approval under ORS 215.213 (uses permitted in exclusive farm use zones in*
35 *counties that adopted marginal lands system prior to 1993) (1)(c)(B) or 215.283 (uses*
36 *permitted in exclusive farm use zones in nonmarginal lands counties) (1)(c)(B)*
37 *demonstrates to the governing body of a county or its designee that the associated*
38 *transmission line meets:*

- 39 (a) *At least one of the requirements listed in subsection (3) of this section; or*
40 (b) *The requirements described in subsection (4) of this section*

41
42 As presented in the *Final Order on Request for Amendment 3*, because the previously approved
43 230 kV transmission line would not satisfy any requirements under ORS 215.274(3), the ORS

1 215.274 evaluation is based upon satisfying the requirements or factors under ORS 215.274(4).
2 Therefore, the Department evaluates potential changes in circumstance that could impact the
3 Council's previous assessment of ORS 215.274(4) factors, as listed below:
4

5 *ORS 215.274(4)(a) Except as provided in subsection (3) of this section, the governing body of*
6 *a county or its designee shall approve an application under this section if, after an*
7 *evaluation of reasonable alternatives, the applicant demonstrates that the entire route of*
8 *the associated transmission line meets, subject to paragraphs (b) and (c) of this subsection,*
9 *two or more of the following factors:*

10
11 *(A) Technical and engineering feasibility;*

12
13 *(B) The associated transmission line is locationally dependent because the associated*
14 *transmission line must cross high-value farmland, as defined in ORS 195.300*
15 *(Definitions for ORS 195.300 to 195.336), or arable land to achieve a reasonably*
16 *direct route or to meet unique geographical needs that cannot be satisfied on other*
17 *lands;*

18
19 *(C) Lack of an available existing right-of-way for a linear facility, such as a transmission*
20 *line, road or railroad, that is located above the surface of the ground;*

21
22 *(D) Public health and safety; or*

23
24 *(E) Other requirements of state or federal agencies*

25
26 *ORS 215.274(4)(b) The applicant shall present findings to the governing body of the county*
27 *or its designee on how the applicant will mitigate and minimize the impacts, if any, of the*
28 *associated transmission line on surrounding lands devoted to farm use in order to prevent a*
29 *significant change in accepted farm practices or a significant increase in the cost of farm*
30 *practices on the surrounding farmland.*

31
32 Based on the ORS 215.274(4) factors, the Department recommends that Council rely upon its
33 previous findings for ORS 215.274(a)(A)-(B), and (a)(D)-(E), but that because ORS
34 215.274(4)(a)(C) evaluates the availability of existing rights-of-way, which could have changed
35 since the Council's previous order, the Department presents an updated evaluation for Council
36 consideration below.

37
38 *(C) Lack of an available existing right-of-way for a linear facility, such as a transmission*
39 *line, road or railroad, that is located above the surface of the ground;*

40
41 On the record of RFA #4, the certificate holder evaluates the availability of existing rights-of-
42 way within the analysis area (area within and extending 0.5-miles from the site boundary) for
43 the potential co-location of the segment of 230 kV transmission line not already planned for

1 co-location. Based on consultation with Sherman County Planning Director Georgia Macnab,
2 the certificate holder asserts that there have not been any new linear right-of-ways
3 constructed (e.g., roads, rail lines, transmission lines) within the land use analysis area since
4 November 2016 (the date when Golden Hills filed the Third Supplement to RFA 3 with ODOE)
5 that would offer a reasonably available alternative to the one Council already approved.
6

7 In the Council's *Final Order on Request for Amendment #3*, the Council found that existing
8 utility rights-of-way would be utilized to the maximum extent practicable by co-locating the
9 230 kV transmission line on the existing Hay Canyon transmission line. Based on the certificate
10 holder's review of availability of existing rights-of-way, the Department recommends that
11 Council continue to find that the certificate holder would satisfy the ORS 215.274(a)(C) factor.
12 Moreover, the Department recommends that Council continue to find that the certificate
13 holder continues to demonstrate that the entire route of the 230 kV transmission line meets
14 two or more of the relevant factors in ORS 215.274(4). Based on this analysis, in conjunction
15 with the findings included in the Council's *Final Order on Request for Amendment 3*, the
16 Department recommends that Council find that the 230 kV transmission line continues to be
17 necessary for public service pursuant to the factors set forth in ORS 215.274(4).
18

19 **Conclusion of Law**

20 Based on reasons addressed above, and subject to compliance with the existing site certificate
21 conditions, the Department recommends that the Council find that the facility continues to
22 satisfy the Council's Land Use standard.
23

24 **III.A.6 Protected Areas: OAR 345-022-0040**

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

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

34 *(b) National monuments, including but not limited to John Day Fossil Bed National*
35 *Monument, Newberry National Volcanic Monument and Oregon Caves National*
36 *Monument;*

37 *(c) Wilderness areas established pursuant to The Wilderness Act, 16 U.S.C. 1131 et seq.*
38 *and areas recommended for designation as wilderness areas pursuant to 43 U.S.C.*
39 *1782;*

40 *(d) National and state wildlife refuges, including but not limited to Ankeny, Bandon*
41 *Marsh, Baskett Slough, Bear Valley, Cape Meares, Cold Springs, Deer Flat, Hart*
42 *Mountain, Julia Butler Hansen, Klamath Forest, Lewis and Clark, Lower Klamath,*

- 1 *Malheur, McKay Creek, Oregon Islands, Sheldon, Three Arch Rocks, Umatilla, Upper*
2 *Klamath, and William L. Finley;*
3 *(e) National coordination areas, including but not limited to Government Island,*
4 *Ochoco and Summer Lake;*
5 *(f) National and state fish hatcheries, including but not limited to Eagle Creek and*
6 *Warm Springs;*
7 *(g) National recreation and scenic areas, including but not limited to Oregon Dunes*
8 *National Recreation Area, Hell's Canyon National Recreation Area, and the Oregon*
9 *Cascades Recreation Area, and Columbia River Gorge National Scenic Area;*
10 *(h) State parks and waysides as listed by the Oregon Department of Parks and*
11 *Recreation and the Willamette River Greenway;*
12 *(i) State natural heritage areas listed in the Oregon Register of Natural Heritage Areas*
13 *pursuant to ORS 273.581;*
14 *(j) State estuarine sanctuaries, including but not limited to South Slough Estuarine*
15 *Sanctuary, OAR Chapter 142;*
16 *(k) Scenic waterways designated pursuant to ORS 390.826, wild or scenic rivers*
17 *designated pursuant to 16 U.S.C. 1271 et seq., and those waterways and rivers*
18 *listed as potentials for designation;*
19 *(l) Experimental areas established by the Rangeland Resources Program, College of*
20 *Agriculture, Oregon State University: the Prineville site, the Burns (Squaw Butte)*
21 *site, the Starkey site and the Union site;*
22 *(m) Agricultural experimental stations established by the College of Agriculture, Oregon*
23 *State University, including but not limited to: Coastal Oregon Marine Experiment*
24 *Station, Astoria Mid-Columbia Agriculture Research and Extension Center, Hood*
25 *River Agriculture Research and Extension Center, Hermiston Columbia Basin*
26 *Agriculture Research Center, Pendleton Columbia Basin Agriculture Research Center,*
27 *Moro North Willamette Research and Extension Center, Aurora East Oregon*
28 *Agriculture Research Center, Union Malheur Experiment Station, Ontario Eastern*
29 *Oregon Agriculture Research Center, Burns Eastern Oregon Agriculture Research*
30 *Center, Squaw Butte Central Oregon Experiment Station, Madras Central Oregon*
31 *Experiment Station, Powell Butte Central Oregon Experiment Station, Redmond*
32 *Central Station, Corvallis Coastal Oregon Marine Experiment Station, Newport*
33 *Southern Oregon Experiment Station, Medford Klamath Experiment Station,*
34 *Klamath Falls;*
35 *(n) Research forests established by the College of Forestry, Oregon State University,*
36 *including but not limited to McDonald Forest, Paul M. Dunn Forest, the Blodgett*
37 *Tract in Columbia County, the Spaulding Tract in the Mary's Peak area and the*
38 *Marchel Tract;*
39 *(o) Bureau of Land Management areas of critical environmental concern, outstanding*
40 *natural areas and research natural areas;*
41 *(p) State wildlife areas and management areas identified in OAR chapter 635, Division*
42 *8.*
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Findings of Fact

The Protected Areas standard requires the Council to find that, taking into account mitigation, the design, construction and operation of a facility are not likely to result in significant adverse impacts to any protected area as defined by OAR 345-022-0040.

The Council addressed the Protected Area standard in Section IV.F of the *Final Order on the Application* and found that the proposed facility complied with the Protected Areas standard, without any required conditions. During its review of the first, second and third amendment requests to the site certificate extending the construction deadlines, the Council determined that the three requests did not impact compliance with the Protected Areas standard and, therefore continued to find compliance with the standard.

In RFA #4 the certificate holder evaluated the amended facility’s continued compliance with the Protected Areas standard, including potential impacts during facility construction and operation regarding noise, increased traffic, water use, wastewater disposal, visual impacts of facility structures or plumes, and visual impacts from air emissions. As explained in RFA #4, the certificate holder is not requesting to modify the previously approved facility, location of facility components, or site boundary, and that the analysis area associated with the Protected Areas standard continues to be the area within and extending 20 miles from the site boundary. As such, the Department recommends that Council continue to rely upon its previous findings included in the *Final Order on Request for Amendment 3*, and find that the certificate holder and new owner of the certificate holder (transferee) complies with the Councils Protected Areas standard.

Conclusion of Law

Based on reasons addressed above, the Department recommends that Council find that the facility, is not likely to result in significant adverse impacts to any protected area, and continues to comply with the Protected Areas Standard.

III.A.7 Retirement and Financial Assurance: OAR 345-022-0050

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

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

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Findings of Fact

The Retirement and Financial Assurance standard requires a finding that the facility site can be restored to a useful, non-hazardous condition at the end of the facility’s useful life, should either the certificate holder stop construction or should the facility cease to operate.²⁴

In the amendment request, the transferee (certificate holder) asserts that Golden Hills is aware of payment issues of Avangrid for other EFSC-jurisdictional projects, but is confident that the outstanding issues will be resolved. With this change, Golden Hills is confident that Avangrid will remain in good standing with the Department.²⁵

Restoration of the Site Following Cessation of Construction or Operation

OAR 345-022-0050(1) requires the Council to find that the facility site can be restored to a useful non-hazardous condition at the end of the facility’s useful life.

The Council addressed the Retirement and Financial Assurance standard in section IV.C of the *Final Order on the Application* and concluded that, subject to conditions stated in the *Final Order on the Application*, the certificate holder had the ability to adequately restore the site to a useful, nonhazardous condition following permanent cessation of construction or operation of the facility, and that the certificate holder had a reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory to the Council. The Council continued to find compliance with the standard in the subsequent three site certificate amendments. The Council previously imposed several conditions (Conditions IV.C.1-10) requiring the site certificate holder to submit to the Council, prior to construction, a bond or letter of credit sufficient to the Council to restore the site to useful, non-hazardous condition. These conditions would continue to apply to the transferee.

Council previously imposed Condition IV.C.6 in the site certificate, which requires the certificate holder to report to the Department any release of hazardous substances, pursuant to Oregon DEQ regulations, within one working day after the discovery of such release. The reporting obligation shall be in addition to any other reporting requirements applicable to such a release. To provide further clarification of the timing and submittal requirements associated with this condition, the Department recommends that the Council amend Condition IV.C.6 as follows:

Recommended Amended Condition IV.C.6:

The certificate holder shall ~~report to the Department:~~

²⁴ OAR 345-022-0050(1).

²⁵ Late payment of outstanding invoices was related to the Montague Wind Power Facility, also owned by Avangrid Renewables. In January 2018, Avangrid paid the outstanding invoices for the Montague project. ODOE issued a “Stop Work Order” for the work related to the Montague Wind Power Facility on November 3, 2017, due to outstanding Invoices 75 days past due. On January 9, 2018, Avangrid Renewables resumed payment of siting-related fees, and work on the Montague Wind Power Facility commenced.

1 a) Notify the Department of any spill or release of hazardous substances, material during
2 construction, operation or retirement of the facility pursuant to Oregon Department of
3 Environmental Quality (“DEQ”) regulations, within one working day after the discovery
4 of such release. This obligation~~The certificate holder shall be in addition to any other~~
5 reporting follow applicable Oregon Department of Environmental Quality (“DEQ”)
6 response requirements applicable to such a release regulations pursuant to OAR
7 Chapter 340 Division 142.

8
9 b) Within 45-days of the discovery, the certificate holder shall submit to the Department
10 copies of the Oregon Emergency Response System Spill/Release Report, as submitted
11 to DEQ.

12 [Final Order on ASC, Condition IV.C.6; Amended in Final Order on AMD4]

13
14 Additionally, the Department recommends an administrative edit to existing Condition IV.C.7
15 to clarify the Conditions applicability. The Departments recommendation for amended
16 Condition IV.C.7. is presented below:

17
18 **Recommended Amended Condition IV.C.7:**

19 If the certificate holder has not remedied a ~~release~~spill consistent with applicable
20 ~~Oregon~~ODEQ standards within six months after the date of the ~~release~~spill, the certificate
21 holder shall submit to the Council for its approval an independently prepared estimate of the
22 additional cost of remediation or correction within such six-month period.

23 (a) Upon approval of an estimate by the Council, the certificate holder shall increase the
24 amount of its bond or letter of credit by the amount of the estimate.

25 (b) In no event, however, shall the certificate holder be relieved of its obligation to
26 exercise all due diligence in remedying a ~~release or spill~~of hazardous substances.

27 [Final Order on ASC, Condition IV.C.7, Final Order on AMD4]

28
29 The Department also recommends that Condition IV.C.8 be removed from the Site Certificate,
30 as EFSC does not recognize the value of salvage in decommissioning calculations.

31
32 Based upon compliance with the existing and amended site certificate conditions, and because
33 the amendment request would not result in any changes to the facility or tasks or actions
34 necessary for facility decommissioning, the Department recommends that Council finds that
35 the certificate holder continues to have the ability to adequately restore the site to a useful,
36 nonhazardous condition.

37
38 *Ability of the Transferee to Obtain a Bond or Letter of Credit*

39 OAR 345-022-0050(2) requires the Council to determine that the certificate holder has a
40 reasonable likelihood of obtaining a bond or letter of credit, in a form and amount satisfactory
41 to the Council, to restore the site to a useful, non-hazardous condition. The retirement cost
42 estimate previously approved by Council for the Golden Hills facility is \$14,424,936. As a

1 supplement to the RFA #4, the transferee submitted a letter dated December 19, 2017 from
2 Liberty Mutual Insurance Company, which stated that Avangrid, Inc. “is qualified for issuance
3 of a single bond in the amount of \$75,000,000 with aggregate capacity of \$75,000,000.” The
4 letter also states that the “surety assumes no liability to you [EFSC Council Member] or to third
5 parties if for any reason we [Liberty Mutual] do not execute any required bonds.”²⁶
6 Additionally, as noted elsewhere in this order, Avangrid holds numerous other site certificates
7 and has provided the required bonds or letters of credit for each facility, in accordance with
8 those site certificates.

9
10 Condition IV.C.4 requires the certificate holder to provide a bond or letter of credit in the
11 amount deemed satisfactory by Council to restore the site to a useful, non-hazardous
12 condition. This condition would continue to apply to the transferee.

13
14 Subject to the transferee’s compliance with both amended and existing site certificate
15 conditions, and based upon the adequacy of the Financial Assurance letter from Liberty
16 Mutual, the Department recommends that the Council find that the transferee has a
17 reasonable likelihood of obtaining a bond or letter of credit in a form and amount satisfactory
18 to the Council to restore the site to a useful, non-hazardous condition.

19
20 **Conclusion of Law**

21 Based on the foregoing findings of fact, and subject to the existing and amended site
22 certificate conditions, the Department recommends the Council find that the transferee,
23 including the certificate holder and new owner of the certificate holder, will continue to
24 comply with the Council’s Retirement and Financial Assurance standard.

25
26 **III.A.8 Fish and Wildlife Habitat: OAR 345-022-0060**

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

- 29
30 (1) *The general fish and wildlife habitat mitigation goals and standards of OAR 635-415-*
31 *0025(1) through (6) in effect as of February 24, 2017, an*
32
33 (2) *For energy facilities that impact sage-grouse habitat, the sage-grouse specific habitat*
34 *mitigation requirements of the Greater Sage-Grouse Conservation Strategy for Oregon*
35 *at OAR 635-415-0025(7) and OAR 635-140-0000 through -0025 in effect as of February*
36 *24, 2017.*
37

38 **Findings of Fact**

39 The EFSC Fish and Wildlife Habitat standard requires the Council to find that the design,
40 construction and operation of a facility is consistent with the Oregon Department of Fish and
41 Wildlife’s (ODFW) habitat mitigation goals and standards, as set forth in OAR 635-415-0025.

²⁶ GH1AMD4Doc2-1 RFA4 Supplement- RAI Response 2017-12-30

1 This rule creates requirements for mitigating impacts to fish and wildlife habitat, based on the
2 functional quantity and quality of the habitat impacted as well as the nature, extent, and
3 duration of the impact. The rule also establishes a habitat classification system based on the
4 function and value of the habitat it would provide to a species or group of species likely to use
5 it. There are six habitat categories, with Category 1 being the most valuable, and Category 6
6 the least valuable.

7
8 *Habitat Types and Categories, and Potential Habitat Impacts*

9 The amendment request does not include any changes to the previously approved site
10 boundary, facility design, or facility component location; therefore, the certificate holder did
11 not conduct a field-based updated habitat assessment and relies upon the previous habitat
12 assessment and impact evaluation provided in the 2016 RFA #3. RFA #3 was approved by
13 Council in February 2017. Because the amendment request includes a construction
14 commencement deadline extension and because habitats can change over time, the
15 Department requested ODFW confirmation that the 2016 RFA #3 habitat assessment and
16 categorization accurately represents current conditions within the analysis area. In a comment
17 on the amendment request, ODFW confirmed that the 2016 RFA #3 habitat accurately
18 represents current habitat categorization within the site boundary and analysis area.²⁷ The
19 majority of land impacted by the facility is Category 6 habitat. As described in the *Final Order*
20 *on Amendment #3*, of an estimated 1,069 acre of temporary facility impact, 1,002 of those
21 acres are Category 6, and of 132 acres of permanent disturbance, 126.7 acres are Category 6.
22 The Council previously imposed Condition III.C.1 requiring that the certificate holder prepare a
23 pre-construction habitat assessment to confirm habitat category, temporary and permanent
24 habitat impacts based on final facility design, and to support the final evaluation of required
25 compensatory habitat mitigation. To provide additional clarification on agency review and
26 timing, protocol and methodology, the Department recommends the Council administratively
27 amend Condition III.C.1 as follows:

28
29 **Recommended Amended Condition III.C.1:**

30 At least 45-days prior to constructions ~~Before beginning construction~~, but not more than two
31 years before beginning construction, and after considering all micro-siting factors, the
32 certificate holder shall:

- 33 a) Conduct a field-based habitat survey to confirm the habitat categories of areas that will
34 be affected by facility components, as well as the locations of any sensitive resources
35 such as active raptor and other bird nests. The survey protocols and habitat
36 classification categories shall be confirmed with the Department and ODFW.
37 b) At least 45-days prior to construction, unless otherwise agreed to by the Department,
38 submit to the Department a habitat assessment report that includes:

²⁷ GH1AMD4Doc8. Reviewing Agency Comment ODFW Thompson. 2017-12-08

- 1 • Habitat impact table, based upon final facility design and updated habitat
2 survey, including permanent and temporary impacts by facility component and
3 habitat category/type/subtype.
- 4 • Maps showing: habitat categories and subtypes of all areas within the site
5 boundary, final location of temporary and permanent facility components, and
6 locations of any sensitive resources within areas that will be affected by facility
7 components. If any sensitive resources are identified, they will need to be
8 flagged as exclusion zones in accordance with Condition IV.M.10. If necessary,
9 sensitive resource information shall be submitted to the Department in hard
10 copy only and provided under request for information to be treated as
11 confidential.

12 The field survey and information in the habitat assessment report will be used to finalize the
13 HRMP for Department and ODFW approval (Condition PRE-TL). The certificate holder shall not
14 construct any facility components within areas of Category 1 habitat and shall avoid temporary
15 disturbance of Category 1 habitat.

16 ~~provide to the Department, the Oregon Department of Fish and Wildlife (“ODFW”) and the~~
17 ~~Planning Director of Sherman County detailed maps of the facility site, showing the final~~
18 ~~locations where the certificate holder proposes to build facility components and a table~~
19 ~~showing the acres of temporary and permanent habitat impact by habitat category and~~
20 ~~subtype. The maps shall include the locations of temporary laydown areas and areas of~~
21 ~~temporary ground disturbance associated with the construction of all facility components. The~~
22 ~~detailed maps of the final facility layout shall indicate the habitat categories of all areas that~~
23 ~~would be affected during construction. In classifying the affected habitat into habitat~~
24 ~~categories, the certificate holder shall consult with ODFW. The certificate holder shall not~~
25 ~~begin ground disturbance in an affected area until the habitat assessment has been approved~~
26 ~~by the Department. The Department may employ a qualified contractor to confirm the habitat~~
27 ~~assessment by on-site inspection.~~

28 [Final Order on ASC, Condition IV.M.4; Amended in Final Order on AMD4]

29
30 To mitigate the permanent, and temporary habitat impacts identified in Table 1, *Habitat*
31 *Categories and Classifications within Site Boundary with Acreages of Impact*, the Council
32 previously imposed Condition IV.M.1 requiring the certificate holder to finalize and implement
33 the requirements of a Habitat Mitigation and Revegetation Plan (HMRP) following completion
34 of construction. A draft HMRP was prepared by the certificate holder and evaluated in 2009
35 during the ASC phase. While there have been no changes in habitat categorization or
36 anticipated habitat impacts since the Council’s *Final Order on Request for Amendment #3*,
37 because RFA #4 includes a construction commencement deadline extension request, the
38 evaluation of “changes in circumstance” is triggered pursuant to OAR 345-027-0070(10)(b)(B).
39 The Department, in consultation with ODFW, identified changes in circumstance necessitating
40 that the 2009 draft HMRP be revised. The changes in circumstance affecting the draft 2009
41 HMRP relate to the Department and ODFW’s current recommendations on enhancement,
42 management and revegetation activities; success criteria; monitoring and reporting. The 2018

1 draft HMRP, including red-line and clean versions, is provided as Attachment C to this order.
2 The requirements of Condition IV.M.1, including implementation of a final HMRP, as approved
3 by the Department in consultation with ODFW, would not change and would continue to apply
4 to the certificate holder.

5
6 *State Sensitive Wildlife*

7 In RFA 4, the certificate holder provides results of a December 2017 desktop survey for the
8 analysis area, which identified suitable habitat for 14 State-sensitive species (including 1 fish, 1
9 reptile, 8 bird, and 4 bat species).²⁸ The certificate holder affirms that the suitable habitat
10 identified in the December 2017 literature review did not include any new State-sensitive
11 species not previously identified on the record of the ASC or subsequent amendment
12 proceedings.

13
14 The certificate holder also provides results of 2016 State-sensitive species surveys covering a
15 survey area within and extending 1,000 feet from the centerline of proposed turbine locations.
16 The 2016 survey resulted in State-sensitive species observations of Loggerhead shrike
17 (grassland bird) and Swainson’s hawk within the site boundary.²⁹

18
19 *Potential Impacts to State-Sensitive Species Habitat and Mitigation*

20 As described throughout this order, RFA #4 does not include any changes to the previously
21 approved site boundary, facility design, or facility component location; therefore, habitat
22 impacts resulting from facility construction and operation would not be expected to differ
23 from the Council’s evaluation included *Final Order on Request for Amendment #3*.

24
25 Condition IV.M.11 requires that the certificate holder conduct a pre-construction raptor nest
26 survey to confirm presence of State-sensitive avian species habitat and IV.M.10 requires 1300
27 foot buffers around nests for State-sensitive species previously identified within the site
28 boundary, which the Department recommends the Council continue to find would satisfy the
29 Council’s Fish and Wildlife Habitat standard.

30
31 While the 2017 literature review identified suitable habitat and documented observations of
32 Loggerhead shrike and Grasshopper sparrow, and the 2016 State-sensitive species survey
33 resulted in Loggerhead shrike observations within the site boundary, potential construction-
34 related impacts to these species habitat would be minimized through previously imposed
35 Condition IV.M.5. Condition IV.M.5 requires that the certificate conduct a pre-construction
36 survey for identification of these species and restrict ground disturbing construction activities
37 within a 150-foot buffer of identified active nests. The Department also notes that the 2017
38 literature review identified that the analysis area represented a probable migration area for
39 four state-sensitive bat species, which are not included in Condition IV.M.10, but would be
40 monitored post-construction under the previously imposed Condition IV.M.7.

²⁸ GH1AMD4Doc2-1 RFA4 Supplement- RAI Response. 2017-12-30.

²⁹ Id.

1
2 Condition IV.M.7 requires the certificate holder to adhere to requirements of a Wildlife
3 Monitoring and Mitigation Plan (WMMP) including a 2-year post construction bird and bat
4 fatality monitoring program. The post-construction bird fatality monitoring program includes
5 monitoring of grassland bird species, including Grasshopper sparrow and Loggerhead shrike,
6 and bat species; and, requires evaluation of additional mitigation if bird or bat fatalities exceed
7 specific thresholds of concern. The Department recommends Council continue to find that
8 Condition IV.M.7, administratively amended as described below, would adequately mitigate
9 potential operational impacts to State-sensitive bird and bat species habitat and would
10 continue to be consistent with ODFW's Fish and Wildlife Habitat Policy.

11
12 The Council previously imposed Conditions IV.M.1 through IV.M.11 to demonstrate that facility
13 related construction and operational impacts would be mitigated consistent with ODFW's Fish
14 and Wildlife Habitat mitigation policy. As described in Section II.A.1, the Department
15 recommends administrative amendments to numerous conditions in the site certificate to
16 clarify timing of implementation, to align with agency review processes, and to clarify a
17 submittal requirement, as needed. Specifically, the Department recommends administrative
18 amendments to Conditions IV.M.1, IV.M.2, IV.M.3, IV.M.5, IV.M.8, IV.M.9, IV.M.10 and IV.M.11,
19 as presented in Attachment A of this order.

20
21 Based on review of the information provided in RFA #4 and in response to the Department's
22 request for information, and subject to compliance with the recommended amended site
23 certificate conditions, the Department recommends that the Council find that the design,
24 construction, and operation of the facility, taking into account mitigation, continue to be
25 consistent with the fish and wildlife habitat mitigation goals and standards of OAR 345-415-
26 0025.

27
28 **Conclusion of Law**

29 Based on the findings presented above, and subject to the existing and amended conditions,
30 the Department recommends that the Council find the facility, continues to comply with the
31 Council's Fish and Wildlife Habitat standard.

32
33 **III.A.9 Threatened and Endangered Species: OAR 345-022-0070**

34 *To issue a site certificate, the Council, after consultation with appropriate state agencies, must*
35 *find that:*

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

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

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

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 cause
4 a significant reduction in the likelihood of survival or recovery of the species.
5

6 **Findings of Fact**

7 The Threatened and Endangered Species standard requires the Council to find that the design,
8 construction, and operation of the facility is not likely to cause a significant reduction in the
9 likelihood of survival or recovery of a fish, wildlife, or plant species listed as threatened or
10 endangered by the Oregon Fish and Wildlife Commission or Oregon Department of Agriculture
11 (ODA). For threatened and endangered plant species, the Council must also find that the
12 facility is consistent with an adopted protection and conservation program from ODA.
13 Threatened and endangered species are those listed under ORS 564.105(2) for plant species,
14 or ORS 496.172(2) for fish and wildlife species.
15

16 In the *Final Order on the ASC*, Council found that based on compliance with conditions IV.L.1
17 and IV.L.2 of the site certificate, the proposed facility complied with the Threatened and
18 Endangered Species Standard. In the *Final Order on Amendment 1, and Final Order on*
19 *Amendment 2*, Council found the facility continued to meet the Standard. Council imposed
20 condition IV.L.3 in the *Final Order on Amendment 3*, which requires the certificate holder to
21 perform new field surveys for threatened and endangered species prior to facility
22 construction. Once performed, the certificate holder shall report the results to the
23 Department, ODFW and the Department of Agriculture. If the surveys identify the presence of
24 threatened or endangered species within the site boundary, the certificate holder shall
25 implement appropriate measures to avoid a significant reduction in the likelihood of survival
26 or recovery of the species, as approved by the Department, ODFW, and the Oregon
27 Department of Agriculture. In the *Final Order on Amendment 3*, Council determined that,
28 subject to the existing and amended site certificate conditions, the facility, as amended
29 continued to comply with the Threatened and Endangered Species Standard.³⁰
30

31 The Department recommends administrative amendments to conditions IV.L.1, and IV.L.3, as
32 presented in Attachment A of this order. The administrative amendments to the conditions
33 clarify instructions to, and deliverables from the certificate holder, and will not substantively
34 change the requirements of the conditions.
35

36 Since the RFA #4 does not include any changes to the previously approved site boundary,
37 facility design, or facility component location, the certificate holder relied upon the previous
38 surveys and findings made in RFA #3 to support their continued compliance with the
39 Threatened and Endangered Species Standard; however, in December 2017 as part of RFA #4,
40 the certificate holder include an updated literature review for federal- and state-listed
41 endangered, threatened, proposed, or candidate plant and wildlife species that have potential

³⁰ GH1AMD3Doc118 Final Order and Attachments. Section IV.A.9. 2017-02-28

1 for occurrence in the analysis area of the facility. The updated literature review did not identify
2 any new state-listed threatened or endangered wildlife or plant species that was not
3 previously identified and analyzed in the ASC and previous site certificate amendments.³¹ The
4 review did identify three state-listed species (the Bald eagle, American peregrine falcon, and
5 the Whitehead navarretia) that were originally included in the ASC but that have since been
6 de-listed as no longer threatened or endangered.³²

7
8 No Threatened or Endangered species were observed within the analysis area during the State-
9 sensitive species survey the certificate holder conducted in 2016 for RFA #3. . The certificate
10 holder provided an updated Table Q-1, *State Threatened and Endangered Species and Federal*
11 *Threatened, Endangered, and Proposed Species with the Potential to Occur Within the Exhibit*
12 *Q Analysis Area (Site Boundary and 5 miles) of the Golden Hills Facility.*³³

13
14 Based on review of the information provided in RFA #4 and in response to the Department’s
15 request for information, and subject to compliance with the recommended amended site
16 certificate conditions, the Department recommends that the Council find that the requested
17 amendment would not result in impacts to threatened and endangered plant or animal species
18 that have not been addressed by the Council, nor otherwise affect the certificate holder’s
19 ability to construct and operate the facility consistent with applicable protection plans for
20 threatened or endangered plant and animal species and in a manner which will not likely cause
21 a significant reduction in the likelihood of a species’ survival or recovery.

22
23 **Conclusion of Law**

24 Based on the findings presented above, and subject to the existing and amended conditions,
25 the Department recommends that the Council find the facility, continues to comply with the
26 Council’s Threatened and Endangered Species standard.

27
28 **III.A.10 Scenic Resources: OAR 345-022-0080**

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

³¹ The literature review identified four federally listed species as having potential to occur in the analysis area that were not identified in the original ASC. However, species that are only listed as threatened or endangered by the federal government are outside of EFSC jurisdiction. The certificate holder must comply with applicable federal regulations regarding the protection of federally-listed species independent of the EFSC site certificate process.

³² GH1APPDoc1-21. ASC Exhibit Q. 2007-07

³³ GH1AMD4Doc2-1. RFA4 Supplement- RAI Response. 2017-12-30

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Findings of Fact

The Scenic Resources standard requires the Council to find that the facility would not cause a significant adverse impact to identified scenic resources and values. To be considered under the standard, scenic resources and values must be identified as significant or important in local land use plans, tribal land management plans, and/or federal land management plans. The Council addressed the Scenic Resources standard in section IV.G of the *Final Order on the Application*. The Council found that the design, construction, and operation of the facility, taking into account mitigation, were not likely to result in significant adverse impacts to scenic resources and values identified as significant or important in local land use plans, tribal land management plans, and federal land management plans for any significant or important scenic resources identified within the 10-mile analysis area.³⁴ In the *Final Order on the Application*, Council adopted three site certificate conditions related to the Scenic Resources standard, conditions IV.G.1 to IV.G.3. These conditions would continue to apply to the facility. As part of RFA #4, by reviewing local land use plans, tribal land management plans, and federal land management plans, the certificate holder confirmed that no new important scenic resources have been identified within the analysis area for scenic resources.³⁵

RFA #4 would not change the facility design, layout, or site boundary, and as such, the Department recommends that the Council find that the proposed amendment would not be likely to result in new impacts to important scenic resources that have not been addressed by the Council or otherwise affect the certificate holder’s ability to design, construct and operate the facility, as amended, without significant adverse impact to important scenic resources. Based on review of the information provided in RFA #4 and in response to the Department’s request for information, and subject to compliance with the recommended amended site certificate conditions, the Department recommends that the Council continue to find that the design, construction and operation of the facility, as amended, is not likely to result in significant adverse impacts to scenic resource identified within the analysis area and identified as significant or important in applicable land use plans or federal land management plans.

Conclusion of Law

Based on the foregoing findings of fact and conclusions of law, and subject to compliance with the existing site certificate conditions, the Department recommends that the Council find the facility would continue to satisfy the requirements of the Council’s Scenic Resources standard.

III.A.11 Historic, Cultural and Archaeological Resources: OAR 345-022-0090

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

³⁴ GH1APPDoc208 Final Order on the Application, Section IV.G. 2009-05-15
³⁵ The analysis area for Scenic Resources includes the area within the site boundary and the area extending 10 miles beyond the site boundary in both Oregon and Washington. GH1AMD4Doc2-1 RFA4 Supplement- RAI Response. 2017-12-30

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

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

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

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

10 ***

11
12 **Findings of Fact**

13 Section (1) of the Historic, Cultural and Archaeological Resources standard generally requires
14 the Council to find that the facility is not likely to result in significant adverse impacts to
15 historic, cultural or archaeological resources. Under Section (2), the Council may issue a site
16 certificate for a wind power facility without making findings of compliance with this standard.
17 However, the Council may impose site certificate conditions based on the requirements of this
18 standard.

19
20 The Council addressed the Historic, Cultural and Archaeological standard in section V.B of the
21 *Final Order on the Application* and imposed Conditions V.B.1 through V.B.10. The first and
22 second amendments to the site certificate extended the construction deadlines and did not
23 impact the Council’s previous findings associated with the Historic, Cultural and Archaeological
24 standard. The third amendment to the site certificate extended the construction deadlines and
25 also expanded the site boundary into areas not previously surveyed for historic, cultural, and
26 archeological resources. As a result, the certificate holder conducted both a desktop and field
27 survey for historic, cultural, and archeological resources within the site boundary expansion
28 areas, and did not identify any resources. In the *Final Order on Amendment #3*, Council found
29 that the existing site certificate conditions ensured adequate protection of historic, cultural
30 and archeological resources.³⁶

31
32 As part of RFA #4, the certificate holder reviewed SHPO databases to confirm that no new
33 historic and cultural resources within the analysis area have been listed, or recommended as
34 potentially eligible on the National Register of Historic Places, since Councils previous
35 decisions.

36
37 RFA #4 does not change the facility layout or site boundary and as such, is not anticipated to
38 impact resources not previously discussed in the original ASC or subsequent site certificate
39 amendments. The Department is recommending edits to existing Condition V.B.2 in order to
40 clarify submittal requirements, which were previously unclear, and also incorporate the
41 requirements of Condition V.B.3 into V.B.2.

³⁶ GH1AMd3Doc118 Final Order on Amendment No. 3, Section IV.A.11. 2017-02-28

1
2 Additionally, Condition V.B.3 was previously imposed to require the certificate holder to
3 consult with the SHPO regarding the development of a CRMP. The requirements of Condition
4 V.B.3 were incorporated into the Departments recommendations for amended Condition V.B.2
5 as presented below:
6

7 **Recommended Amended Condition V.B.2:**

8 At least 45 days prior to construction ~~For sites 35SH215, 35SH216 and 35SH221,~~ the certificate
9 holder shall ~~avoid impacts to these sites during construction and subsequent operations. The~~
10 ~~certificate holder shall develop~~ prepare a Cultural Resource Management Plan (the “CRMP”)
11 and shall submit the CRMP to the Department and State Historic Preservation Office (the
12 “SHPO”) for review. The Department must approve the CRMP, in consultation with SHPO, prior
13 to construction.

14 The CRMP shall at a minimum include:

- 15 (a) Specific protocols and procedures for protecting known cultural resources including
16 imposing that includes a 30-meter buffer zone around these listed sites designated and
17 designating as a “no-work zones” for all ground-disturbing activities, around sites
18 35SH215, 35SH216, 35SH221, and to the sites identified in Condition V.B.1: 35SH217,
19 35SH220, GH site 6 (above ground resource), 35SH219 and GH Isolate 6. Both the
20 buffer and no work zones apply to cultural resources, including any additional
21 archeological sites and possible human remains accidentally discovered during
22 construction. The CRMP shall identify how protocols will follow State laws and rules at
23 ORS 358.905-961, ORS 390.235, OAR 736-051-0090 and ORS 97.740-760 as in effect on
24 the date of this site certificate, The certificate holder shall submit the CRMP to the
25 State Historic Preservation Office (the “SHPO”) for concurrence and shall provide to the
26 Department documentation confirming SHPO concurrence prior to start of
27 construction.
- 28 (b) Protocols and procedures for responding to accidental discovery of cultural resources
29 during operations and ongoing maintenance activities.

30 [Final Order on ASC, Condition V.B.2; Amended in Final Order on AMD4]
31

32 **Condition V.B.3:**

33 ~~The certificate holder shall consult with the SHPO regarding the development of a CRMP that will~~
34 ~~address the protection of aboveground historic resources and belowground archeological resources.~~
35 ~~The CRMP shall include established protocol and procedures for unanticipated discoveries, such as the~~
36 ~~discovery of new archeological sites or Native American human remains during ground-disturbing~~
37 ~~activities, and shall document how these protocols will follow State laws and rules at ORS 358.905-961,~~
38 ~~ORS 390.235, OAR 736-051-0090 and ORS 97.740-760 as in effect on the date of this site certificate.~~

39 [Final Order on ASC, Condition V.B.3, Amended in Final Order on AMD4]

1
2 The Department also recommends administrative amendments to Conditions V.B.4, V.B.5, V.B.6,
3 V.B.7, V.B.8, and V.B.9, as presented in Attachment A of this order.
4

5 **Conclusion of Law**

6 Based on review of the information provided in RFA #4 and in response to the Department's
7 request for information, the Department recommends that the Council find that the existing
8 and amended site certificate conditions to address the Historic, Cultural and Archaeological
9 Resources standard are adequate to ensure protection of historic, cultural and archeological
10 resources.
11

12 **III.A.12 Recreation: OAR 345-022-0100**

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

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

25 **Findings of Fact**

26 The Recreation standard requires the Council to find that the design, construction, and
27 operation of the facility are not likely to result in significant adverse impacts to important
28 recreational opportunities. The Council addressed the Recreation standard in section IV.H of
29 the *Final Order on the Application*, and found that the design, construction and operation of
30 the facility were not likely to result in a significant adverse impact to any important
31 recreational opportunities identified within the 5-mile analysis area. The Council did not
32 impose any conditions related to this standard.
33

34 In RFA #4, the certificate holder confirmed that there were no new recreational opportunities,
35 or impacts on recreational opportunities within the site boundary analysis area of the facility
36 that had not been previously considered in the original application or previous amendments.
37 Based on the information provided in RFA #4, the Department recommends that the Council
38 find that the facility, as amended, is not likely to result in significant adverse impacts to
39 important recreational opportunities within the analysis area.
40

41 **Conclusion of Law**

42 Based on the findings presented here, the Department recommends that the Council find that
43 the facility continues to comply with the Council's Recreation standard.

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III.A.13 Public Services: OAR 345-022-0110

- (1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact to the ability of public and private providers within the analysis area described in the project order to provide: sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.*
- (2) The Council may issue a site certificate for a facility that would produce power from wind, solar or geothermal energy without making the findings described in section (1). However, the Council may apply the requirements of section (1) to impose conditions on a site certificate issued for such a facility.*

Findings of Fact

The Council’s Public Services standard requires the Council to evaluate a facility’s impacts on the ability of public and private service providers to supply sewer and sewage treatment, water, stormwater drainage, solid waste management, housing, traffic safety, police and fire protection, health care, and schools. Under OAR 345-022-0110(2), the Council may issue a site certificate for a facility that would produce power from wind without making findings with respect to the Public Services standard. However, the Council may impose site certificate conditions based upon the requirements of the standard. In Exhibit U of the ASC, the certificate holder identified 10 Oregon cities and one Washington city within the analysis area that could be affected by construction and operation of the proposed facility: Arlington, Condon, Grass Valley, Moro, Rufus, Wasco, Dufur, The Dalles, Maupin, and Mosier, Oregon, and Goldendale, Washington. The analysis area for public services, as established in the project order, is the area within the site boundary and 30 miles from the site boundary, including area within the State of Washington.³⁷

The Council addressed the Public Services standard in section V.C of the *Final Order on the Application*, and imposed site certificate conditions V.C.1 to V.C.14 to address the requirements of the standard. In Exhibit U of the ASC, the certificate holder represented that facility construction would be completed within 9-months, and would require 100 to 120 workers during peak construction activity.³⁸ The certificate holder also proposed in Exhibit U of the ASC that between 10 and 15 permanent employees would be needed during operation of the facility.³⁹ In RFA #3, the certificate holder stated that the components included would result in the same or fewer employees required for both the construction (100-120 workers during peak construction), and operation (between 10-15 permanent employees) of the facility, and as such would not increase the number of people requiring housing or public

³⁷ GH1APPDoc1-25. ASC Exhibit U, p. U-2. 2007-07
³⁸ GH1APPDoc1-25. ASC Exhibit U, p. U-1. 2007-07
³⁹ GH1APPDoc1-25. ASC Exhibit U, p. U-17. 2007-07

1 services, thus not changing the impact previously evaluated in the *Final Order on the*
2 *Application, Final Order on Amendment #1, and Final Order on Amendment #2* to police and
3 fire protection services, housing services, health care services, and schools.⁴⁰
4

5 The requirements of Conditions V.C.12 to V.C.14 were incorporated into other conditions and
6 have been removed from the site certificate. The requirements of Conditions V.C.12 and
7 V.C.13 were incorporated into the Department's recommendation for amended Condition
8 IV.D.19. The Department also recommends that Council incorporate the requirements of
9 Condition V.C.14 into amend Condition IV.D.18.

10
11 The Department also recommends additional administrative amendments to Conditions V.C.3,
12 V.C.9, and V.C.10, as presented in Attachment A of this order.

13
14 In RFA #4, in response to the Departments RAI's, the certificate holder and new owner of the
15 certificate holder (transferee) confirmed that it expects major construction to last 9 months
16 with total construction lasting as long as 12 months. This is consistent with this amendment
17 request to begin construction by June 18, 2020 and complete construction by June 18, 2021.
18 Further, based on the transferee's experience, RFA #4 states that the original ASC and RFA #3
19 underestimated the number of construction workers needed during peak construction
20 periods. Avangrid recently constructed four wind energy facilities in other states, and based on
21 employment data from those projects, the peak number of workers ranged from 182 to 411
22 people.⁴¹
23

24 Golden Hills now assumes that during peak construction period there will be 300 workers
25 onsite, and there will be an average of 170 workers onsite during construction. Included as
26 Attachment F to the *RFA Supplement- RAI response*, the certificate holder conducted a *Public*
27 *Services Evaluation* in which the anticipated increase in workers' construction-related impacts
28 to public services (e.g., housing, health care, transportation and roadway impacts, etc.) were
29 taken into consideration. The certificate holder also confirms in RFA #4 that the estimated
30 number of permanent employees needed to operate the facility, between 10 and 15
31 permanent employees, would remain consistent with what was previously assumed in Exhibit
32 U of the ASC.⁴²
33

34 *Sewage, Storm Water and Solid Waste*

35 The certificate holder asserts that during construction of the facility, the impact on sewers and
36 sewage treatment facilities would be minimal, as a local provider will supply portable toilets to
37 the site, and the facility would not be connected to a municipal sewer system. The Council
38 previously imposed Waste Management conditions (V.D.3) and (V.D.4) requiring the certificate
39 holder to provide and maintain portable toilets for on-site sewage handling during
40 construction and to discharge sanitary wastewater to an on-site septic system during

⁴⁰ GH1AMD3Doc2. Golden Hills Wind Project Request for Amendment No. 3.p. 5-22. 2015-12

⁴¹ GH1AMD4Doc2-1. RFA4 Supplement- RAI Response 2017-12-30

⁴² GH1AMD4Doc2-3 RFA4 Supplement Information 2018-02-12

1 operation of the proposed facility. The change in estimated construction workers is not
2 expected to affect the Council’s previous finding of compliance with the Public Services
3 standard, as additional sewage would be managed by the portable toilet service provider and
4 in accordance with site certificate Conditions V.D.3 and V.D.4.

5
6 Storm water drainage during construction would continue to be subject to the NPDES Storm
7 Water Discharge General Permit #1200-C, which ensures appropriate on-site handling of storm
8 water. There are no local storm sewers serving the proposed Golden Hills site. Construction of
9 the facility would generate solid waste that would be recycled to the extent feasible and
10 otherwise hauled to an appropriate landfill by local garbage haulers. As such, the change in
11 estimated construction workers is not expected to affect the Council’s previous finding of
12 compliance with the Public Services standard.

13
14 *Water*

15 Exhibit O of the ASC provides an estimate of approximately 25 million gallons of water would
16 be used during facility construction.⁴³ The certificate holder confirmed in RFA #4 that during
17 facility construction, water would be trucked in from offsite, and that the increase in
18 construction workers will not adversely impact local water suppliers or the quantities needed
19 during facility construction.

20
21 Water used during facility operation will have no effect on municipal water systems, as the
22 water would come from an on-site well. Council previously imposed condition V.C.1, requiring
23 the certificate holder to not use more than 5,000 gallons of water per day from the on-site
24 well, during facility operation.

25
26 *Housing, Police and Fire Protection, Health Care and Schools*

27 As noted above, the certificate holder estimates an increase in the estimated amount of
28 workers onsite during the peak construction period. The new estimate of 300 workers during
29 the peak construction period is expected to not adversely impact the housing within the
30 analysis area. The certificate holder expects to hire approximately half of the construction
31 workers from outside of the analysis area. The increased number of construction workers
32 would be housed in available local hotels and other short-term housing, of which the
33 certificate holder confirmed are sufficient within the local commuting area. As such, the
34 change in estimated construction workers is not expected to affect the Council’s previous
35 finding of compliance with the Public Services standard.

36
37 Golden Hills expects that the permanent operations workforce would comprise 10 to 15 full-
38 time and part-time employees and that nine of these employees would come from outside the
39 area. According to the 2000 U. S. Census data, there are about 2,800 vacant housing units in
40 communities within the analysis area. The Council finds that construction and operation of the

⁴³ GH1APPDoc1-19. ASC Exhibit O, p. O-1. 2007-07

1 proposed facility would not have a significant adverse effect on the supply of housing in the
2 analysis area.

3
4 The Dalles, Goldendale and Condon are the only cities within the analysis area that provide
5 their own police service. The certificate holder claims that the increase in construction workers
6 would not have a significant adverse impact on local police, fire protection, and emergency
7 response services because the population increase would be temporary and relatively small
8 numbers of total workers compared to the total local population. In addition, Conditions V.C.2-
9 V.C.14 provides safety, fire protection and emergency response measures for the facility,
10 including the requirement to develop a fire safety and response plan with affected agencies
11 prior to construction of the facility. The certificate holder also anticipates that the increase in
12 the analysis area population caused by the in-migration of construction workers would result
13 in little to no increase in the student population. Construction work is short-term and it is not
14 expected that construction workers would bring families and school-aged children. As such,
15 the change in estimated construction workers is not expected to affect the Council's previous
16 finding of compliance with the Public Services standard.

17
18 *Traffic Safety*

19 During facility construction and operation, the certificate holder expects the primary route of
20 construction-related traffic to be I-84 to US 97 (at Biggs Junction) to the US 97/OR 206
21 intersection. Workers traveling from Washington would take US 97 south across the Columbia
22 River bridge at Biggs Junction and continue south. Construction traffic may also approach the
23 site from the south on US 97. Both US 97 and OR 206 are two-lane paved highways.

24
25 Construction-related traffic delays on local roadways could occur, but would likely be caused
26 by the size of the construction material delivery trucks rather than passenger (construction
27 worker) traffic due to very low use of these local roadways. To accommodate the length and
28 weight of vehicles that will deliver the turbines and equipment necessary for construction,
29 some of the county roads will be improved or completely reconstructed. As such, the change
30 in estimated construction workers is not expected to affect the Council's previous finding of
31 compliance with the Public Services standard. RFA #4 does not change the facility design,
32 layout, or site boundary, and therefore does not change the previous analysis of traffic and
33 traffic safety.

34
35 Prior to construction, a construction phase traffic management plan will be developed in
36 consultation with the local community as identified in Condition V.C.10. To provide additional
37 clarification on the implementation schedule and submittal requirements of Condition V.C.10,
38 the Department recommends the Council administratively amend Condition V.C.10 as follows:

39
40 **Recommended Amended Condition V.C.10:**

41 Before and during beginning construction of the facility, the certificate holder shall develop, in
42 consultation with Sherman County Road Department, and implement a construction-phase

1 traffic management plan, ~~with all affected local jurisdictions.~~ The certificate holder shall
2 submit to the Department a copy of the final construction-phase traffic management plan.
3 [Final Order on ASC, Condition V.C.10; Amended in Final Order on AMD4]

4
5 During operation of the proposed facility, the expected staff of 10 to 15 employees would not
6 significantly increase traffic in the analysis area. The Council finds that the use of area
7 highways and local roads during construction and operation of the proposed facility is not
8 likely to result in a significant adverse impact on traffic safety.

9
10 Based on review of the information provided in RFA #4 and in response to the Department's
11 request for information, and subject to compliance with the existing and recommended
12 amended site certificate conditions, the Department recommends that the Council find that
13 the construction and operation of the facility, as amended, is not likely to result in significant
14 adverse impacts to the ability of public and private providers within the analysis area to
15 provide the identified services.

16
17 **Conclusion of Law**

18 Based on the foregoing analysis, and subject to the existing and amended conditions in the site
19 certificate, the Department recommends that the Council find that the facility continues to
20 comply with the Council's Public Services standard.

21
22 **III.A.14 Waste Minimization: OAR 345-022-0120**

- 23 *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the*
24 *Council must find that, to the extent reasonably practicable:*
25 *(a) The applicant's solid waste and wastewater plans are likely to minimize generation*
26 *of solid waste and wastewater in the construction and operation of the facility, and*
27 *when solid waste or wastewater is generated, to result in recycling and reuse of*
28 *such wastes;*
29 *(b) The applicant's plans to manage the accumulation, storage, disposal and*
30 *transportation of waste generated by the construction and operation of the facility*
31 *are likely to result in minimal adverse impact on surrounding and adjacent areas.*
32 *(2) The Council may issue a site certificate for a facility that would produce power from*
33 *wind, solar or geothermal energy without making the findings described in section (1).*
34 *However, the Council may apply the requirements of section (1) to impose conditions on*
35 *a site certificate issued for such a facility.*

36 ***

37
38 **Findings of Fact**

39 The Waste Minimization standard requires the Council to find that the certificate holder will
40 minimize generation of solid waste and wastewater, and manage waste generated to result in
41 minimal adverse impacts on the surrounding and adjacent areas. Under Section (2) of the
42 standard, the Council may issue a site certificate for a wind power facility without making

1 findings of compliance with this section. However, the Council may impose site certificate
2 conditions based on the requirements of this standard.

3
4 In the *Final Order on the ASC, Final Order on Amendment 1, Final Order on Amendment #2, and*
5 *Final Order on Amendment #3*, the Council found that, based upon compliance with Conditions
6 V.D.1 to V.D.4, the certificate holder has the ability to construct and operate the facility in
7 compliance with Council’s Waste Minimization Standard.

8
9 The Council evaluated the Waste Minimization standard in section V.D. of the *Final Order on*
10 *the Application* and found that the facility, with conditions, addressed the Waste Minimization
11 standard. The first, second and third amendments to the site certificate extended the
12 construction deadlines and did not impact the Council’s previous evaluation of the Waste
13 Minimization standard.

14
15 The Council imposed four conditions in the original site certificate related to the Waste
16 Minimization standard (conditions V.D.1 to V.D.4). Those four conditions would continue to
17 apply to the facility, and include requirements for the certificate holder to develop and
18 implement waste management plans during both construction and operations. As noted in the
19 conditions, those plans include recycling plans to reduce waste going to landfills.
20 To provide additional clarification on the submittal requirements of Condition V.D.4, the
21 Department recommends the Council administratively amend Condition V.D.4 as follows:

22
23 **Recommended Amended Condition V.D.4:**

24 During operation, the certificate holder shall discharge sanitary wastewater generated at the
25 O&M facility to a licensed on-site septic system in compliance with county permit
26 requirements. The certificate holder shall design the septic system with a discharge capacity of
27 less than 5,000 gallons per day. The certificate holder shall provide copies of all necessary
28 septic system permits to the Department.

29 [Final Order on ASC, Condition V.D.4; Amended in Final Order on AMD4]

30
31 Additionally, the Department recommends administrative amendments to Conditions V.D.1,
32 and V.D.2, as presented in Attachment A of this order.

33
34 RFA #4 requests no changes to the facility design, layout, or operation, and as such, the
35 Department recommends that the Council find that the facility will continue to comply with
36 the Council’s Waste Minimization Standard.

37
38 **Conclusion of Law**

39 Based on the foregoing analysis, and subject to the existing conditions in the site certificate,
40 the Department recommends that the Council find that the facility continues to comply with
41 the Council’s Waste Minimization standard.

1 **III.B Division 23 Standards**

2 The Division 23 standards apply only to “nongenerating facilities” as defined in ORS
3 469.503(2)(e)(K), except nongenerating facilities that are related or supporting facilities. The
4 facility is not a nongenerating facility as defined in statute and therefore Division 23 is not
5 applicable to the requested amendment.
6

7 **III.C Division 24 Standards**

8 The Council’s Division 24 standards include specific standards for siting facilities including
9 wind, underground gas storage reservoirs, transmission lines and facilities that emit carbon
10 dioxide.
11

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

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

- 15 (1) *Can design, construct and operate the facility to exclude members of the public from*
16 *close proximity to the turbine blades and electrical equipment.*
17 (2) *Can design, construct and operate the facility to preclude structural failure of the tower*
18 *or blades that could endanger the public safety and to have adequate safety devices*
19 *and testing procedures designed to warn of impending failure and to minimize the*
20 *consequences of such failure.*
21

22 **Findings of Fact**

23 OAR 345-024-0010 requires the Council to consider specific public health and safety standards
24 related to wind energy facilities. In particular, the Council must evaluate an applicant’s
25 proposed measures to exclude members of the public from close proximity to the turbine
26 blades and electrical equipment, and the applicant’s ability to design, construct and operate
27 the facility to prevent structural failure of the tower or blades and to provide sufficient safety
28 devices to warn of failure.
29

30 The Council addressed the Public Health and Safety Standard for Wind Facilities in section IV.I
31 of the *Final Order on the Application* and found that the certificate holder could design,
32 construct, and operate the facility to exclude members of the public from close proximity to
33 the turbine blades and electrical equipment. The Council further found that the certificate
34 holder could design, construct, and operate the facility to preclude structural failure of the
35 tower or blades that could endanger public safety, and to have adequate safety devices and
36 testing procedures designed to warn of impending failure and to minimize the consequences
37 of such failure. Accordingly, the Council found that the facility, with conditions, complied with
38 this standard.⁴⁴
39

40 In order to maintain compliance with the standard, Council implemented a number of
41 conditions in the site certificate (Conditions IV.I.1 to IV.I.8). These conditions will continue to

⁴⁴ GH1APPDoc208 Final Order on the Application, Section IV.I. 2009-05-15

1 apply the facility. There are no proposed changes to the facility design, layout, or site
2 boundary as part of RFA #4.

3
4 The Council previously imposed Condition IV.I.1 requiring that the certificate holder to follow
5 the manufacturer’s recommended handling instructions and procedures to prevent damage to
6 turbine or turbine tower components that could lead to failure. To provide additional
7 clarification on the implementation schedule and submittal requirements of Condition IV.I.1,
8 the Department recommends the Council administratively amend Condition IV.I.1 as follows:
9

10 **Recommended Amended Condition IV.I.1:**

11 During construction, the certificate holder shall follow manufacturer’s recommended
12 handling instructions and procedures to prevent damage to turbine or turbine tower
13 components that could lead to failure. In the compliance plan required per OAR 345-026-
14 0048, the certificate holder shall describe the process or protocol to be implemented to
15 ensure manufacturer’s handling instructions and procedures are followed during
16 equipment delivery.

17 [Final Order on ASC, Condition IV.I.1; Amended in Final Order on AMD4]

18
19 The Department recommends additional administrative amendments to Conditions IV.I.2,
20 IV.I.4, IV.I.5, IV.I.6, and IV.I.8, as presented in Attachment A of this order.

21
22 Based on the findings presented here, the Department recommends that Council continue to
23 find that the certificate holder can design, construct, and operate the facility, as amended, in
24 compliance with Public Health and Safety Standards for Wind Energy Facilities.

25
26 **Conclusion of Law**

27 Based on the assessment above, and subject to compliance with the site certificate conditions,
28 the Department recommends that Council find that the facility, as proposed under RFA 4,
29 continues to comply with the Council’s Public Health and Safety Standards for Wind Energy
30 Facilities.

31
32 **III.C.2 Cumulative Effects Standards for Wind Energy Facilities: OAR 345-024-0015**

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

- 36 (1) *Using existing roads to provide access to the facility site, or if new roads are needed,*
37 *minimizing the amount of land used for new roads and locating them to reduce adverse*
38 *environmental impacts.*
39 (2) *Using underground transmission lines and combining transmission routes.*
40 (3) *Connecting the facility to existing substations, or if new substations are needed,*
41 *minimizing the number of new substations.*
42 (4) *Designing the facility to reduce the risk of injury to raptors or other vulnerable wildlife*
43 *in areas near turbines or electrical equipment.*

- 1 (5) *Designing the components of the facility to minimize adverse visual features.*
2 (6) *Using the minimum lighting necessary for safety and security purposes and using*
3 *techniques to prevent casting glare from the site, except as otherwise required by the*
4 *Federal Aviation Administration or the Oregon Department of Aviation*

5
6 **Findings of Fact**

7 The Cumulative Effects Standard for Wind Energy Facilities requires the certificate holder to
8 use practicable measures in designing and constructing the facility to reduce the cumulative
9 adverse environmental effects in the vicinity of the facility. The standard does not require the
10 Council to find that the facility would have no cumulative environmental impacts; however,
11 the Council must find that the applicant is able to use “practicable measures” in the design and
12 construction of the facility to reduce the cumulative effects.

13
14 The Council addressed the Cumulative Effects Standard for Wind Facilities in section IV.J of the
15 *Final Order on the Application* and found that the proposed design and construction of the
16 facility would be in compliance with the standard.

17
18 The certificate holder provided an assessment of compliance with the Cumulative Effects for
19 Wind Facilities standard in RFA #4. The fourth proposed amendment would not change the
20 facility design, layout, or site boundary, and as such would not impact the cumulative
21 environmental effects of the components authorized for construction or otherwise change the
22 facts upon which the Council relied in making findings for this standard regarding the
23 cumulative environmental effects from this wind facility. Based on compliance with the
24 existing conditions, the Department recommends that the Council find that the certificate
25 holder and new owner of the certificate holder (transferee) will continue to comply with the
26 Council’s Cumulative Effects Standard for Wind Facilities.

27
28 **Conclusion of Law**

29 The Department recommends that, subject to the existing site certificate conditions, the
30 facility continues to comply with the Council’s Cumulative Effects Standards for Wind Facilities.

31
32 **III.C.3 Siting Standards for Transmission Lines: OAR 345-024-0090**

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

- 35 (1) *Can design, construct and operate the proposed transmission line so that alternating*
36 *current electric fields do not exceed 9 kV per meter at one meter above the ground*
37 *surface in areas accessible to the public;*
38 (2) *Can design, construct and operate the proposed transmission line so that induced*
39 *currents resulting from the transmission line and related or supporting facilities will be*
40 *as low as reasonably achievable*

1 **Findings of Fact**

2 These standards address safety hazards associated with electric fields around transmission
3 lines. Section (1) of OAR 345-024-0090 sets a limit for electric fields from transmission lines of
4 not more than 9 kV per meter at one meter above the ground surface in areas that are
5 accessible to the public. Section (2) requires implementation of measures to reduce the risk of
6 induced current.

7
8 The Council addressed the Siting Standards for Transmission Lines in section IV.K of the *Final*
9 *Order on the Application*, and found the facility to be in compliance with the standard. In the
10 *Final Order on the Application*, the Council found that the certificate holder could construct
11 and operate the proposed transmission lines so that alternating current electric fields do not
12 exceed 9 kV per meter at one meter above the ground surface in areas accessible to the
13 public. The Council further found that the certificate holder could design, construct and
14 operate the proposed transmission lines so that induced currents resulting from the
15 transmission lines would be as low as reasonably achievable.⁴⁵ The certificate holder states in
16 RFA #4 that there are no changes to the facility design, layout, or operation, and as such, the
17 facility will continue to comply with subsection (1) of the standard.

18
19 Subsection (2) of the standard requires the Council to find that an applicant or certificate
20 holder can design, construct, and operate proposed transmission lines so that induced
21 currents will be as low as reasonably achievable. The Council previously found that the facility
22 would comply with this standard, as the certificate holder would provide appropriate
23 grounding of fences and metal-roofed buildings in order to reduce the risk of induced
24 current.⁴⁶ The certificate holder states in RFA #4 that there are no changes to the facility
25 design, layout, or operation, and as such, the facility will continue to comply with subsection
26 (2) of the standard and maintain induced current as low as reasonable achievable.⁴⁷ The
27 Council found in the *Final Order on Application* that the facility would be built to National
28 Electric Safety Code standards, reducing risk of induced current.

29
30 The Department recommends that Council amend Condition VII.17 as follows:

31
32 **Recommended amended Condition VII.17:**

33 ~~OAR 345-027025-00230006(4): If the facility includes any transmission line under Council~~
34 ~~jurisdiction:~~

- 35 (a) The certificate holder shall design, construct and operate the transmission line in
36 accordance with the requirements of the 2012 Edition of the National Electrical Safety
37 Code approved on June 3, ~~2001~~2011, by the American National Standards Institute; and
38 (b) The certificate holder shall develop and implement a program that provides reasonable
39 assurance that all fences, gates, cattle guards, trailers, or other objects or structures of

⁴⁵ GH1APPD0c208 Final Order on Application, Section IV.K. 2009-05-15

⁴⁶ GH1APPD0c208 Final Order on Application, Section IV.K. 2009-05-15

⁴⁷ GH1AMD4Doc2 Request for Amendment. , Section 3.5.2., p. 3-13 2017-10-19

1 a permanent nature that could become inadvertently charged with electricity are
2 grounded or bonded throughout the life of the line.

3 [Final Order on Amendment #3]

4 [Final Order on ASC, Condition VII.17 [OAR 345-027-0023(4)]; Amended in Final Order on
5 AMD4

6
7 The Council also imposed site certificate Condition IV.K.1, requiring the underground 34.5 kV
8 collector lines to be buried at a minimum depth of 3 feet. This condition would continue to
9 apply to the facility as amended by RFA #3.

10
11 Based on the findings presented here, the Department recommends that the Council find that
12 the certificate holder and new owner of the certificate holder (transferee) will continue to
13 comply with the Council's Siting Standards for Transmission Lines.

14
15 **Conclusion of Law**

16 For the reasons discussed above, and subject to compliance with the existing and amended
17 conditions in the site certificate, the Department recommends that the Council find that the
18 facility will continue to comply with the Council's Siting Standards for Transmission Lines.

19
20 **III.D Other Applicable Regulatory Requirements Under Council Jurisdiction**

21 Under ORS 469.503(3) and the Council's General Standard of Review (OAR 345-022-0000), the
22 Council must determine whether the facility complies with "all other Oregon statutes and
23 administrative rules..., as applicable to the issuance of a site certificate for the proposed
24 facility." In evaluating this amendment, the Council must determine whether the proposed
25 amendment affects any finding made by the Council in earlier orders.⁴⁸ This section addresses
26 the applicable Oregon statutes and administrative rules that are not otherwise addressed,
27 including noise control regulations, regulations for removal or fill of material affecting waters
28 of the state, and regulations for water rights and usage.

29
30 **III.D.1 Noise Control Regulations: OAR 340-035-0035**

31 *(1) Standards and Regulations:*

32 ***

33 *(c) New Noise Sources:*

34 *(A) New Sources Located on Previously Used Sites. No person owning or controlling*
35 *a new industrial or commercial noise source located on a previously used industrial*
36 *or commercial site shall cause or permit the operation of that noise source if the*
37 *statistical noise levels generated by that new source and measured at an*
38 *appropriate measurement point, specified in subsection (3)(b) of this rule, exceed*
39 *the levels specified in Table 8, except as otherwise provided in these rules. For noise*

⁴⁸ OAR 345-027-0070(10)(c)

1 *levels generated by a wind energy facility including wind turbines of any size and*
2 *any associated equipment or machinery, subparagraph (1)(b)(B)(iii) applies.*

3 ***
4

5 **Findings of Fact**

6 The noise control regulations in OAR 340-035-0035 apply to noise associated with operation of
7 the facility. The Council addressed the Noise Control Regulations in section VI.A.1 of the *Final*
8 *Order on the Application*. In the original application, to represent the range of turbines that
9 could be used at the proposed facility, the applicant provided total and octave band sound
10 power level data for the worst case (loudest) scenario. To ensure that the facility as-built
11 would comply with the noise regulations, the Council adopted four conditions (Conditions
12 VI.A.1.1 through VI.A.1.4), requiring the certificate holder to provide information to the
13 Department about the turbines selected and the final design layout before beginning
14 construction. The Council found that the facility, with conditions, complied with the Noise
15 Control Regulations.⁴⁹ The first, second, and third amendments to the site certificate did not
16 impact compliance with the Noise Control Regulations. As a result, the *Final Order on*
17 *Amendment #1, Final Order on Amendment #2, and Final Order on Amendment #3* relied on
18 the analysis in the *Final Order on the Application*.

19
20 As part of RFA #4, the certificate holder asserts in its RFA #4 RAI response that nine new Noise
21 Sensitive Receptors (NSR's) were identified within one-mile of the site boundary (Analysis
22 Area), after conducting a detailed review of aerial photograph surveys. All nine of the newly
23 identified NSR's are located east of the facility site boundary, and are located further from the
24 approved micro-siting corridors (and turbines) than existing NSR's identified in the original
25 application and subsequent previous amendment documents.

26
27 The certificate holder notes that because existing Condition VI.A1.2 requires Golden Hills to,
28 among other things, complete a noise analysis for the facility based on the final design layout
29 and verify each noise-sensitive property, as defined in OAR 340-035-0015(38); identify NSRs
30 where the facility would increase the ambient noise level over the full set of environmental
31 conditions more than 10 A-weighted decibels (dBA); obtain a legally effective easement or real
32 covenant from that property owner pursuant to which the owner of the property authorizes
33 the certificate holder's operation of the facility to increase ambient statistical noise levels L₅₀
34 and L₅₀ by more than 10 dBA at the appropriate measurement point; and maintain a complaint
35 response system to address noise complaints.⁵⁰ The Department does not propose any
36 amendments to the four existing Noise Control Regulation conditions, and recommends that
37 the Council find that the certificate holder and new owner of the certificate holder
38 (transferee), subject to the existing site certificate conditions, will not exceed the allowable
39 noise levels under the DEQ noise control regulations.
40

⁴⁹ Final Order on Application, Section VI.A.1.

⁵⁰ GH1AMD4Doc2-1 RFA4 Supplement- RAI Response. RAI-15. 2017-12-30

1 **Conclusion of Law**

2 For the reasons discussed above, and subject to the existing site certificate conditions, the
3 Department recommends that the Council find that the certificate holder and new owner of
4 the certificate holder (transferee) will continue to comply with the applicable DEQ noise
5 control regulations in OAR 340-035-0035.

6
7 **III.D.2 Removal-Fill Law**

8 The Oregon Removal-Fill Law (ORS 196.800 through .990) and Oregon Department of State
9 Lands (DSL) regulations (OAR 141-085-0005 through 141-085-0090) require a removal-fill
10 permit if 50 cubic yards or more of material is removed, filled or altered within any “waters of
11 the state” at the proposed site.

12
13 **Findings of Fact**

14 The Council addressed the removal-fill law in Section VI.A.2 of the *Final Order on the*
15 *Application*, and found that the facility would not require a removal-fill permit. The first,
16 second and third amendments to the site did not impact Council’s removal-fill law findings. As
17 a result, the *Final Order on Amendment #1*, *Final Order on Amendment #2*, and *Final Order on*
18 *Amendment #3* relied on the analysis in the *Final Order on the Application*.

19
20 Council imposed Removal-Fill Condition 1 in the Final Order of Amendment #3 requiring the
21 certificate holder to conduct an updated wetland delineation report prior to construction,
22 including coverage of all areas of temporary and permanent impact, and submit the
23 delineation survey report to both the Department and the Department of State Lands (DSL).⁵¹
24 This condition will continue to apply to the facility. Furthermore, the condition specifies that if
25 the reports determine that a removal-fill permit is in fact required to construct and operate
26 the facility, another site certificate amendment would be necessary. Considering that RFA #4
27 makes no changes to the facility layout or site boundary, and based on the findings presented
28 here, the Department recommends that Council find that the facility will continue to be in
29 compliance with the removal-fill law and not need a removal-fill permit.

30
31 **Conclusion of Law**

32 The Department recommends that Council find that the facility, as amended, will continue to
33 be in compliance with the removal-fill law.

34
35 **III.D.3 Water Rights**

36 Under ORS Chapters 537 and 540 and OAR Chapter 690, OWRD administers water rights for
37 appropriation and use of the water resources of the state. Under OAR 345-022-0000(1), the
38 Council must determine whether the proposed facility would comply with these statutes and
39 administrative rules.

40

⁵¹ GH1AMD3Doc118. Section IV.D.2. p.110. 2017-02-28

1 **Findings of Fact**

2 The Council addressed the Ground Water Act in section VI.A.3 of the *Final Order on the*
3 *Application*. The Council found that the facility would comply with the Ground Water Act of
4 1955 and the rules of the Water Resources Department. The first, second and third
5 amendments to the site certificate did not impact compliance with the requirements of the
6 Ground Water Act of 1955 and Water Resources Department rules. As a result, the *Final Order*
7 *on Amendment #1, Final Order on Amendment #2, and Final Order on Amendment #3* relied on
8 the analysis in the *Final Order on the Application*.

9
10 RFA #4 requests no changes to the facility layout, design, or site boundary. The certificate
11 holder has not requested a water permit. There are no changes as part of RFA #4 that could
12 affect water rights or the rules of the Water Resources Department. Based on the findings
13 presented here, the Department recommends that Council continue to find that the facility, as
14 amended, complies with the Ground Water Act of 1955 and Water Resources Department
15 rules.

16
17 **Conclusion of Law**

18 For the reasons discussed above, the Department recommends that Council continue to find
19 that the facility, as amended, complies with the applicable water rights statutes and
20 regulations.

21
22 **IV. GENERAL APPLICATION OF CONDITIONS**

23 The conditions referenced in this proposed order include conditions that are specifically
24 required by OAR 345-027-0020 (Mandatory Conditions in Site Certificates), OAR 345-027-0023
25 (Site Specific Conditions), OAR 345-027-0028 (Monitoring Conditions), or OAR Chapter 345,
26 Division 26 (Construction and Operation Rules for Facilities). The conditions referenced in this
27 proposed order include conditions based on representations in RFA #3 and the supporting
28 record. The Department recommends that the Council deem these representations to be
29 binding commitments made by the certificate holder. This proposed order also includes
30 conditions that the Department recommends the Council find necessary to ensure compliance
31 with the siting standards of OAR Chapter 345, Divisions 22 and 24.

32
33 The Department recommends edits to existing Condition VII.18 in order to clarify the intent of
34 the condition, and to align with information included in ASC Exhibits B and C. The
35 Department's recommendations for amended Condition VII.18 as presented below:

36
37 **Recommended amended Condition VII.18:**

38 ~~OAR 345-027-0025-0023-0006 (5-If the proposed energy facility is a pipeline or a transmission line~~
39 ~~or has, as a related or supporting facility, a pipeline or transmission line, the Council shall~~
40 ~~specify an approved corridor in the site certificate and shall allow the certificate holder to~~
41 ~~construct the pipeline or transmission line anywhere within the corridor, subject to the~~
42 ~~conditions of the site certificate. If the applicant has analyzed more than one corridor in its~~
43 ~~application for a site certificate, the Council may, subject to the Council's standards, approve~~

1 ~~more than one corridor.~~ The certificate holder is authorized to construct a 230-kV transmission
2 line anywhere within the approved corridor, subject to the conditions of the site certificate.
3 The approved corridor includes a 5-mile segment and 700-foot segment extending the length
4 of the 230-kV transmission line route and is 200 feet in width.

5 [Final Order on ASC, Condition VII.18; Amended in Final Order on AMD4]
6

7 In addition to all other conditions referenced or included in this proposed order, the certificate
8 holder is subject to all conditions and requirements contained in the rules of the Council and in
9 local ordinances and state law in effect on the date the amended site certificate is executed.
10 Under ORS 469.401(2), upon a clear showing of a significant threat to public health, safety, or
11 the environment that requires application of later-adopted laws or rules, the Council may
12 require compliance with such later-adopted laws or rules.
13

14 The Department recognizes that many specific tasks related to the design, construction,
15 operation, and retirement of the facility will be undertaken by the certificate holder’s agents
16 or contractors. Nevertheless, the certificate holder is responsible for ensuring that all agents
17 and contractors comply with all provisions of the site certificate.
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1 **V. GENERAL CONCLUSION AND PROPOSED ORDER**

2 Amendment #4 to the Golden Hills Wind Project site certificate approves the following facility
3 modifications:

4
5 Golden Hills requests an amendment to the site certificate to (1) transfer ownership of the
6 Golden Hills Wind Project Site Certificate holder from the current parent company, Orion
7 Renewable Energy Group, LLC (Orion) to Avangrid Renewables, LLC (Avangrid), a new parent
8 company and subsidiary of AVANGRID, Inc., the U.S. division of Iberdrola, S.A. (IBERDROLA
9 group); and (2) extend the construction start deadline by 2 years, from June 18, 2018 to June
10 18, 2020.

11
12 Based on the recommended findings and conclusions included in this order, the Department
13 recommends that the Council make the following findings:

14
15 (1) RFA #4 to the Golden Hills Wind Project Site Certificate complies with the
16 requirements of the Oregon Energy Facility Siting statutes, ORS 469.300 to ORS
17 469.570 and ORS 469.590 to ORS 469.619.

18
19 (2) RFA #4 to the Golden Hills Wind Project Site Certificate complies with the applicable
20 standards adopted by the Council pursuant to ORS 469.501.

21
22 (3) RFA #4 to the Golden Hills Wind Project Site Certificate complies with all other
23 Oregon statutes and administrative rules that were included in and governed by the
24 original site certificate and are applicable to the amendment of the site certificate for
25 the Golden Hills Wind Project.

26
27 (4) Avangrid Renewables, LLC, as the new parent company of the certificate holder
28 (transferee) and Golden Hills Wind, LCC (certificate holder), complies with the
29 standards described in OAR 345-022-0010 and OAR 345-022-0050 and will be lawfully
30 entitled to possession or control of the Golden Hills Wind Project as described in the
31 site certificate as amended by this order.

32
33 Accordingly, the Department recommends that the Council find that the requested
34 amendment would comply with the General Standard of Review (OAR 345-022-0000). The
35 Department recommends that the Council find, based on a preponderance of the evidence on
36 the record, that the site certificate may be amended and transferred as requested by the
37 certificate holder and transferee.

1 **Proposed Order**

2 The Department recommends that the Council approve RFA #4 and issue an amended site
3 certificate for the Golden Hills Wind Project, subject to the terms and conditions set forth
4 above. In addition, the Department recommends that the Council approve Golden Hills Wind,
5 LLC as the new certificate holder, and Avangrid Renewables, LLC as the new parent company
6 of the certificate holder and also of the Golden Hills Wind Project subject to the terms and
7 conditions set forth above.

8
9 Issued this 2nd day of March, 2018

10
11 THE OREGON DEPARTMENT OF ENERGY

12
13 By: 

14 Todd R. Cornett, Assistant Director for Siting
15 Oregon Department of Energy, Energy Facility Siting Division

16
17
18 **Attachments**

- 19 Attachment A: List of Existing, Amended, New and Deleted Site Certificate Conditions
- 20 Attachment B: Amended Site Certificate [PLACEHOLDER – To be included in Final Order]
- 21 Attachment C: Draft 2018 Habitat Mitigation and Revegetation Plan (Includes red-line and
22 clean versions)
- 23 Attachment D: Raptor Nest Survey Protocol (As Approved in January 2015)
- 24 Attachment E: Wildlife Monitoring and Mitigation Plan (As Approved in May 2009)

- 1 **Notice of the Right to Appeal**
- 2 [Text to be added to Final Order]
- 3

ATTACHMENT A
LIST OF EXISTING, AMENDED, NEW, REMOVED, AND CONSOLIDATED SITE CERTIFICATE
CONDITIONS

List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions

The certificate holder shall construct a facility substantially as described in the site certificate and may select up to 125 turbines, subject to the following restrictions and compliance with other site certificate conditions. Before beginning construction, the certificate holder shall provide to the Department a description of the turbine types selected for the facility demonstrating compliance with this condition.

- (a) The total number of turbines at the facility must not exceed 125 turbines.
- (b) The combined peak generating capacity of the facility must not exceed 400 megawatts.
- (c) The turbine hub height must not exceed 95 meters and the maximum blade tip height must not exceed 158 meters.
- (d) The minimum blade tip clearance must be 19.8 meters above ground.
- (e) The maximum combined weight of metals in the tower (including ladders and platforms) and nacelle must not exceed 336 U.S. tons per turbine.

[Final Order on ASC, Condition III.A.1]

At least 45-days prior to constructions ~~Before beginning construction~~, but not more than two years before beginning construction, and after considering all micrositing factors, the certificate holder shall:

- a) Conduct a field-based habitat survey to confirm the habitat categories of areas that will be affected by facility components, as well as the locations of any sensitive resources such as active raptor and other bird nests. The survey protocols and habitat classification categories shall be confirmed with the Department and ODFW.
- b) At least 45-days prior to construction, unless otherwise agreed to by the Department, submit to the Department a habitat assessment report that includes:
 - Habitat impact table, based upon final facility design and updated habitat survey, including permanent and temporary impacts by facility component and habitat category/type/subtype.
 - Maps showing: habitat categories and subtypes of all areas within the site boundary, final location of temporary and permanent facility components, and locations of any sensitive resources within areas that will be affected by facility components. If any sensitive resources are identified, they will need to be flagged as exclusion zones in accordance with Condition IV.M.10. If necessary, sensitive resource information shall be submitted to the Department in hard copy only and provided under request for information to be treated as confidential.

The field survey and information in the habitat assessment report will be used to finalize the HRMP for Department and ODFW approval (Condition PRE-TL). The certificate holder shall not construct any facility components within areas of Category 1 habitat and shall avoid temporary disturbance of Category 1 habitat.

~~provide to the Department, the Oregon Department of Fish and Wildlife ("ODFW") and the Planning Director of Sherman County detailed maps of the facility site, showing the final locations where the certificate holder proposes to build facility components and a table showing the acres of temporary and permanent habitat impact by habitat category and subtype. The maps shall include the locations of temporary laydown areas and areas of temporary ground disturbance associated with the construction of all facility components. The detailed maps of the final facility layout shall indicate the habitat categories of all areas that would be affected during construction. In classifying the affected habitat into habitat categories, the certificate holder shall consult with ODFW. The certificate holder shall not begin ground disturbance in an affected area until the habitat assessment has been approved by the Department. The Department may employ a qualified contractor to confirm the habitat assessment by on-site inspection.~~

[Final Order on ASC, Condition III.C.1; Amended in Final Order on AMD4]

The certificate holder shall begin construction of the facility ~~within~~ by June 18, ~~2018~~2020. Under OAR 345-015-0085(9), an amended site certificate is effective upon execution by the Council Chair and the certificate holder. The Council may grant an extension of the deadline to begin construction in accordance with OAR 345-027-0030 or any successor rule in effect at the time the request for extension is submitted.

On or before June 18, 2020, the certificate holder shall provide written notification to the Department that it has met the construction commencement deadline. Construction is defined in OAR 345-001-0010.

<p style="text-align: center;">List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>[Final Order on ASC, Condition III.D.1; Amended in Final Order on AMD2, AMD3, <u>AMD4</u>]</p>
<p>The certificate holder shall complete construction of the facility by June 18, 2021. Construction is complete when (1) the facility is substantially complete as defined by the certificate holder’s construction contract documents; (2) acceptance testing has been satisfactorily completed; and (3) the energy facility is ready to begin continuous operation consistent with the site certificate. The certificate holder shall promptly notify the Department of the date of completion of construction. The Council may grant an extension of the deadline for completing construction in accordance with OAR 345-027-0030 or any successor rule in effect at the time the request for extension is submitted.</p>
<p>[Final Order on ASC, Condition III.D.2; Amended in Final Order on AMD2, AMD3]</p>
<p>Before beginning construction, the certificate holder shall notify the Department in advance of any work on the site that does not meet the definition of “construction” in ORS 469.300(6), excluding surveying, exploration or other activities to define or characterize the site, and shall provide to the Department a description of the work and evidence that its value is less than \$250,000.</p>
<p>[Final Order on ASC, Condition III.D.3]</p>
<p><u>During construction, operation and facility retirement, ¶</u>the certificate holder shall report promptly to the Department <u>within 7 days</u>, any change in its<u>the</u> corporate relationship with Orion Renewable Energy Group LLC<u>structure of Avangrid Renewables LLC (a subsidiary of Avangrid, Inc., and the parent company of Pacific Wind Development, LLC)</u>. The certificate holder shall report promptly to the Department any change in its access to the resources, expertise and personnel of Orion Renewable Energy Group LLC<u>Avangrid Renewables LLC</u>. The certificate holder shall include in the report, <u>an evaluation of whether the change in corporate structure represents a change in ownership of the certificate holder and whether a site certificate transfer is warranted.</u></p>
<p>[Final Order on ASC, Condition IV.B.1; Amended in Final Order on AMD2, <u>AMD4</u>]</p>
<p>Before beginning construction, the certificate holder shall notify the Department of the identity and qualifications of the major design, engineering and construction contractor(s) for the facility. The certificate holder shall select contractors that have substantial experience in the design, engineering and construction of similar facilities. <u>Within three business days,</u>¶the certificate holder shall report to the Department any change of major contractors.</p>
<p>[Final Order on ASC, Condition IV.B.2; Amended in Final Order on AMD4]</p>
<p><i>The requirements of this condition have been incorporated into Condition IV.B.7. No substantive changes were made to the requirements of this condition.</i></p> <p>If the certificate holder chooses a third party contractor to operate the facility, the certificate holder shall submit to the Council the identity of the contractor so the Council may review the qualifications and capability of the contractor to meet the standards of OAR 345-022-0010. If the Council finds that a new contractor meets these standards, the Council shall not require an amendment to the site certificate for the certificate holder to hire the contractor.</p>
<p>[Final Order on ASC, Condition IV.B.3; Amended in Final Order on AMD4]</p>
<p>Any matter of noncompliance under the site certificate shall be the responsibility of the certificate holder. Any notice of violation issued under the site certificate shall be issued to the certificate holder. Any civil penalties assessed under the site certificate shall be levied on the certificate holder.</p>
<p>[Final Order on ASC, Condition IV.B.4]</p>
<p>The certificate holder shall contractually require the engineering and procurement contractor and all independent contractors and subcontractors involved in the construction and operation of the facility to comply with all applicable laws and regulations and with the terms and conditions of the site certificate. Such contractual provision shall not operate to relieve the certificate holder of responsibility under the site certificate.</p>
<p>[Final Order on ASC, Condition IV.B.5]</p>
<p><u>During construction, operation and retirement, ¶</u>the certificate holder shall obtain, or shall ensure that its contractors obtain, necessary federal, State and local permits or approvals required for the construction, operation and retirement of the facility. The certificate holder shall work with local and State fire officials to ensure compliance with all fire code regulations regarding public buildings.</p>

<p style="text-align: center;">List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>[Final Order on ASC, Condition IV.B.6; Amended in Final Order on AMD4]</p>
<p>During construction, the certificate holder shall have an</p> <p>The certificate holder shall:</p> <ul style="list-style-type: none"> (a) <u>Prior to construction, notify the Department of the identity, telephone number, e-mail address and qualifications of the on-site construction manager or assistant construction manager who is qualified in environmental compliance to ensure compliance with all construction related site certificate conditions. During operation, the certificate holder shall have a facility manager who is qualified in environmental compliance to ensure compliance with all ongoing site certificate conditions. The certificate holder shall. The construction manager or assistant construction manager must be capable of managing a wind facility construction project, including permit and regulatory compliance requirements.</u> (b) <u>Prior to operation, notify the Department of the identity, telephone number, e-mail address and qualifications of the facility operations manager. The facility operations manager must be capable of managing permit and regulatory compliance requirements and manage operation of a wind facility.</u> (c) <u>Prior to facility retirement, notify the Department of the name identity, telephone number, fax number and e-mail address and qualifications of these managers and shall keep the Department informed of any change in this information the personnel or entity responsible for facility decommissioning and restoration activities. The personnel or entity responsible for facility decommissioning and restoration activities must be capable of managing permit and regulatory compliance requirements and be qualified to decommission a wind facility.</u> <p>The certificate holder shall notify the Department within three business days upon any change in personnel or contact information provided to satisfy Condition IV.B.7(a) through (c).</p> <p>[Final Order on ASC, Condition IV.B.7; Amended in Final Order on AMD4]</p>
<p>Within 72 hours <u>three business days</u> after discovery of conditions or circumstances that may violate the terms or conditions of the site certificate, the certificate holder shall report, <u>in accordance with OAR 345-029-0010(1)</u>, the conditions or circumstances to the Department. <u>Within 30-days of discovery, the certificate holder shall submit to the Department a written report pursuant to OAR 345-029-0010(3).</u></p> <p>[Final Order on ASC, Condition IV.B.7; Amended in Final Order on AMD4]</p>
<p>The certificate holder shall retire the facility if the certificate holder permanently ceases construction or operation of the facility. The certificate holder shall retire the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, and prepared pursuant to Condition (IV.C.2).</p> <p>[Final Order on ASC, Condition IV.C.1]</p>
<p>Two years before closure of the energy facility, the certificate holder shall submit to the Department a proposed final retirement plan for the facility and site, pursuant to OAR 345-027-0110, including:</p> <ul style="list-style-type: none"> (a) A plan for retirement that provides for completion of retirement within two years after permanent cessation of operation of the energy facility and that protects the public health and safety and the environment; (b) A description of actions the certificate holder proposes to take to restore the site to a useful, non-hazardous condition suitable for agricultural use; and (c) A detailed cost estimate, a comparison of that estimate with the dollar amount secured by a bond or letter of credit and any amount contained in a retirement fund, and a plan for assuring the availability of adequate funds for completion of retirement. <p>[Final Order on ASC, Condition IV.C.2]</p>
<p>The certificate holder shall prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder.</p> <p>[Final Order on ASC, Condition IV.C.3]</p>

List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions

Before beginning construction, the certificate holder shall submit to the State through the Council a bond or letter of credit in the amount described herein naming the State, acting by and through the Council, as beneficiary or payee. If the certificate holder elects to build the facility in a single phase, the initial bond or letter of credit amount is \$14,425,000 (in 2008 dollars), adjusted to the date of issuance as described in (b), or the amount determined as described in (a). If the certificate holder elects to build the facility in more than one phase, the amount of the initial bond or letter of credit for each phase of construction shall be the amount determined as described in (a). The certificate holder shall adjust the amount of each bond or letter of credit on an annual basis thereafter as described in (b).

- (a) The certificate holder may adjust the amount of each bond or letter of credit based on the final design configuration of the facility by applying the unit costs and general costs illustrated in Table IV.C.1 of the Final Order on the Application to the final design and calculating the financial assurance amount as described in that order, adjusted to the date of issuance as described in (b) and subject to approval by the Department.
- (b) The certificate holder shall adjust the amount of each bond or letter of credit, using the following calculation and subject to approval by the Department:
 - (i) Adjust the subtotal component of the bond or letter of credit amount (expressed in 2008 dollars) to present value, using the U.S. Gross Domestic Product Implicit Price Deflator, Chain-Weight, as published in the Oregon Department of Administrative Services' "Oregon Economic and Revenue Forecast" or by any successor agency (the "Index") and using the annual average index value for 2008 dollars and the quarterly index value for the date of issuance of the new bond or letter of credit. If at any time the Index is no longer published, the Council shall select a comparable calculation to adjust 2008 dollars to present value.
 - (ii) Calculate the adjusted performance bond amount as 1 percent of the new subtotal (i).
 - (iii) Add the subtotal (i) to the adjusted performance bond amount (ii) for the adjusted gross cost.
 - (iv) Calculate the adjusted administration and project management costs as 10 percent of the adjusted gross cost (iii).
 - (v) Calculate the adjusted future developments contingency as 10 percent of the adjusted gross cost (iii).
 - (vi) Add the adjusted gross cost (iii) to the sum of adjusted administration and project management costs (iv) and the adjusted future developments contingency (v) and round the resulting total to the nearest \$1,000 to determine the adjusted financial assurance amount.
- (c) The certificate holder shall use a form of bond or letter of credit approved by the Council.
- (d) The certificate holder shall use an issuer of the bond or letter of credit approved by the Council.
- (e) The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council under Condition (VII.21.a.ii).
- (f) The bond or letter of credit shall not be subject to revocation or reduction before retirement of the facility site.

[Final Order on ASC, Condition IV.C.4; Amended in Final Order on Amendment 3]

If the certificate holder elects to use a bond to meet the requirements of Condition (IV.C.4), the certificate holder shall ensure that the surety is obligated to comply with the requirements of applicable statutes, Council rules and this site certificate when the surety exercises any legal or contractual right it may have to assume construction, operation or retirement of the energy facility. The certificate holder shall also ensure that the surety is obligated to notify the Council that it is exercising such rights and to obtain any Council approvals required by applicable statutes, Council rules and this site certificate before the surety commences any activity to complete construction, operate or retire the energy facility.

[Final Order on ASC, Condition IV.C.5]

The certificate holder shall ~~report to the Department:~~

- (a) Notify the Department of any spill or release of hazardous substances, material during construction, operation or retirement of the facility pursuant to Oregon Department of Environmental Quality ("DEQ") regulations, within one working day after the discovery of such release. This obligation~~The certificate holder shall be in addition to any other reporting follow applicable Oregon Department of Environmental Quality ("DEQ") response requirements applicable to such a release regulations pursuant to OAR Chapter 340 Division 142.~~

<p>List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>(b) <u>Within 45-days of the discovery, the certificate holder shall submit to the Department copies of the Oregon Emergency Response System Spill/Release Report, as submitted to DEQ.</u></p> <p>[Final Order on ASC, Condition IV.C.6; <u>Amended in Final Order on AMD4</u>]</p>
<p>If the certificate holder has not remedied a releasespill consistent with applicable OregonODEQ standards within six months after the date of the releasespill, the certificate holder shall submit to the Council for its approval an independently prepared estimate of the additional cost of remediation or correction within such six-month period.</p> <p>(a) Upon approval of an estimate by the Council, the certificate holder shall increase the amount of its bond or letter of credit by the amount of the estimate.</p> <p>(b) In no event, however, shall the certificate holder be relieved of its obligation to exercise all due diligence in remedying a release or spill of hazardous substances.</p> <p>[Final Order on ASC, Condition IV.C.7, <u>Final Order on AMD4</u>]</p>
<p><i>Condition IV.C.8 has been removed from the Site Certificate, as EFSC does not recognize the value of salvage in decommissioning calculations.</i></p> <p>All funds received by the certificate holder from the salvage of equipment and buildings shall be committed to the restoration of the energy facility site to the extent necessary to fund the approved site restoration and remediation.</p> <p>[Final Order on ASC, Condition IV.C.8; <u>Amended in Final Order on AMD4</u>]</p>
<p>The certificate holder shall pay the actual cost to restore the site to a useful, non-hazardous condition at the time of retirement, notwithstanding the Council’s approval in the site certificate of an estimated amount required to restore the site.</p> <p>[Final Order on ASC, Condition IV.C.9]</p>
<p>If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110 and prepared pursuant to Condition (IV.C.2), the Council shall notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the Department within a reasonable time not to exceed 90 days.</p> <p>(a) If the certificate holder does not submit a proposed final retirement plan by the specified date or if the Council rejects the retirement plan that the certificate holder submits, the Council may direct the Department to prepare a proposed a final retirement plan for the Council’s approval.</p> <p>(b) Upon the Council’s approval of the final retirement plan prepared pursuant to (a), the Council may draw on the bond or letter of credit described in Condition (IV.C.4) and shall use the funds to restore the site to a useful, non-hazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29.</p> <p>(c) If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder shall pay any additional cost necessary to restore the site to a useful, non-hazardous condition.</p> <p>(d) After completion of site restoration, the Council shall issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan.</p> <p>[Final Order on ASC, Condition IV.C.10]</p>
<p><u>Prior to construction, the certificate holder shall provide to the Department, Sherman County Planning Department, and Sherman County Transportation Department, as applicable, road design plans demonstrating that:</u></p> <p>(a) <u>New or substantially modified public roads</u> The certificate holder shall construct the public road improvements described in the Application for a Site Certificate to meet or exceed road standards for the road classifications in the County’s Transportation System Plan and Zoning Ordinance because roads will require a more substantial section to bear the weight of the vehicles and turbine components than would usually be constructed by the County.</p> <p>(b) <u>Private access connection and driveway design of the O&M facility and substation comply with applicable requirements established in Sherman County Zoning Ordinance Section 4.14.4.</u></p> <p>[Final Order on ASC, Condition IV.D.1; <u>Amended in Final Order on AMD4</u>]</p>

List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions
<p>The certificate holder shall ensure that no equipment or machinery is parked or stored on any county road except while in use. [Final Order on ASC, Condition IV.D.2]</p>
<p>The site certificate holder shall, in consultation with affected landowners, design and construct private access roads to minimize the division of existing farm units. [Final Order on ASC, Condition IV.D.3]</p>
<p>The certificate holder shall not locate any aboveground facility structure (including wind turbines, O&M building, substation and met towers, but not including aboveground power collection and transmission lines and poles and junction boxes) within 50 feet from any <u>external</u> property line or within 50 feet from the right of way of any arterial or major collector road. <u>Prior to construction of any aboveground facility structure, the certificate holder shall submit to the Department maps and distance tables (i.e. distance from nearest facility component to setback location), based on final facility design, demonstrating that the aboveground facility structures are not located within 50 feet from any external property line or within 50 feet from the right of way of any arterial or major collector road.</u> [Final Order on ASC, Condition IV.D.4; Amended in Final Order on AMD4]</p>
<p>Aboveground transmission line structures shall not occupy areas that show gross indicators of landslide activity or marginal stability. <u>Prior to construction of aboveground transmission line structures, the certificate holder shall provide confirmation to the Department that the locations of the aboveground transmission line structures do not occupy areas that show gross indicators of landslide activity or marginal stability. The certificate holder may rely upon the analysis included in the pre-construction geotechnical investigation, as required per Condition V.A.1, to satisfy this condition.</u> [Final Order on ASC, Condition IV.D.5; Amended in Final Order on AMD4]</p>
<p>Collector lines in the Natural Hazards Combining Zone (“NH zone”) shall be placed under ground except in instances where it is more practical to install aboveground power collection lines and provided that the aboveground power collection lines will be designed to minimize slope stability and other NH zone hazards. The site-specific geotechnical investigation required prior to construction shall address native soil and bedrock stability concerns at cuts, fills and culvert crossings, and shall include design and construction recommendations to minimize the potential for destabilizing marginally stable slopes and the potential for stream erosion. [Final Order on ASC, Condition IV.D.6]</p>
<p>Prior to start of construction, the certificate holder shall submit <u>to the Department evidence that the Sherman County Planning Department has received and concurred with the SCZO Article 3.7.5(e) Development Proposal, required for uses within a NH zone for Sherman County Planning Department concurrence the plans and profiles described at SCZO 3.7.5(e).</u> [Final Order on ASC, Condition IV.D.7; Amended in Final Order on AMD4]</p>
<p>Construction staging areas shall be limited to areas outside the Natural Hazards Combining Zone. <u>Prior to construction of staging areas, the certificate holder shall provide construction related maps demonstrating that the staging areas are located outside the Natural Hazards Combining Zone (“NH Zone”).</u> [Final Order on ASC, Condition IV.D.8; Amended in Final Order on AMD4]</p>
<p>The certificate holder shall stabilize all roads or streets in the Natural Hazards Combining Zone shall be stabilized by planking, gravel or pavement as deemed necessary, and <u>shall build roadways shall be built</u> without installation of excessive fill, diversion of water or excessive cuts unless the site investigation determines that such conditions will not be detrimental to the area or create unwarranted maintenance problems or additional hazards. [Final Order on ASC, Condition IV.D.9; Amended in Final Order on AMD4]</p>
<p>Prior to construction, the certificate holder shall <u>submit to the Department final facility design maps presenting the location of locate access roads and temporary construction laydown and staging areas, including those associated with construction of transmission lines or placement of conductors on third-party transmission lines. The facility shall be designed</u> to minimize disturbance with farming practices and, wherever feasible, as determined in consultation with affected landowners, shall place turbines and transmission interconnection lines along the margins of cultivated areas to reduce the potential for</p>

<p>List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>conflict with farm operations. The certificate holder shall place aboveground transmission and collector lines and poles and junction boxes along property lines and public road rights-of-way to the extent practicable. [Final Order on ASC, Condition IV.D.10; Amended in Final Order on AMD4]</p>
<p>During operation of the facility, the certificate holder, in cooperation with landowners, shall avoid impact on cultivated land to the extent reasonably possible when performing facility repair and maintenance activities. [Final Order on ASC, Condition IV.D.11]</p>
<p>Where necessary and feasible During construction, the certificate holder shall provide access across construction trenches to fields within the facility site and otherwise provide adequate and timely access to properties during critical periods in the farming cycle, such as harvest, as necessary and as determined feasible by the certificate holder and landowner. [Final Order on ASC, Condition IV.D.12; Amended in Final Order on AMD4]</p>
<p>Before beginning construction of the facility Prior to construction, the certificate holder shall record submit to the Department evidence that a Farm Management Easement covering the properties on which the certificate holder locates wind power generation facilities facility components has been recorded. The certificate holder shall record the easements in the real property records of Sherman County and shall file a copy of the recorded easement with the Sherman County Planning Director. [Final Order on ASC, Condition IV.D.13; Amended in Final Order on AMD4]</p>
<p>The certificate holder shall remove from Special Farm Assessment the portions of parcels on which facilities are located and shall pay all property taxes due and payable after the Special Farm Assessment is removed from such properties. [Final Order on ASC, Condition IV.D.14]</p>
<p>Within 90 days after beginning operation, the certificate holder shall provide to the Department and to the Sherman County Planning Director the actual latitude and longitude location or Stateplane NAD 83(91) coordinates of each turbine tower, connecting lines and transmission lines. In addition, the certificate holder shall provide to the Department and to the Sherman County Planning Director, a summary of as-built changes in the facility compared to the original plan, if any. [Final Order on ASC, Condition IV.D.15]</p>
<p><i>The requirements of this condition have been incorporated into Condition IV.E.4. No substantive changes were made to the requirements of this condition.</i> The certificate holder shall work with the Sherman County Weed Control manager to take appropriate measures to prevent the invasion, during and after the facility's construction, of any weeds on the Sherman County noxious weed list. [Final Order on ASC, Condition IV.D.16; Amended in Final Order on AMD4]</p>
<p><i>The requirements of this condition have been incorporated into Condition IV.D.19. No substantive changes were made to the requirements of this condition.</i> The certificate holder shall cooperate with the Sherman County Road Department to ensure that any unusual damage or wear caused by the use of the county's roads by the developer during the construction of the facility will be the responsibility of the developer. The Road Department will provide an assessment of road conditions in the facility area prior to the start of construction of the facility and an evaluation of the roads following completion of the facility to determine any significant change in condition. In addition, no equipment or machinery of the developers shall be parked or stored on any county road except while in use. [Final Order on ASC, Condition IV.D.17; Amended in Final Order on AMD4]</p>
<p>Prior to start of construction, the certificate holder shall, in consultation with Sherman County, assign a 9-1-1 5-digit rural address to every tower road that intersects a State or county road. The county will provide and install the signage for these addresses. [Final Order on ASC, Condition IV.D.18]</p>
<p>Prior to beginning construction, the certificate holder willshall: (a) <u>Prior to beginning construction, provide evidence to the Department that both a pre-construction road condition inspection and consultation with the Sherman County Road Department has occurred. Through the consultation, the</u></p>

<p style="text-align: center;">List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>certificate holder shall, at a minimum, obtain confirmation of the following or provide the following documentation to the <u>Sherman County Road Department</u>:</p> <p>(1) Final facility design maps identifying the <u>Designate a route or routes for the transport of wind turbine construction material (including water, aggregate, concrete, machinery and tower pieces) with the intention of minimizing damage to non-designated roads, and provide these designations to the County Road Master, and facility access for construction personnel; and, concurrence on the pre-construction conditions of any routes using or crossing county roads.</u></p> <p>(2) Provide to the County Road Master a <u>A written summary of possible anticipated road damage to the designated route or routes, and an estimate of the cost of repair to the designated route or routes;</u></p> <p>(3) <u>Communication protocol for reporting to the Sherman County Road Department unusual damage or wear identified during facility construction and determined to be a result of facility construction vehicle use.</u></p> <p>(4) Establish and maintain an escrow account for so long as construction is ongoing, funded in an amount equal to the estimated cost to repair the designated route or routes consistent with the estimate provided in (b); and</p> <p>(5) Conduct an inspection of the roads along the designated route or routes before and after construction with a representative of the Sherman County Road Department and an independent third party with the required expertise to inspect and evaluate paved and graveled roads. In the event a dispute arises, the third party shall be the final arbiter. The cost of the hiring of the third party shall be borne by the applicant <u>certificate holder.</u></p> <p><u>(b) Following completion of construction and prior to operation, conduct the inspection of the roads along the designated route or routes with a representative of the Sherman County Road Department and an independent third party, as specified in sub(a)(5) of this condition.</u></p> <p>[Final Order on ASC, Condition IV.D.19; <u>Amended in Final Order on AMD4</u>]</p>
<p>Before beginning construction of facility access roads, the certificate holder shall confer with the Sherman County Road Master regarding any utility permits needed for county road right-of-ways and obtain permits for construction of all approach roads onto county roads, all in accordance with Sherman County Ordinance No. 35-2007.</p> <p>[Final Order on ASC, Condition IV.D.20; <u>Amended in Final Order on AMD4</u>]</p>
<p><i>The requirements of this condition have been incorporated into Conditions IV.D.1 No substantive changes were made to the requirements of this condition.</i></p> <p>The certificate holder shall comply with Sherman County Zoning Ordinance Section 4.14.4, Access Connection and Driveway Design, in connection with construction of the O&M facility and substations.</p> <p>[Final Order on ASC, Condition IV.D.21, <u>Amended in Final Order on AMD4</u>]</p>
<p>Prior to construction, Certificate Holder shall demonstrate that the final location of turbines within the micro-siting corridors approved by the Council will satisfy setback requirements prescribed by Section 4 of the Sherman County Wind Setback Ordinance (Ordinance No. 39-2007) unless the Council or Oregon Department of Energy has approved a variance to such setback for the turbine or the Certificate Holder has negotiated a setback agreement with the affected adjacent property owner or wind project developer. [Amendment #1]</p> <p>[Final Order on Amendment #1, Condition IV.D.22; <u>Amended in Final Order on AMD1, AMD4</u>]</p>
<p>The certificate holder shall conduct all construction work in compliance with an Erosion and Sediment Control Plan (the "ESCP") satisfactory to the Oregon DEQ and as required under the National Pollutant Discharge Elimination System Storm Water Discharge General Permit #1200-C. The certificate holder shall include in the ESCP any procedures necessary to meet local erosion and sediment control requirements or storm water management requirements.</p> <p>[Final Order on ASC, Condition IV.E.1]</p>
<p>Where temporary impacts will occur in cultivated areas <u>During construction,</u> the certificate holder shall salvage approximately three feet of topsoil and stockpile this topsoil in windrows, wherever temporary impacts will occur in cultivated areas. The certificate holder shall protect the windrows with plastic sheeting or mulch. Upon removal of the temporary features, the certificate holder shall cultivate the subsoil to a depth of at least 12 inches (except where bedrock prohibits achieving this depth) and then redistribute the salvaged topsoil to match adjacent grades.</p> <p>[Final Order on ASC, Condition IV.E.2; <u>Amended in Final Order on AMD4</u>]</p>

<p style="text-align: center;">List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>During facility operation, the certificate holder shall routinely inspect and maintain all roads, pads and trenched areas and, as necessary, maintain or repair erosion control measures. The certificate holder shall restore areas that are temporarily disturbed during facility maintenance or repair activities to predisturbance condition or better. [Final Order on ASC, Condition IV.E.3]</p>
<p>Prior to construction, the certificate holder shall develop a plan to control the introduction and spread of noxious weeds during facility construction and operation. The plan shall be developed in consultation with the Department, the Sherman County Weed Control manager, and ODFW. The plan shall be approved by the Department prior to construction. The plan shall focus on weed species listed on the Sherman County noxious weed list, but shall also include preventative measures, <u>based on consultation with the Sherman County Weed Control Manager</u>, to combat noxious weeds of concern in the area. [Final Order on ASC, Condition IV.E.4; Amended in Final Order on AMD3, <u>AMD4</u>]</p>
<p>During construction, the certificate holder shall ensure that the wash down of concrete trucks occurs only at a contractor-owned batch plant or at tower foundation locations. If such wash down occurs at tower foundation locations, then the certificate holder shall ensure that wash down wastewater does not run off the construction site into otherwise undisturbed areas and that the wastewater is disposed of on backfill piles and buried underground with the backfill over the tower foundation. [Final Order on ASC, Condition IV.E.5]</p>
<p>During facility operation, if blade-washing becomes necessary, the certificate holder shall ensure that there is no runoff of wash water from the site or discharges to surface waters, storm sewers or dry wells. The certificate holder shall not use acids, bases or metal brighteners with the wash water. The certificate holder may use biodegradable, phosphate-free cleaners sparingly. [Final Order on ASC, Condition IV.E.6]</p>
<p>To reduce the visual impact of the facility, the certificate holder shall:</p> <ol style="list-style-type: none"> a. Mount nacelles on smooth steel structures painted uniformly in a neutral color to blend with the surrounding landscape; b. Paint substation structures in a neutral color to blend with the surrounding landscape; c. Not allow any advertising to be used on any part of the facility; d. Use only those signs required for facility safety or required by law, except that the certificate holder may erect a sign to identify the facility; and e. Maintain any signs allowed under this condition in good repair. <p>[Final Order on ASC, Condition IV.G.1]</p>
<p>The certificate holder shall design and construct the O&M facility to be generally consistent with the character of similar buildings used by commercial farmers or ranchers in the area and shall paint the building in a neutral color to blend with the surrounding landscape. [Final Order on ASC, Condition IV.G.2]</p>
<p>During operation of the facility, the certificate holder shall not use exterior nighttime lighting except:</p> <ol style="list-style-type: none"> a. The minimum turbine tower lighting required or recommended by the Federal Aviation Administration (the "FAA"); b. Security lighting at the O&M facility and substations, provided that such lighting is shielded or directed downward to reduce glare; c. Minimum lighting necessary for repairs or emergencies; and d. As otherwise required by federal, State or local law. <p>[Final Order on ASC, Condition IV.G.3]</p>
<p>The certificate holder shall follow manufacturer's recommended handling instructions and procedures to prevent damage to turbine or turbine tower components that could lead to failure. [Final Order on ASC, Condition IV.I.1]</p>

List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions
<p>The certificate holder shall:</p> <ul style="list-style-type: none"> a) <u>During facility construction, install and maintain</u> self-monitoring devices on each turbine, connected to a fault annunciation panel or SCADA system at the O&M facility to alert operators to potentially dangerous conditions. The certificate holder shall equip each turbine with vibration-sensing equipment that will shut down the turbine in the event of abnormal levels of vibration. b) <u>During facility operation, maintain the self-monitoring devices and vibration-sensing equipment on each turbine, connected to the fault annunciation panel or SCADA system at the O&M facility.</u> <p>[Final Order on ASC, Condition IV.I.2; Amended in Final Order on AMD4]</p>
<p>The certificate holder shall construct turbine towers with no exterior ladders or access to the turbine blades and shall install locked tower access doors. The certificate holder shall keep tower access doors locked at all times except when authorized personnel are present.</p> <p>[Final Order on ASC, Condition IV.I.3]</p>
<p><u>Prior to operation, the certificate holder shall have or submit to the Department materials or other documentation demonstrating the facility's operational safety-monitoring program and shall inspect all. The program shall, at a minimum, include requirements for regular turbines and turbine tower components on a regular basis inspections and maintenance. The certificate holder shall maintain or repair turbine and turbine tower components as necessary to protect public safety.</u></p> <p>[Final Order on ASC, Condition IV.I.4; Amended in Final Order on AMD4]</p>
<p><u>Prior to operation, the certificate shall submit to the Department evidence demonstrating that, for turbine types having pad-mounted step-up transformers, the certificate holder shall install the transformers are installed</u> at the base of each tower in locked cabinets designed to protect the public from electrical hazards and to avoid creation of artificial habitat for raptor prey.</p> <p>[Final Order on ASC, Condition IV.I.5; Amended in Final Order on AMD4]</p>
<p>To protect the public from electrical hazards <u>Prior to construction, the certificate holder shall enclose the provide evidence to the Department demonstrating that the facility substations will be enclosed</u> with appropriate fencing and locked gates.</p> <p>[Final Order on ASC, Condition IV.I.6; Amended in Final Order on AMD4]</p>
<p>Before beginning construction, the certificate holder shall submit to the FAA and the Oregon Department of Aviation ("ODA") a Notice of Proposed Construction or Alteration identifying the proposed final locations of the turbines and related or supporting facilities and shall provide a copy of this notice to the Department. The certificate holder shall notify the Department of the FAA's and ODA's responses as soon as they have been received.</p> <p>[Final Order on ASC, Condition IV.I.7]</p>
<p>The certificate holder shall construct all facility components in compliance with the following setback requirements</p> <ul style="list-style-type: none"> a. The certificate holder shall maintain a minimum distance of 110 percent of maximum blade tip height, measured from the centerline of the turbine tower to the nearest edge of any public road right-of-way. The certificate holder shall assume a minimum right-of-way width of 60 feet. b. The certificate holder shall maintain a minimum distance of 1,320 feet, measured from the centerline of the turbine tower to the center of the nearest residence existing at the time of tower construction. c. The certificate holder shall maintain a minimum distance of 110 percent of maximum blade tip height, measured from the centerline of the turbine tower to the nearest boundary of the certificate holder's lease area. <p><u>Prior to construction of turbine towers, the certificate holder shall submit to the Department final facility design and layout maps, with supporting distance tables (i.e. distance of facility component to nearest setback location – residence, right of way, etc), demonstrating compliance with the aforementioned setback requirements.</u></p> <p>[Final Order on ASC, Condition IV.I.8; Amended in Final Order on AMD4]</p>
<p>The certificate holder shall install the underground segments of the 34.5-kV collector system at a minimum depth of three feet.</p> <p>[Final Order on ASC, Condition IV.K.1]</p>

<p style="text-align: center;">List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>The certificate holder shall report the results of the database review and consultation to the Department and to ODFW and, if there have been new documentations of nesting bald eagles or peregrine falcons within 2 miles of the facility, the certificate holder shall implement appropriate measures to protect the species from adverse impact, as approved by the Department and ODFW.</p> <p>[Final Order on ASC, Condition IV.L.1]</p>
<p>The certificate holder shall implement measures to mitigate impacts to sensitive wildlife habitat during construction including, but not limited to, the following:</p> <ul style="list-style-type: none"> (a) Preparing maps to show sensitive areas, such as nesting or denning areas for sensitive wildlife species, that are off limits to construction personnel; (b) Ensuring that a qualified person instructs construction personnel to be aware of wildlife in the area and to take precautions to avoid injuring or destroying wildlife or significant wildlife habitat; and (c) Avoiding unnecessary road construction, temporary disturbance and vehicle use. <p>[Final Order on ASC, Condition IV.L.2]</p>
<p>Prior to the beginning of construction but no more than two years prior to the beginning of construction of the facility, the certificate holder shall:</p> <ul style="list-style-type: none"> a. <u>Submit protocol for field surveys for threatened and endangered species to the Department for review and approval, in consultation with ODFW. The survey protocol shall be based on the protocol included on ASC Exhibit P, Attachment P-1, and shall be updated based on consultation with ODFW.</u> b. Perform new field surveys for threatened and endangered species following the survey protocol set forth in the Application for Site Certificate <u>as approved per sub(a).</u> c. The certificate holder shall report the results of the field surveys to the Department and ODFW, and the Oregon Department of Agriculture. <u>and ODFW, and the Oregon Department of Agriculture.</u> If the surveys identify the presence of threatened or endangered species within the site boundary, the certificate holder shall implement appropriate measures to avoid a significant reduction in the likelihood of survival or recovery of the species, as approved by the Department in consultation with ODFW, and the Oregon Department of Agriculture. <u>in consultation with ODFW, and the Oregon Department of Agriculture.</u> <p>[Final Order on ASC, Condition IV.L.3; Amended in Final Order on AMD3, AMD4]</p>
<p>Prior to construction, the certificate holder shall finalize and implement the Habitat Mitigation and Revegetation Plan (HMRP), included as Attachment EC <u>E</u> to the Final Order on Amendment No. 34 <u>3</u>, as approved by the Department in consultation with ODFW and as amended from time to time. Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments, and the Council retains the authority to approve, reject, or modify any amendments of the HMRP agreed to by the Department. [Final Order on Amendment No. 34 <u>3</u>]</p> <p>The finalized HMRP shall incorporate the maps, habitat classifications, and anticipated temporary and permanent habitat impact assessment completed as per site certificate Condition III.C.1. Prior to start of construction, the certificate holder shall acquire the legal right to create, enhance, maintain and protect a habitat mitigation area so long as the site certificate is in effect by means of outright purchase, conservation easement or similar conveyance and shall provide a copy of the documentation to the Department. The nominal lease term shall be at least 30 years, with an option to extend if the facility continues operations past year 30. The mitigation area shall be as shown in figures 1, 2 and 3 of Attachment B to the Final Order. Any different mitigation area shall require prior approval of the Department in consultation with ODFW.</p> <p>If, prior to the achievement of success criteria for revegetation and restoration of temporarily impacted areas as provided in the final HMRP, any area temporarily disturbed during facility construction is converted for some other use such that the Department, in consultation with ODFW, determines the success criteria cannot be achieved, or the Department otherwise determines, in consultation with ODFW, that the success criteria cannot be achieved, the Department shall amend the HMRP using the process described above to require additional mitigation consistent with the habitat classifications and mitigation requirements for other areas permanently impacted by the facility.</p> <p>[Final Order on ASC, Condition IV.M.1; Amended in Final Order on Amendment 3 <u>AMD3, AMD4</u>]</p>

List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions												
<p>The certificate holder shall restore areas outside the permanent footprint that are disturbed, during construction according to the methods and monitoring procedures described in the revegetation plan HMRP included in the Final Order on <u>Amendment 4</u> as Attachment <u>BC</u> and as amended from time to time. Mitigation and restoration requirements in the plan shall apply to all laydown areas and other areas of temporary disturbance, including those associated with construction of transmission lines.</p> <p>[Final Order on ASC, Condition IV.M.2; <u>Amended in Final Order on AMD4</u>]</p>												
<p>Permanent met towers shall not have guy wires.</p> <p>[Final Order on ASC, Condition IV.M.3]</p>												
<p>The certificate holder shall survey the status of known raptor nests within 0.5 miles before ground-disturbing activities begin. If an active nest is found, and ground-disturbing activities are scheduled to begin before the end of the sensitive nesting and breeding season (mid-April to mid-August), the certificate holder will not engage in ground-disturbing activities within a 0.25-mile buffer around the nest until the nest fledges young or the nest fails, unless ODFW approves an alternative plan. If ground-disturbing construction activities continue into the sensitive nesting and breeding season for the following year, the certificate holder will not engage in ground-disturbing activities within the 0.25-mile buffer if the nest site is found to be active until the nest fledges young or the nest fails, unless ODFW approves an alternate plan.</p> <p>[Final Order on ASC, Condition IV.M.4]</p>												
<p>Prior to construction, the certificate holder will survey the status of known loggerhead shrikes nests and visit sites where non-nesting loggerhead shrikes were observed in order to determine old and new nest sites. Ground-disturbing activities will be sequenced with active raptor nests, using a 150-meter buffer. <u>The certificate holder shall avoid all construction activities within a 492-foot (150-meter) buffer from active loggerhead shrikes nests.</u></p> <p>[Final Order on ASC, Condition IV.M.5; <u>Amended in Final Order on AMD4</u>]</p>												
<p>Trees in Category 3 upland tree habitat shall not be physically harmed or removed.</p> <p>[Final Order on ASC, Condition IV.M.6]</p>												
<p>During facility operation, the certificate holder shall conduct wildlife monitoring as described in the Wildlife Monitoring and Mitigation Plan that is included as Attachment <u>AE</u> to the Final Order on <u>Amendment 4</u> and as amended from time to time.</p> <p>[Final Order on ASC, Condition IV.M.7; <u>Amended in Final Order on AMD4</u>]</p>												
<p>The certificate holder shall design and construct all aboveground transmission line support structures following the practices suggested by the Avian Powerline Interaction Committee (<u>APLIC 1996, referenced in the Application for a Site Certificate, at P-33 APLIC 2006; APLIC 2012</u>) and shall install anti-perching devices on transmission pole tops and cross arms where the poles are within the site or are located within one-quarter mile of any wind turbine.</p> <p>[Final Order on ASC, Condition IV.M.8; <u>Amended in Final Order on AMD4</u>]</p>												
<p>Prior to construction, the certificate holder shall submit to the Department final facility design maps confirming that the certificate holder may construct turbines and other facility components <u>will be located</u> within the 900-foot corridors shown on Figures P-1 through P-10 of the Application for a Site Certificate and August 2008 supplement. The certificate holder shall not construct any facility components within areas of Category 1 or Category 2 habitat and shall avoid temporary disturbance of Category 1 or Category 2 habitat, except for those acreages allowed in Table 1 in the Final Order for RFA No. 3. <u>The certificate holder may rely upon the maps and data submitted per Condition IV.M.1 to satisfy this condition.</u> [Final Order on Amendment No. 3]</p> <p>[Final Order on ASC, Condition IV.M.9; Amended in Final Order on AMD3, <u>AMD4</u>]</p>												
<p>During construction, the certificate holder shall protect the area within a 1300-foot buffer around any active nests of the following species during the sensitive period, as provided in this condition:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Species</th> <th>Sensitive Period</th> <th>Early Release Date</th> </tr> </thead> <tbody> <tr> <td>Swainson's hawk</td> <td>April 1 to August 15</td> <td>May 31</td> </tr> <tr> <td>Golden eagle</td> <td>February 1 to August 31</td> <td>May 31</td> </tr> </tbody> </table>				Species	Sensitive Period	Early Release Date	Swainson's hawk	April 1 to August 15	May 31	Golden eagle	February 1 to August 31	May 31
Species	Sensitive Period	Early Release Date										
Swainson's hawk	April 1 to August 15	May 31										
Golden eagle	February 1 to August 31	May 31										

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	Ferruginous hawk	March 15 to August 15	May 31
	Burrowing owl	April 1 to August 15	July 15
<p>The 1300-foot buffer may be reduced, with Department approval, if there is an adequate physical barrier between the nest site and the construction impacts such that a 1300-foot buffer proves to be excessive.</p> <p>During the year in which construction of any phase occurs, the certificate holder shall use a protocol approved by ODFW to determine whether there are any active nests of these species within a half-mile of any areas that would be disturbed during construction. If a nest is occupied by any of these species after the beginning of the sensitive period, the certificate holder shall not engage in high-impact construction activities (activities that involve blasting, grading or other major ground disturbance) or allow high levels of construction traffic within 1300 feet of the nest site, or such lesser distance as may be approved by the Department in the event there is an adequate physical barrier between the nest site and the construction impacts.</p> <p>In addition, the certificate holder shall flag the boundaries of the 1300-foot buffer area, or such lesser distance as may be approved by the Department in the event there is an adequate physical barrier between the nest site and the construction impacts, and shall instruct construction personnel to avoid any unnecessary activity within the buffer area. The certificate holder shall direct a qualified independent third-party biological monitor, as approved by the Department, to observe the active nest sites during the sensitive period for signs of disturbance and to notify the Department of any noncompliance with this condition. If the monitor observes nest site abandonment or other adverse impact to nesting activity, the certificate holder shall implement appropriate mitigation, in consultation with ODFW and subject to the approval of the Department, unless the adverse impact is clearly shown to have a cause other than construction activity. The certificate holder may begin or resume high-impact construction activities before the ending day of the sensitive period if any known nest site is not occupied by the early release date. If a nest site is occupied, then the certificate holder may begin or resume high-impact construction before the ending day of the sensitive period with the approval of ODFW, but after the young are fledged. The certificate holder shall use a protocol approved by ODFW to determine when the young are fledged (meaning the young are independent of the core nest site).</p> <p>[Final Order on ASC, Condition IV.M.10]</p>			
<p><u>Prior to construction,</u> tThe certificate holder shall:</p> <ol style="list-style-type: none"> Conduct two (2) years of raptor nest surveys with at least one (1) year of the raptor nest surveys occurring prior to the beginning of construction. The raptor nest surveys shall be conducted following the instructions set forth in the Raptor Nest Survey Protocol for Golden Hills Wind Project included as Attachment C<u>D</u> to the Second <u>Fourth</u> Amended Site Certificate. At least 45 days prior to construction, tThe certificate holder shall provide a written report on the raptor nest surveys to the Department and ODFW. If the surveys identify the presence of raptor nests within the survey area, the certificate holder shall implement appropriate measures, consistent with the Habitat Mitigation and Revegetation Plan <u>Wildlife Monitoring and Mitigation Plan</u>, and as approved by the Department in consultation with ODFW, to assure that design, construction, and operation of the facility are consistent with the Fish and Wildlife Habitat standard. {Final Order on Amendment No. 3} <p>[Final Order on ASC, Condition IV.M.11; Amended in Final Order on AMD3, AMD4]</p>			
<p><u>Prior to construction,</u> the certificate holder shall:</p> <ol style="list-style-type: none"> Submit a <u>draft site-specific geotechnical investigation report to the Department and Oregon Department of Geology & Mineral Industries (“DOGAMI”), for review.</u> The investigation and report shall conform to the Oregon State Board of Geologist Examiners guidelines titled “Guidelines for Engineering Geologic Reports” and “Guidelines for Site-Specific Seismic Hazard Reports for Essential and Hazardous Facilities and Major and Special-Occupancy Structures in Oregon.” <u>The site-specific geotechnical investigation shall address native soil and bedrock stability concerns at cuts, fills and culvert crossings, and shall include design and construction recommendations to minimize the potential for destabilizing marginally stable slopes and the potential for stream erosion.</u> <u>The Department shall review and concur with the report, in consultation with DOGAMI, prior to construction.</u> <p>[Final Order on ASC, Condition V.A.1; Amended in Final Order on AMD4]</p>			

<p style="text-align: center;">List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>The certificate holder shall instruct the consulting geologist and engineer to study slope stability issues and include conclusions and recommendations about slope stability in the site-specific geotechnical report. [Final Order on ASC, Condition V.A.2]</p>
<p>The certificate holder shall design and construct the facility in accordance with requirements set forth by the State’s Building Code Division and any other applicable codes and design procedures. <u>Prior to operation, the certificate holder shall provide confirmation to the Department that facility design and construction satisfies the requirements set forth by the State’s Building Code Division and any other applicable codes and design procedures.</u> [Final Order on ASC, Condition V.A.3; Amended in Final Order on AMD4]</p>
<p>The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety presented by non-seismic hazards. As used in this condition, “non-seismic hazards” include settlement, landslides, flooding and erosion. [Final Order on ASC, Condition V.A.4]</p>
<p>The certificate holder shall ensure that wind turbine corridors and major structures are constructed with sufficient setbacks from all steeper slopes to minimize the potential for creating unstable or marginally stable conditions. [Final Order on ASC, Condition V.A.5]</p>
<p>The certificate holder shall design the facility to avoid impacts to sites 35SH217, 35SH220, GH site 6 (above ground resource), 35SH219 and GH Isolate 6. [Final Order on ASC, Condition V.B.1]</p>
<p>At least 45 days prior to construction For sites 35SH215, 35SH216 and 35SH221, the certificate holder shall avoid impacts to these sites during construction and subsequent operations. The certificate holder shall develop <u>prepare</u> a Cultural Resource Management Plan (the “CRMP”) and shall submit the CRMP to the Department and State Historic Preservation Office (the “SHPO”) for review. The Department must approve the CRMP, in consultation with SHPO, prior to construction. <u>The CRMP shall at a minimum include:</u></p> <ul style="list-style-type: none"> (a) Specific protocols and procedures for protecting known cultural resources including imposing that includes a 30-meter buffer zone around these listed sites designated and designating as a “no-work zones” for all ground-disturbing activities, around sites 35SH215, 35SH216, 35SH221, and to the sites identified in Condition V.B.1: <u>35SH217, 35SH220, GH site 6 (above ground resource), 35SH219 and GH Isolate 6. Both the buffer and no work zones apply to cultural resources, including any additional archeological sites and possible human remains accidentally discovered during construction. The CRMP shall identify how protocols will follow State laws and rules at ORS 358.905-961, ORS 390.235, OAR 736-051-0090 and ORS 97.740-760 as in effect on the date of this site certificate,</u> The certificate holder shall submit the CRMP to the State Historic Preservation Office (the “SHPO”) for concurrence and shall provide to the Department documentation confirming SHPO concurrence prior to start of construction. (b) <u>Protocols and procedures for responding to accidental discovery of cultural resources during operations and ongoing maintenance activities.</u> <p>[Final Order on ASC, Condition V.B.2; Amended in Final Order on AMD4]</p>
<p><i>The requirements of this condition have been incorporated into Condition V.B.2. No substantive changes were made to the requirements of this condition.</i></p> <p>The certificate holder shall consult with the SHPO regarding the development of a CRMP that will address the protection of aboveground historic resources and belowground archeological resources. The CRMP shall include established protocol and procedures for unanticipated discoveries, such as the discovery of new archeological sites or Native American human remains during ground disturbing activities, and shall document how these protocols will follow State laws and rules at ORS 358.905-961, ORS 390.235, OAR 736-051-0090 and ORS 97.740-760 as in effect on the date of this site certificate. [Final Order on ASC, Condition V.B.3; Amended in Final Order on AMD4]</p>

<p style="text-align: center;">List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>Before beginning construction of any phase of the facility, the certificate holder shall provide to the Department a map showing the final design locations of all components of that phase of the facility and areas that would be temporarily disturbed during construction, and also showing the areas surveyed by Tetra Tech in preparing the Archeological Inventory for Golden Hills Wind Energy Development included in the Application for a Site Certificate as Attachment S-1. If there are any additional areas where ground-disturbing activities will occur that were not part of the original facility area, the certificate holder shall <u>notify the Department and SHPO</u> contact the SHPO to determine whether <u>additional surveys or avoidance measures are necessary</u> there will be additional impacts to cultural resources.</p> <p>[Final Order on ASC, Condition V.B.4; <u>Amended in Final Order on AMD4</u>]</p>
<p><u>Prior to and during construction, the certificate holder shall ensure that construction personnel receive training from a cultural resources specialist on how to identify sensitive historic, cultural, and archaeological resources present onsite and on measures to avoid accidental damage to identified resource sites. Records of such training must be maintained onsite during construction, and made available to the Department upon request.</u> a qualified archaeologist instructs construction personnel on the identification of cultural resources</p> <p>[Final Order on ASC, Condition V.B.5; <u>Amended in Final Order on AMD4</u>]</p>
<p><u>During construction,</u> if any cultural resources are discovered during construction activities, all work at that location shall cease immediately and the certificate holder shall contact <u>notify the Department and the SHPO</u> to determine whether it is necessary to have an archeologist travel to the worksite and assess the discovery or monitor construction activities.</p> <p>[Final Order on ASC, Condition V.B.6; <u>Amended in Final Order on AMD4</u>]</p>
<p><u>Prior to and during construction,</u> “No access” buffers shall be identified on construction plans and temporarily demarcated in the field before and during construction if work is planned within 200 feet of known cultural resources that require buffers. The facility Environmental Inspector shall monitor flagged “no access” buffers around archeological sites during construction to prevent accidental damage to cultural resources. These flags or markers shall not be moved or removed during construction activities, and construction personnel shall be advised of these restrictions.</p> <p>[Final Order on ASC, Condition V.B.7; <u>Amended in Final Order on AMD4</u>]</p>
<p><u>During construction,</u> the certificate holder shall ensure that construction personnel cease all ground-disturbing activities in the immediate area if any archaeological or cultural resources are found during construction of the facility until a qualified archaeologist can evaluate the significance of the find. No construction personnel will be allowed in the discovery area except for facility management in consultation with the SHPO. The certificate holder shall notify the Department and the SHPO of the find. If the SHPO determines that the resource is significant, the certificate holder shall make recommendations to the Council for mitigation, including avoidance or data recovery, in consultation with the Department, the SHPO, the appropriate Oregon tribes and other appropriate parties. The certificate holder shall not restart work in the affected area until the certificate holder has demonstrated to the Department that it has complied with State archaeological protection and archaeological permit laws in coordination with the SHPO.</p> <p>[Final Order on ASC, Condition V.B.8; <u>Amended in Final Order on AMD4</u>]</p>
<p><u>During construction,</u> The certificate holder shall ensure that construction personnel <u>proceed carefully in the vicinity</u> are instructed on the location of the mapped alignment of the Oregon Trail, per Condition V.B.5. If any intact physical evidence of the trail is discovered <u>that was not previously identified,</u> the certificate holder shall avoid any disturbance to the intact segments by redesign, reengineering or restricting the area of construction activity. The certificate holder shall promptly notify the Department and the SHPO of the discovery. The certificate holder shall consult with the Department and with the SHPO to determine appropriate mitigation measures.</p> <p>[Final Order on ASC, Condition V.B.9; <u>Amended in Final Order on AMD4</u>]</p>
<p>Upon completion of construction, the certificate holder shall consult with the Oregon Historic Trails Advisory Council regarding the appropriate content of an interpretive sign. After such consultation, the certificate holder shall place in a publicly accessible location a sign giving notice of the historic background of the facility site and surrounding areas.</p> <p>[Final Order on ASC, Condition V.B.10]</p>

<p style="text-align: center;">List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>During operation of the facility, the certificate holder shall obtain water for on-site use from one well located at the O&M facility, subject to compliance with applicable permit requirements. During operation of the facility, the certificate holder shall not use more than 5,000 gallons of water per day from the on-site well. [Final Order on ASC, Condition V.C.1]</p>
<p>During construction and operation of the facility, the certificate holder shall install on-site security and shall require on-site security personnel to establish a line of communication with the Sherman County Sheriff's Office to regularly report on the status of on-site security operations. [Final Order on ASC, Condition V.C.2]</p>
<p>Before beginning construction the certificate holder shall develop and implement a fire safety and response plan for both construction and operation phases in consultation with the Oregon State Fire Marshal, the Sherman County Emergency Services, North Sherman Fire and Rescue, Moro Rural Fire Protection District and other first-response agencies the facility will rely upon for fire protection services. A copy of the plan must be provided to the Department at least 30 days before beginning construction. The plan must be updated at least annually by the agencies identified in (a) below and a copy provided to the agencies identified in (a), (b), and (c) and to the Department within 30 days of the update. The fire safety and response plan shall address, at a minimum, the following:</p> <ul style="list-style-type: none"> (a) Identification of agencies that participated in developing the plan; (b) Identification of agencies that are designated as first response agencies or are included in any mutual aid agreements with the facility; (c) A list of any other mutual aid agreements or fire protection associations in the vicinity of the facility; (d) Complete contact information for each agency listed in (a), (b), and (c) above, including at least two facility contacts available on a 24-hour basis; (e) Communication protocols for both routine and emergency events and the incident command system to be used in the event a fire response by multiple agencies is needed at the facility; (f) Access and fire response at the facility site during construction and operations. Fire response plans during construction shall address regular and frequent communication amongst the agencies regarding the number and location of construction sites within the site boundary, access roads that are completed and those still under construction, location of water receptacles, and a temporary signage system until permanent addresses and signs are in place; (g) The minimum designated time period of the fire season (i.e., May 1 through October 15) and the criteria to modify the designated fire season to respond to changing conditions; (h) The number, size, and location of onsite water receptacles to be staged around the facility site for firefighting purposes during the fire season; and (i) Training needs (both for facility personnel and for first responders). (j) Copies of mutual aid, fire protection association, or other agreements entered into concerning fire protection at the facility site. <p>[Final Order on ASC, Condition V.C.3; Amended in Final Order on AMD2]</p>
<p>During construction of the facility, the certificate holder shall ensure that construction vehicles and equipment are operated on graveled areas to the extent possible and that open flames, such as cutting torches, are kept away from grassy areas. [Final Order on ASC, Condition V.C.4]</p>
<p>During construction and operation of the facility, the certificate holder shall ensure that the O&M facility and all service vehicles are equipped with shovels and portable fire extinguishers of a 4A50BC or equivalent rating. [Final Order on ASC, Condition V.C.5]</p>
<p>During construction of the facility, the certificate holder shall maintain a water truck on site to respond to potential fire incidents. [Final Order on ASC, Condition V.C.6]</p>

<p style="text-align: center;">List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>The certificate holder shall construct turbines on concrete pads with a minimum of 10 feet of nonflammable and non-erosive ground cover on all sides. The certificate holder shall cover turbine pad areas with nonflammable, non-erosive material immediately following exposure during construction and shall maintain the pad area covering during operation of the facility.</p> <p>[Final Order on ASC, Condition V.C.7]</p>
<p>During operation of the facility, the certificate holder shall ensure that all on-site employees receive annual fire prevention and response training, including tower rescue training, from qualified instructors or members of local fire districts and shall ensure that all employees are instructed to keep vehicles on roads and off dry grassland, except when off-road operation is required for emergency purposes.</p> <p>[Final Order on ASC, Condition V.C.8]</p>
<p>Upon<u>Before</u> beginning operation of the facility, the certificate holder shall provide to North Sherman Fire Protection District and Moro Rural Fire Protection District a site plan indicating the identification number assigned to each turbine and the location of all facility structures. During operation of the facility, the certificate holder shall ensure that appropriate district personnel have an up-to-date list of the names and telephone numbers of facility personnel available to respond on a 24-hour basis in case of an emergency on the facility site.</p> <p>[Final Order on ASC, Condition V.C.9; <u>Amended in Final Order on AMD4</u>]</p>
<p>Before and during beginning construction of the facility, the certificate holder shall develop, <u>in consultation with Sherman County Road Department, and implement</u> a construction-phase traffic management plan. with all affected local jurisdictions. <u>The certificate holder shall submit to the Department a copy of the final construction-phase traffic management plan.</u></p> <p>[Final Order on ASC, Condition V.C.10; <u>Amended in Final Order on AMD4</u>]</p>
<p>During construction of the facility, the certificate holder shall implement measures to reduce traffic impacts, including:</p> <ul style="list-style-type: none"> (a) Providing notice to all affected local jurisdictions in advance of deliveries; (b) Providing notice to adjacent landowners and residents of Biggs Junction in advance of deliveries; and (c) Requiring flaggers to be at appropriate locations at appropriate times during construction to direct traffic and reduce accident risks. <p>[Final Order on ASC, Condition V.C.11]</p>
<p><i>The requirements of this condition have been incorporated into Conditions IV.D.2. and IV.D.19. No substantive changes were made to the requirements of this condition.</i></p> <p>Prior to start of construction, the certificate holder shall obtain from the Sherman County Road Department an assessment of road conditions in the facility area prior to the start of construction of the facility. The certificate holder shall also obtain from the county road department an evaluation of the roads following completion of the facility to determine any significant change in condition. The certificate shall cooperate with the Sherman County Road Department to ensure that any unusual damage or wear caused by the use of the county's roads by the developer during the construction of the facility will be the responsibility of the developer. In addition, no equipment or machinery of the developers shall be parked or stored on any county road except while in use.</p> <p>[Final Order on ASC, Condition IV.C.12; <u>Amended in Final Order on AMD4</u>]</p>
<p><i>The requirements of this condition have been incorporated into Condition IV.D.19. No substantive changes were made to the requirements of this condition.</i></p> <p>Prior to beginning construction, the certificate holder will</p> <ul style="list-style-type: none"> (a) Designate a route or routes for the transport of wind turbine construction material (including water, aggregate, concrete, machinery and tower pieces), with the intention of minimizing damage to non-designated roads, and provide these designations to the County Road Master; (b) Provide to the County Road Master a written summary of possible anticipated road damage to the designated route or routes, and an estimate of the cost of repair to the designated route or routes; (c) Establish and maintain an escrow account for so long as construction is ongoing funded in an amount equal to the estimated cost to repair the designated route or routes consistent with the estimate provided in (b); and

<p style="text-align: center;">List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>(d) Conduct an inspection of the roads along the designated route or routes before and after construction with a representative of the Sherman County Road Department and an independent third party with the required expertise to inspect and evaluate paved and graveled roads. In the event a dispute arises, the third party shall be the final arbiter. The cost of the hiring of the third party shall be borne by the certificate holder.</p> <p>[Final Order on ASC, Condition IV.C.13; Amended in Final Order on AMD4]</p>
<p><i>The requirements of this condition have been incorporated into Condition IV.D.18. No substantive changes were made to the requirements of this condition.</i></p> <p>The certificate holder shall work with Sherman County Emergency Manager to assign a 9-1-1-5 digit rural address to every tower road that intersects a State or county road. The county will provide and install the signage for these addresses.</p> <p>[Final Order on ASC, Condition IV.C.14; Amended in Final Order on AMD4]</p>
<p><u>During construction, the certificate holder shall implement a waste management plan</u> Prior to construction, the certificate holder shall submit to the Department a <u>Construction Waste Management Plan</u> that includes, but is not limited to, the following measures:</p> <ul style="list-style-type: none"> (a) Recycling steel and other metal scrap; (b) Recycling wood waste; (c) Recycling packaging wastes, such as paper and cardboard; (d) Collecting non-recyclable waste for transport to a landfill; and (e) Segregating all hazardous wastes, such as used oil, oily rags and oil-absorbent materials, lubricant and cleaning solution containers, mercury-containing lights, and lead-acid and nickel-cadmium batteries, for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous wastes. <p><u>The requirements of the plan shall be implemented and adhered to during construction activities.</u></p> <p>[Final Order on ASC, Condition V.D.1; Amended in Final Order on AMD4]</p>
<p>During operation, the certificate holder shall implement a waste management plan <u>Prior to operation, the certificate holder shall submit to the Department an Operational Waste Management Plan</u> that includes, but is not limited to, the following measures:</p> <ul style="list-style-type: none"> (a) Training employees to minimize and recycle solid waste; (b) Recycling paper products, metals, glass and plastics; (c) Recycling used oil and hydraulic fluid; (d) Collecting non-recyclable waste for transport to a landfill; and (e) Segregating all hazardous wastes, such as used oil, oily rags and oil-absorbent materials, oil and cleaning solution containers, mercury-containing lights, and lead-acid and nickel-cadmium batteries, for disposal by a licensed firm specializing in the proper recycling or disposal of hazardous wastes. <p><u>The requirements of the plan shall be implemented and adhered to during operational activities.</u></p> <p>[Final Order on ASC, Condition V.D.2; Amended in Final Order on AMD4]</p>
<p>During construction, the certificate holder shall provide portable toilets for on-site sewage handling and shall ensure that they are pumped and cleaned regularly by a licensed contractor.</p> <p>[Final Order on ASC, Condition V.D.3]</p>
<p>During operation, the certificate holder shall discharge sanitary wastewater generated at the O&M facility to a licensed on-site septic system in compliance with county permit requirements. The certificate holder shall design the septic system with a discharge capacity of less than 5,000 gallons per day. <u>The certificate holder shall provide copies of all necessary septic system permits to the Department.</u></p> <p>[Final Order on ASC, Condition V.D.4; Amended in Final Order on AMD4]</p>
<p><u>During construction, to- re reduce noise impacts at nearby residential areas, the certificate holder shall:</u></p> <ul style="list-style-type: none"> (a) Confine the noisiest operation of heavy construction equipment to the daylight hours; (b) Require contractors to install and maintain exhaust mufflers on all combustion engine-powered equipment; and

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(c) Establish a complaint response system at the construction manager’s office to address noise complaints.

[Final Order on ASC, Condition VI.A.1.1; Amended in Final Order on AMD4]

The certificate holder shall submit, for Department approval prior to construction, a complete new noise analysis for the facility based on the final design layout and generate a new table listing each noise-sensitive property, as defined in OAR 340-035-0015(38), and the predicted maximum hourly L50 noise level at each noise-sensitive property. In addition, the certificate holder shall provide the predicted sound levels contributed by each turbine at each noise-sensitive property that does not provide a waiver of the ambient noise rule. The certificate holder shall perform the analysis using the CADNA/A by DataKustik GmbH of Munich, Germany, and shall base the analysis on the final facility design including final choice of turbine and location of all facility components. The analysis shall demonstrate to the satisfaction of the Department that each of the following requirements have been met:

- (a) For any noise-sensitive property, the certificate holder shall identify the final design locations of all turbines to be built and perform a noise analysis demonstrating, in accordance with OAR 340-035-0035(1)(b)(B)(iii)(IV), that the total hourly L50 noise level generated by the facility would not exceed 50 dBA at the appropriate measurement point. The certificate holder shall assume the following input parameters:
 - The maximum sound power level warranted by the manufacturer or confirmed by other means acceptable to the Department;
 - The exact locations of the proposed turbines;
 - Attenuation of sound due to absorption to be calculated using a methodology satisfactory to the Department;
 - The use of 50° F temperature and 70 percent relative humidity in the analysis;
 - A 2dB safety margin shall be added to turbine sound power levels;
 - No credit for shielding of any residence by terrain; and
 - All receptors treated as simultaneously downwind of all turbines.
- (b) If the hourly L50 noise levels caused by the facility at any noise-sensitive property would increase the ambient noise level at any noise-sensitive property over the full set of wind conditions ranging from cut in to full load by more than 10 dBA, the certificate holder shall obtain a legally effective easement or real covenant from that property owner pursuant to which the owner of the property authorizes the certificate holder’s operation of the facility to increase ambient statistical noise levels L50 and L50 by more than 10 dBA at the appropriate measurement point. A legally effective easement or real covenant shall (i) include a legal description of the burdened property (the noise-sensitive property); (ii) be recorded in the real property records of the county; (iii) expressly benefit the certificate holder; (iv) expressly run with the land and bind all future owners, lessees or holders of any interest in the burdened property; and (v) not be subject to revocation without the certificate holder’s written approval.
- (c) If, for any noise-sensitive property where the hourly L50 noise levels caused by the facility would increase by more than 10 dBA above the ambient level over the full range of wind conditions measured for that property and where the certificate holder has not obtained a legally effective easement or real covenant as described in (b), the certificate holder shall identify measures to reduce noise at that property either by eliminating or moving turbines, and shall perform the noise analysis again to demonstrate, in accordance with OAR 340-035-0035(1)(b)(B)(iii)(IV), that the total noise generated by the facility would meet the ambient noise degradation test at the appropriate measurement point at that noise-sensitive property. The certificate holder shall obtain Department concurrence of the new analysis prior to start of construction.

[Final Order on ASC, Condition VI.A.1.2]

During operation, the certificate holder shall maintain a complaint response system to address noise complaints. The certificate holder shall promptly notify the Department of any complaints received regarding facility noise and of any actions taken by the certificate holder to address those complaints. Prior to start of commercial operation, the certificate holder shall notify, in writing, the owners of potentially affected noise-sensitive properties identified in Exhibit X of the completed Application for a Site Certificate. The notice shall inform the property owners of the procedure and contact information for

<p style="text-align: center;">List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>filing a complaint regarding the noise level from the facility once it is operating. The certificate holder shall document the issuance of this notice and provide that documentation to the Department. [Final Order on ASC, Condition VI.A.1.3]</p>
<p>Prior to start of commercial operation, the certificate holder shall submit a plan for complaint-based operational noise monitoring to the Department. Commercial operation shall not commence until the Department has concurred in writing with the complaint-based noise monitoring protocol. The plan shall provide for testing at houses whose owners or occupants submit a complaint to the Council or the Department. The plan shall include a schedule for completion of required testing and a date certain by which written results shall be provided to the Council. If the owner of the property that filed the complaint refuses to grant access for the purpose of performing the noise test described in this condition after reasonable attempts are made by the certificate holder to receive permission for access, then the Department shall not require further corrective action. [Final Order on ASC, Condition VI.A.1.4]</p>
<p>Removal-Fill Condition 1: Prior to construction, the certificate holder shall:</p> <ol style="list-style-type: none"> 1) Conduct an updated wetlands and waters delineation survey of all areas to be temporarily or permanently impacted by the facility based on final layout and design. 2) Submit the delineation survey report to the department and Oregon Department of State Lands and receive concurrence of the report from DSL. 3) Confirm from the results of the delineation survey and DSL concurrence that the facility will not need a removal-fill permit. 4) If a removal-fill permit is necessary, file a site certificate amendment request to review and process the permit request. <p>(Final Order on Amendment No. 3)</p>
<p>Prior to construction, the certificate holder shall take reasonable steps to reduce or manage human exposure to electric and magnetic fields, including, but not limited to:</p> <ol style="list-style-type: none"> a) Submittal of final facility design maps to the Department demonstrating that Constructing all aboveground transmission lines <u>would be located</u> at least 200 feet from any residence or other occupied structure, measured from the centerline of the transmission line; b) Fencing all areas near the facility substations to ensure that substation equipment is not accessible to the public; c) Submittal of evidence to the Department that Providing to landowners a map of underground and overhead transmission lines on their private property and advising landowners an advisory of possible health risks <u>has been provided to all landowners within 200-feet of the transmission line</u>; and d) Designing and maintaining all transmission lines so that alternating current electric fields do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public. <p>[Final Order on ASC, Condition VI.A.4.1; Amended in Final Order on AMD4]</p>
<p>In advance of, and during <u>Prior to construction, the certificate holder shall prepare or prepare</u> detailed design drawings and specifications for 230 kV, 500 kV, and 34.5 kV transmission lines, the certificate holder shall <u>in consultation</u> with the Utility Safety and Reliability Section of the Oregon Public Utility Commission to ensure that the designs and specifications are consistent with applicable codes and standards. [Final Order on ASC, Condition VI.A.4.2; Amended in Final Order on AMD4]</p>
<p>Prior to start of construction, the certificate holder shall submit to ODOE a procedure for coordinating, with all affected local electric service utilities and transmission service providers, crane movements under electric transmission lines during construction and maintenance of the facility. The procedure shall address subjects including, but not limited to, minimum advance notification prior to any crane movement under an electric transmission or distribution line, protocols for determining adequate line clearance and specific crane path locations. With the procedure, the certificate holder shall</p>

<p align="center">List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>provide evidence of concurrence by each affected electric service utility or transmission service provider. The certificate holder shall ensure that all employees, construction contractors and subcontractors adhere to this procedure throughout construction and maintenance of the facility. [Final Order on ASC, Condition VI.A.4.3]</p>
<p>OAR 345-027025-00200006 (1): The Council shall not change the conditions of the site certificate except as provided for in OAR Chapter 345, Division 27. [Final Order on ASC, Condition VII.1; <u>Amended in Final Order on AMD4</u>]</p>
<p>OAR 345-027025-00200006 (2): The certificate holder shall submit a legal description of the site to the Department of Energy within 90 days after beginning operation of the facility. The legal description required by this rule means a description of metes and bounds or a description of the site by reference to a map and geographic data that clearly and specifically identifies the outer boundaries that contain all parts of the facility. [Final Order on ASC, Condition VII.2; <u>Amended in Final Order on AMD4</u>]</p>
<p>OAR 345-027025-00200006 (3): The certificate holder shall design, construct, operate, and retire the facility:</p> <ul style="list-style-type: none"> a) Substantially as described in the site certificate; b) In compliance with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances in effect at the time the site certificate is issued; and c) In compliance with all applicable permit requirements of other state agencies. <p>[Final Order on ASC, Condition VII.3; <u>Amended in Final Order on AMD4</u>]</p>
<p>OAR 345-027025-00200006 (4): The certificate holder shall begin and complete construction of the facility by the dates specified in the site certificate. [See Conditions (III.D.1) and (111.D.2).] [Final Order on ASC, Condition VII.4; <u>Amended in Final Order on AMD4</u>]</p>
<p>OAR 345-027025-00200006 (5): Except as necessary for the initial survey or as otherwise allowed for wind energy facilities, transmission lines or pipelines under this section, the certificate holder shall not begin construction, as defined in OAR 345-001-0010, or create a clearing on any part of the site until the certificate holder has construction rights on all parts of the site. For the purpose of this rule, “construction rights” means the legal right to engage in construction activities. For wind energy facilities, transmission lines or pipelines, if the certificate holder does not have construction rights on all parts of the site, the certificate holder may nevertheless begin construction, as defined in OAR 345-001-0010, or create a clearing on a part of the site if the certificate holder has construction rights on that part of the site and:</p> <ul style="list-style-type: none"> a) The certificate holder would construct and operate part of the facility on that part of the site even if a change in the planned route of the transmission line or pipeline occurs during the certificate holder’s negotiations to acquire construction rights on another part of the site; or b) The certificate holder would construct and operate part of a wind energy facility on that part of the site even if other parts of the facility were modified by amendment of the site certificate or were not built. <p>[Final Order on ASC, Condition VII.5; <u>Amended in Final Order on AMD4</u>]</p>
<p>OAR 345-027-0020(6): If the Council requires mitigation based on an affirmative finding under any standards of Division 22 or Division 24 of OAR Chapter 345, the certificate holder shall consult with affected state agencies and local governments designated by the Council and shall develop specific mitigation plans consistent with Council findings under the relevant standards. The certificate holder must submit the mitigation plans to the Office and receive Office approval before beginning construction or, as appropriate, operation of the facility. [Final Order on ASC, Condition VII.6; <u>Amended in Final Order on AMD4</u>]</p>
<p>OAR 345-027025-00200006 (7): The certificate holder shall prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder. [Final Order on ASC, Condition VII.7; <u>Amended in Final Order on AMD4</u>]</p>

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<p>OAR 345-027025-00200006 (8): Before beginning construction of the facility, the certificate holder shall submit to the State of Oregon, through the Council, a bond or letter of credit in a form and amount satisfactory to the Council to restore the site to a useful, non-hazardous condition. The certificate holder shall maintain a bond or letter of credit in effect at all times until the facility has been retired. The Council may specify different amounts for the bond or letter of credit during construction and during operation of the facility. [See Condition IV.C.4.] [Final Order on ASC, Condition VII.8; <u>Amended in Final Order on AMD4</u>]</p>
<p>OAR 345-027025-00200006 (9): The certificate holder shall retire the facility if the certificate holder permanently ceases construction or operation of the facility. The certificate holder shall retire the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110. The certificate holder shall pay the actual cost to restore the site to a useful, non-hazardous condition at the time of retirement, notwithstanding the Council’s approval in the site certificate of an estimated amount required to restore the site. [Final Order on ASC, Condition VII.9; <u>Amended in Final Order on AMD4</u>]</p>
<p>OAR 345-027025-00200006 (10): The Council shall include as conditions in the site certificate all representations in the site certificate application and supporting record the Council deems to be binding commitments made by the applicant. [Final Order on ASC, Condition VII.10; <u>Amended in Final Order on AMD4</u>]</p>
<p>OAR 345-027025-00200006(11): Upon completion of construction, the certificate holder shall restore vegetation to the extent practicable and shall landscape all areas disturbed by construction in a manner compatible with the surroundings and proposed use. Upon completion of construction, the certificate holder shall remove all temporary structures not required for facility operation and dispose of all timber, brush, refuse and flammable or combustible material resulting from clearing of land and construction of the facility. [Final Order on ASC, Condition VII.11; <u>Amended in Final Order on AMD4</u>]</p>
<p>OAR 345-027025-00200006 (12): The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety <u>and the environment</u> presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. As used in this rule “seismic hazard” includes ground shaking, <u>ground failure</u>, landslide, liquefaction <u>triggering and consequences (including flow failure, settlement buoyancy, and lateral spreading)</u>, tsunami <u>inundation, fault displacement and subsidence</u>, cyclic softening of clays and silts, fault rupture, directivity effects and soil-structure interaction. [Final Order on ASC, Condition VII.12; <u>Amended in Final Order on AMD4</u>]</p>
<p>OAR 345-027025-00200006 (13): The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate. After the Department receives the notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division and to propose mitigation actions. [Final Order on ASC, Condition VII.13; <u>Amended in Final Order on AMD4</u>]</p>
<p>OAR 345-027025-00200006 (14): The certificate holder shall notify the Department, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site. [Final Order on ASC, Condition VII.14; <u>Amended in Final Order on AMD4</u>]</p>
<p>OAR 345-027025-00200006 (15): Before any transfer of ownership of the facility or ownership of the site certificate holder, the certificate holder shall inform the Department of the proposed new owners. The requirements of OAR 345-027-0100 apply to any transfer of ownership that requires a transfer of the site certificate. [Final Order on ASC, Condition VII.15; <u>Amended in Final Order on AMD4</u>]</p>
<p>OAR 345-027025-00200006 (16): If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council shall notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the Office within a reasonable time not to exceed 90 days. If the certificate holder does</p>

<p style="text-align: center;">List of Existing, Amended, New, Removed and Consolidated Site Certificate Conditions</p>
<p>not submit a proposed final retirement plan by the specified date, the Council may direct the Department to prepare a proposed a final retirement plan for the Council’s approval. Upon the Council’s approval of the final retirement plan, the Council may draw on the bond or letter of credit described in OAR 345-027-0020(8) to restore the site to a useful, non-hazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder shall pay any additional cost necessary to restore the site to a useful, non-hazardous condition. After completion of site restoration, the Council shall issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan. [Final Order on ASC, Condition VII.16; Amended in Final Order on AMD4]</p>
<p>OAR 345-027025-00230006 (4): If the facility includes any transmission line under Council jurisdiction:</p> <ul style="list-style-type: none"> a) The certificate holder shall design, construct and operate the transmission line in accordance with the requirements of the 2012 Edition of the National Electrical Safety Code approved on June 3, 20012011, by the American National Standards Institute; and b) The certificate holder shall develop and implement a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, or other objects or structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the line. <p>[Final Order on Amendment No. 3] [Final Order on ASC, Condition VII.17 [OAR 345-027-0023(4)]; Amended in Final Order on AMD4]</p>
<p>OAR 345-027025-00230006 (5) If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a pipeline or transmission line, the Council shall specify an approved corridor in the site certificate and shall allow the certificate holder to construct the pipeline or transmission line anywhere within the corridor, subject to the conditions of the site certificate. If the applicant has analyzed more than one corridor in its application for a site certificate, the Council may, subject to the Council’s standards, approve more than one corridor. The certificate holder is authorized to construct a 230-kV transmission line anywhere within the approved corridor, subject to the conditions of the site certificate. The approved corridor includes a 5-mile segment and 700-foot segment extending the length of the 230-kV transmission line route and is 200 feet in width. [Final Order on ASC, Condition VII.18; Amended in Final Order on AMD4]</p>
<p>OAR 345-027-0028: The following general monitoring conditions apply:</p> <ul style="list-style-type: none"> a) The certificate holder shall consult with affected state agencies, local governments and tribes and shall develop specific monitoring programs for impacts to resources protected by the standards of divisions 22 and 24 of OAR Chapter 345 and resources addressed by applicable statutes, administrative rules and local ordinances. The certificate holder must submit the monitoring programs to the Department of Energy and receive Department approval before beginning construction or, as appropriate, operation of the facility. b) The certificate holder shall implement the approved monitoring programs described in OAR 345-027-0028(1) and monitoring programs required by permitting agencies and local governments. c) For each monitoring program described in OAR 345-027-0028(1) and (2), the certificate holder shall have quality assurance measures approved by the Department before beginning construction or, as appropriate, before beginning commercial operation. d) If the certificate holder becomes aware of a significant environmental change or impact attributable to the facility, the certificate holder shall, as soon as possible, submit a written report to the Department describing the impact on the facility and any affected site certificate conditions. <p>[Final Order on ASC, Condition VII.19; Amended in Final Order on AMD4]</p>
<p>OAR 345-026-0048: Following receipt of the site certificate or an amended site certificate, the certificate holder shall implement a plan that verifies compliance with all site certificate terms and conditions and applicable statutes and rules. As a part of the compliance plan, to verify compliance with the requirement to begin construction by the date specified in the site certificate, the certificate holder shall report promptly to the Department of Energy when construction begins. Construction is defined in OAR 345-001-0010. In reporting the beginning of construction, the certificate holder shall describe</p>

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all work on the site performed before beginning construction, including work performed before the Council issued the site certificate, and shall state the cost of that work. For the purpose of this exhibit, “work on the site” means any work within a site or corridor, other than surveying, exploration or other activities to define or characterize the site or corridor. The certificate holder shall document the compliance plan and maintain it for inspection by the Department or the Council.
[Final Order on ASC, Condition VII.20]

ORAR 345-026-0080: The certificate holder shall report according to the following requirements:

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

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

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

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

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

(i) Facility Status: An overview of site conditions, the status of facilities under construction, and a summary of the operating experience of facilities that are in operation. In this section of the annual report, the certificate holder shall describe any unusual events, such as earthquakes, extraordinary windstorms, major accidents or the like that occurred during the year and that had a significant adverse impact on the facility.

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

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

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

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

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

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

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

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

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

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[Final Order on ASC, Condition VII.21; Amended in Final Order on AMD4]
<p>OAR 345-026-0105: The certificate holder and the Department of Energy shall exchange copies of all correspondence or summaries of correspondence related to compliance with statutes, rules and local ordinances on which the Council determined compliance, except for material withheld from public disclosure under state or federal law or under Council rules. The certificate holder may submit abstracts of reports in place of full reports; however, the certificate holder shall provide full copies of abstracted reports and any summarized correspondence at the request of the Department.</p> <p>[Final Order on ASC, Condition VII.22]</p>
<p>OAR 345-026-0170(1): The certificate holder shall notify the Department of Energy within 72 hours of any occurrence involving the facility if:</p> <ul style="list-style-type: none">a) There is an attempt by anyone to interfere with its safe operation;b) A natural event such as an earthquake, flood, tsunami or tornado, or a human-caused event such as a fire or explosion affects or threatens to affect the public health and safety or the environment; orc) There is any fatal injury at the facility. <p>[Final Order on ASC, Condition VII.23]</p>

ATTACHMENT B
AMENDED SITE CERTIFICATE (PLACEHOLDER-TO BE INCLUDED IN THE *FINAL ORDER ON*
***AMENDMENT 4*)**

ATTACHMENT C
DRAFT 2018 HABITAT MITIGATION AND REVEGETATION PLAN (INCLUDES RED-LINE AND
CLEAN VERSION)

Golden Hills Wind Project: Habitat Mitigation & Revegetation Plan

1.0 Introduction

~~BPAE Golden Hills Wind Farm, LLC (certificate holder) is proposing~~ received a Site Certificate from the Energy Facility Siting Council in 2009 authorizing the construction and operation ~~to construct~~ of a 400 megawatt (MW) wind ~~power project~~ energy generation facility in Sherman County, Oregon. The potential turbine strings are spread along ridgecrests located approximately 2.5 miles (mi.) northeast of the town of Wasco, Oregon. In addition to the turbine strings, additional facilities such as access roads, underground and overhead transmission lines, and a substation are being constructed to implement the project.

~~In the Energy Facility Application for a Site Certificate (Application) for the project, BPAE Golden Hills Wind Farm LLC agrees~~ to mitigate impacts associated with the temporary and temporal loss of habitat, and permanent habitat impacts ~~native shrub steppe habitats and Conservation Reserve Program (CRP) lands~~. The goal for temporarily disturbed habitat areas (such as road shoulders, underground electric cable trenches, and the temporarily disturbed area around tower sites) is to return the disturbed habitat to pre-construction (or better) conditions.

In addition to areas temporarily disturbed during facility construction ~~of the project~~, certain areas will be permanently affected by the placement of ~~project facilities~~ facility components for the life of the ~~project~~ facility. These permanently disturbed areas include the location of new or widened roads, the area under tower bases, and the substation area.

Construction of the facility would result in temporary impacts to Category 2, 3, 4 and 6 habitat; operation of the facility would result in permanent impacts to Category 3, 4 and 6 habitat. Based on the pre-construction estimates, As presented in Table 1, based on pre-construction estimates, approximately 2.9 acres of Category 2, 57.0 acres of Category 3, 6.5 acres of Category 4, and 1,000.2 acres of Category 6 habitat will be temporarily disturbed. Temporary impacts to Category 2, 3 and 4 habitat will require mitigation. As presented in Table 2, based on pre-construction estimates, approximately 0.91 acres of Category 2 habitat, 10.295.5 acres of Category 3, and 0.970.1 acres of Category 4, and 126.7 acres of Category 6 habitat will be permanently disturbed. Permanent impacts to Category 3 and 4 habitat and will require mitigation. Mitigation of temporary and permanent habitat impacts must comply with the Council's Fish and Wildlife Habitat standard (OAR 345-022-0060), which requires a demonstration of compliance with ODFW's OAR 635-415-0025 mitigation goals and policies.

Temporary impacts to Category 2 Shrub-steppe would result in a temporal loss of habitat. Temporal loss refers to loss of habitat function and values from the time an impact occurs to the time when the restored habitat provides a pre-impact level of habitat function. Habitat subtypes identified within the site boundary, based on pre-construction estimates, including Conservation Recovery Enhancement Program (CREP), Conservation Reserve Program (CRP) and Grassland, are reasonably expected to be restored within a shorter duration timeframe (i.e. 2-3 years) than Shrub-Steppe (5+ years) and therefore would not be expected to result in temporal loss requiring compensatory mitigation beyond the establishes revegetation requirements of this plan.

To address the temporal loss of habitat quality during the recovery of temporarily impacted Category 2 Shrub-steppe habitat quality during construction, and to satisfy ODFW’s Category 2 habitat mitigation goal of “no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity or quality,” the certificate holder agrees to enhance or create an additional 0.5 acres of Category 2 Shrub-steppe (representing 0.5:1 acre ratio) within a designated mitigation area. This is in addition to revegetation of the temporarily impacted area to pre-impact habitat quality and function. Temporary impacts to the remaining Category 2, 3 and 4 habitat subtypes including CREP, CRP and Grassland would be mitigated through required revegetation efforts, as described further in this plan. In the event that temporary impacts to CREP, CRP and Native Grassland habitat subtypes within Category 3 and 4 habitat are not restored within a short timeframe (i.e. 2-3 years) following completion of construction, the Department in consultation with ODFW may require compensatory mitigation.

To address the permanent loss of Category 3 and 4 habitat, and to satisfy ODFW’s Category 3 and 4 habitat mitigation goal of “no net loss of either habitat quality or quantity,” the certificate holder agrees to enhance or create 5.5 acres of Category 3 habitat and 0.1 acre of Category 4 habitat (representing a 1:1 acre ratio) within a designated mitigation area. Thus, 12.17 acres of Category 2, 3 or 4 habitat will be enhanced or created.

In practice this will result in a mitigation ratio slightly greater than 1:1 because expected impacts are less than the maximum possible impacts used in the pre-construction estimates.

Table 1: Summary of Estimated Temporary Wildlife Habitat Impacts

<u>Habitat Description</u>	<u>Temporary Impact (Acres)</u>	<u>Mitigation (Mitigation Area Ratio [Acres] or Revegetation)</u>	<u>Mitigation Area (Acres)</u>
<u>Category 2</u>			
<u>Conservation Reserve Enhancement Program (CREP)</u>	<u>2.0</u>	<u>Revegetation</u>	<u>0.0</u>
<u>Shrub-steppe (SS)</u>	<u>0.9</u>	<u>0.5:1</u>	<u>0.5</u>
<u>Category 2 Total =</u>	<u>2.9</u>		<u>0.5</u>
<u>Category 3</u>			
<u>Conservation Reserve Program (CRP)</u>	<u>17.2</u>	<u>Revegetation</u>	<u>0.0</u>
<u>Grassland</u>	<u>39.8</u>	<u>Revegetation</u>	<u>0.0</u>
<u>Category 3 Total =</u>	<u>57.0</u>		<u>0.0</u>
<u>Category 4</u>			
<u>Grassland</u>	<u>6.5</u>	<u>Revegetation</u>	<u>0.0</u>
<u>Category 4 Total =</u>	<u>6.5</u>		<u>0.0</u>
<u>Mitigation Area Required for Temporal Loss of Category 2 Habitat =</u>			<u>0.5</u>

Table 2: Summary of Estimated Permanent Wildlife Habitat Impacts

<u>Habitat Description</u>	<u>Permanent Impact (Acres)</u>	<u>Mitigation Area (Mitigation Area Ratio, Acres)</u>	<u>Mitigation Area (Acres)</u>
<u>Category 3</u>			
<u>CRP</u>	<u>1.3</u>	<u>1:1</u>	<u>1.3</u>
<u>Grassland</u>	<u>4.2</u>	<u>1:1</u>	<u>4.2</u>
<u>Category 3 Total =</u>	<u>5.5</u>		<u>5.5</u>
<u>Category 4</u>			
<u>Grassland</u>	<u>0.1</u>	<u>1:1</u>	<u>0.1</u>
<u>Category 4 Total =</u>	<u>0.1</u>		<u>0.1</u>
<u>Mitigation Area Required for Temporal Loss of Category 2 Habitat =</u>			<u>5.6</u>

Approximately 127 acres of cultivated agriculture land may be impacted by permanent facilities. Impacts to the agriculture land will be mitigated by:

- Developing a noxious weed control plan following guidelines based upon consultation with the Sherman County Soil and Water Conservation District and ODFW. The noxious weed control plan will be approved by ODOE and finalized prior to construction.
- The noxious weed control plan will be implemented utilizing Best Management Practices (BMPs) to minimize topsoil loss, and complying with an erosion and sedimentation control plan approved by DEQ as part of the NPDES program in areas adjacent to drainage features.
- Sherman County Soil and Water Conservation District will be consulted for proper procedures for restoring agricultural quality to its original condition.

To achieve these habitat mitigation objectives, this plan has been prepared to guide revegetation efforts **and enhancement efforts within the compensatory mitigation area**. Seed mixes, planting methods, and weed control techniques have been developed specifically for the project area through consultations with the affected agencies, reviews of current literature, and site visits by revegetation specialists. The plan also specifies monitoring procedures to evaluate the success of revegetation **and habitat mitigation area enhancement** efforts, ~~including recommended remediative action should initial revegetation efforts prove unsuccessful in some areas.~~

2.0 Project Facility Description

The Project facility is approved to ~~will~~ be located on private land in an unincorporated area of Sherman County. The Project facility will interconnect with the Bonneville Power Administration's (BPA) transmission system ~~at two locations; one~~ near Klondike Schoolhouse Substation (200 MW) ~~and one at John Day Substation (200 MW)~~. Transmission from the project facility substations to the interconnection points will involve one 84-mile long overhead transmission line ~~and one 11-mile long overhead transmission line~~.

~~Golden Hills wind power project~~ The facility will consist of a number of turbine strings, with up to ~~267-125~~ turbines. ~~Each turbine will likely either be a 1.65 MW or 2.5 MW capacity turbine.~~ Hub height of the turbines will be up to approximately ~~80-95 m (312 feet)~~ tall with a rotor diameter ~~of either 82 up to 126 m (1.65 MW 413 feet), and the total maximum turbine height measuring up to 158 m (518 feet) or 96 m (2.5 MW)~~. Up to six permanent meteorological towers will be built. The turbines will be linked by access roads and a 34.5-kV transmission line. The approximately 6255- mile long power collection system will be largely underground, but might be overhead in some locations.

~~Two project~~ One substations is approved for construction and operation ~~may be built~~. In addition, an operations and maintenance (O&M) facility (including a shop), a control room, a maintenance yard, a kitchen, an office, a washroom, and other provisions typical of this type of facility, will be built.

This project facility will convert approximately ~~141-132~~ total acres to permanent structures and roads. Other facilities which will permanently disturb habitat include turnaround areas, substation sites, and transmission line pole bases. Less than 510% of the permanent habitat impacts will occur to CRP grassland; and native grassland ~~and shrub steppe~~ habitats; the remainder of the impact will occur on cultivated land.

It will also be necessary to temporarily disturb additional areas during construction of the project facility. Laydown areas and equipment work areas at the tower sites will be needed to construct the turbines. Construction of access roads will also require the temporary disturbance of habitat in addition to permanent disturbance of the roadbed. Construction of powerlines, both above and below ground, will also temporarily impact habitat. For the underground lines, temporary impacts are similar to pipeline installation, while for the overhead lines, disturbance is primarily limited to the tower bases. Additionally, miscellaneous facilities such as staging areas, parking lots, and turnouts will be constructed on a temporary basis. In total, it is estimated that ~~1074.5~~ 1,069 acres will be temporarily disturbed during construction; ~~746.2~~ 943 acres of that area will be on land used for agriculture, which is considered Category 6 habitat by ODFW.

3.0 Site Setting

3.1 Physiography, Geology, and Soils

The turbine string sites are located on ridgetops that run along northeast-southwest lines, as well as on flat terrain. Topography within the facility area site boundary is characterized by gently rolling hills with slopes from 0° to 70°. Steeper topography is associated with the Grass Valley Canyon and associated side drainages. Elevations of the turbines strings ranges from 1,066 ft. to 2,201 ft (325 m to 671 m) above mean sea level. Soils within the project area site boundary are primarily deep, well-drained loams, and are used to cultivate small grains and hay or for livestock grazing (Macdonald et al. 1999).

3.2 Climate

Sherman County averages 11.11 inches (in.) of precipitation annually, most of which falls from October through March. Average winter snowfall is 18.9 in. The average air temperature in winter is 32.9° F and the average summer temperature is 65.4° F (Macdonald et al. 1999).

3.3 Landcover/General Vegetation

Land coverages in the project facility area consist primarily of cultivated agriculture (dryland wheat; 83%), followed by shrub-steppe/grassland (10%) and Conservation Reserve Program (CRP) grassland (4%), with less than 2% each of developed, riparian tree, riparian-intermittent stream (IS), upland tree, and Conservation Reserve Enhancement Program (CREP) habitats.

Vegetation communities in the project facility vicinity are primarily bunchgrass and shrub-steppe associations including some historic climax communities. Grasses include: bluebunch wheatgrass (*Pseudoroegneria spicata* ssp. *spicata*), Idaho fescue (*Festuca idahoensis*), and Sandberg bluegrass (*Poa secunda*). Forbs representative of these communities include arrowleaf balsamroot (*Balsamorhiza sagittata*), milkvetch (*Astragalus* sp.), lomatium (*Lomatium dissectum*), common yarrow (*Achillea millefolium*), lupine (*Lupinus* sp.), phlox (*Phlox* sp.), and pussytoes (*Antennaria* sp.). Shrub species include gray rabbitbrush (*Ericameria nauseosa*), Greene's rabbitbrush (*Ericameria greenei*), and basin big sagebrush (*Artemisia tridentata* ssp. *tridentata*). In heavily disturbed areas, the following weedy and noxious species occur: cereal rye (*Secale cereale*), cheat grass (*Bromus tectorum*), Russian thistle (*Salsola kali*), tumbled mustard (*Thelypodopsis* sp.), China lettuce (*Lactuca serriola*), prostrate knotweed (*Polygonum aviculare*), and knapweed (*Centaurea* sp.) Much of the area has been cultivated with monoculture crops of wheat and other small grains.

3.4 Land Use

The project area site boundary is located on privately-owned land. As mentioned above, much of the area is used for agricultural activities and cattle grazing. The cultivated land is used for production of small grain crops, primarily dry-land wheat and barley. The grazed land is either native shrub-steppe or land previously set aside in the federal Conservation Reserve Program.

3.4 Environmental Conditions

A variety of environmental conditions within the ~~project area~~region and facility area make the establishment of desirable plant species difficult. Low precipitation and sandy soils provide very little available moisture for germinating seeds. In addition, extensive past and present disturbance to the vegetative communities has created many areas dominated by non- native, weedy species. These species could spread to areas disturbed by construction activities and compete with planted species for the limited resources. Finally, high winds in the area further complicate efforts to establish desirable vegetation.

~~3.5 Pre-Construction Inventory~~

~~The site certificate authorizes construction on corridors rather than specific turbine locations. The precise impact of construction, therefore, depends on the final project design. Therefore, prior to disturbing any area, GHWF will conduct an impact inventory, to be conducted by a qualified biologist. The pre-construction inventory will include:~~

- ~~• The ODFW habitat category for the area disturbed,~~
- ~~• The number of acres impacted,~~
- ~~• Photos representing the habitat,~~
- ~~• An assessment of dominant plant species, and~~
- ~~• The percentage of vegetative ground cover~~

4.0 Revegetation Procedures (Temporarily Disturbed Areas)

The following methods and protocol are to be ~~used~~followed for all areas of temporary ground and/or vegetation disturbance in the upland habitats throughout the ~~project area~~site boundary. Because no disturbance to wetland habitats is expected, no wetland revegetation methods have been specified.

4.1 Pre-Disturbance Wildlife Habitat Vegetation Inventory

The site certificate for the facility requires restoration of disturbed areas to satisfy the requirements of the Fish and Wildlife Habitat standard (OAR 345-022-0060), which aligns with the mitigation goals and policies within the ODFW Fish and Wildlife Habitat Mitigation Policy (OAR 635 Division 415). In order to meet the ‘no net loss of habitat quality’ goal of the mitigation policy, the certificate holder shall revegetate disturbed areas according to a set of agreed-upon success criteria that return the site to pre-disturbance condition. The evaluation of pre-disturbance conditions and achievement of success criteria is based upon evaluation of the revegetated area conditions. Revegetation success is measured at approved, fixed-point monitoring sites within the disturbed area and compared to habitat conditions of approved, fixed-point reference sites. Reference sites are used, which serve as a proxy for pre-disturbance condition while accounting for change outside the control of the certificate holder such as . It is important to note, however, that habitat conditions at reference sites may fluctuate over time depending on climatic variability and landscape-scale shifts in plant communities. The site certificate for the facility requires restoration of disturbed areas to satisfy the requirements of the Fish and Wildlife Habitat standard (OAR 345-022-0060).

Prior to facility construction, the certificate holder shall identify reference and monitoring sites in consultation with ODFW and the Department. One or more rReference sites should be

identified that closely resemble the pre-disturbance characteristics of the revegetation area monitoring site as indicated by site conditions, including vegetation density, relative proportion of desirable vegetation and species diversity of desirable vegetation. “Desirable vegetation” means those species included in the seed mix or native or native-like species, excluding noxious weeds. The certificate holder shall consider land use patterns, soil type, local terrain and noxious weed densities in selecting monitoring and reference sites.

It is likely that different reference sites will be needed to represent different pre-disturbance habitat conditions of the disturbed area monitoring sites. Once monitoring and reference sites are selected by the certificate holder and approved by the Department and ODFW, the monitoring and reference sites shall remain in the same location unless approval for use of a differing reference site is obtained by the Department and ODFW.

Pre-disturbance wildlife habitat conditions of the reference and monitoring sites shall be determined based on a pre-construction vegetation inventory, to be conducted by a qualified biologist. The pre-construction wildlife habitat vegetation inventory shall include:

- The ODFW habitat category for the area disturbed (Consistent with the evaluation approved per Condition III.C.1)
- Photos representing the habitat,
- Vegetation density (percent cover, percent bare ground, percent cover by plant species-
composition)
- Vegetation Sstructural stage, slope, soil type
- An assessment of the relative proportion of desirable vegetation as determined by the average number of stems of desirable vegetation per square foot or by a visual scan of the area, noting overall recovery status.¹
- As assessment of species diversity of desirable vegetation.

The pre-disturbance vegetation inventory shall be submitted for review and approval by the Department, in consultation with ODFW prior to the agency consultation described in Section 4.2 of this plan.

4.2 Pre-Revegetation Agency Consultation and Revegetation Methods

Prior to construction, the certificate holder shall consult with ODFW, ODOE and Sherman County Weed Control Authority to discuss the pre-disturbance vegetation inventory including habitat category and habitat subtype conditions, monitoring and reference site locations and conditions, revegetation methods, erosion and sediment control measures, and implementation schedule.

During construction, the certificate holder will implement site stabilization measures, including seeding of temporarily disturbed areas according to its National Pollutant Discharge Elimination System (NPDES) 1200-C general construction permit. Six months prior to commercial operation, the certificate holder will meet with ODFW, ODOE, and Sherman County Weed Control Authority to review the actual extent and conditions of temporarily disturbed areas, confirm the revegetation methods agreed to during pre-construction review are

¹ Desirable vegetation is defined as native plant species and non-native plant species not occurring on state or county noxious weed lists.

still appropriate, and to re-visit reference and monitoring sites.

4.2 Seed Mixture (Temporarily Disturbed Non-Agricultural Upland Areas)

As noted in section 2.0 above, the ~~project facility~~ is expected to result in temporary disturbance to approximately ~~279-67~~ acres of non-agricultural land, subject to verification as part of the preconstruction ~~inventory~~ habitat impact assessment required per Condition III.C.1. GHWF-The certificate holder will reseed this area after construction. One seed mixture was developed for use in revegetating all temporarily disturbed upland habitats within the ~~project area~~ site boundary (Table ~~34~~). This seed mixture will be used, unless an alternative mixture is requested by a landowner, or agency biologist. ~~The~~ The certificate holder will submit a request for approval from the Department, in consultation with ODFW, ~~will need to approve the for any~~ alternative mixture. To re-establish plant communities of most value to wildlife, native species are included in the seed mixture, as well as certain non-native species that ODFW has determined to be beneficial to wildlife. Species were selected based on a variety of factors including tolerance to xeric conditions and seed availability.

4.3 Seed Planting Methods

During the first five years following facility construction, pPlanting should be done within disturbed areas annually, or as needed, in March-April (for disturbance that occurs during the winter and spring), and/or in October-November (for disturbance that occurs in the summer and fall). Disturbed, unseeded ground may require annual chemical or mechanical weed control in May or June, before weeds have a chance to go to seed.

In general, a weed-free seedbed should be prepared using conventional tillage equipment. Herbicide should be sprayed to control weedy and/or noxious species, following Oregon's buffer requirements for pesticide use (e.g., 300 feet from water sources). Summer fallowing may be required.

During the first five years following facility construction, aAreas to be seeded should be disked twice in early spring and spot-sprayed on the ground with an herbicide annually or as needed based on the preceding year's seed planting activities. This area should then be harrowed prior to seeding, ideally by the beginning of April. A conventional seed drill shall be used, except in areas where a rangeland drill is deemed more applicable, with a spacing less than 12 inches and at a depth of 1/8-1/4 inch. The prescribed seed mixture (Table ~~43~~) should be drilled at a rate of 12 pounds of pure live seed (PLS) per acre. If fallowing the area is to be used to increase soil moisture content, then the same procedure should be followed, but without seeding. If bare, disturbed soil is not seeded immediately, it will be protected from erosion. Seeding would then occur the following spring.

Completion of seed planting in accordance with the above-described methods should be included in the Revegetation Records as described in Section 4.5 of this plan.

4.4 Restoration of Cropland

~~GHWF The certificate holder shall seed disturbed cropland areas with wheat or other cropseed.~~
GHWF-The certificate holder shall consult with the landowner and farm operator to determine appropriate reseeding on disturbed cropland, including species composition, seed and fertilizer

application rates and application methods.

~~Cropland areas are successfully revegetated when the replanted areas achieve crop production comparable to adjacent non-disturbed cultivated areas. GHWF shall consult with the landowner or farmer to determine whether these areas have been successfully revegetated and shall report to the Department on the success of revegetation in these areas.~~

4.5 Revegetation Records

~~GHWF~~ The certificate holder shall maintain a record of revegetation ~~work for both cropland and wildlife habitat areas~~ activities. In the record, ~~GHWF~~ the certificate holder shall include the date that construction activity was completed in the area to be restored, a description of the affected area (location, acres affected and pre-disturbances condition) and supporting figures representing the revegetated area, the date that revegetation work began and a description of the work done within the affected area. ~~GHWF~~ The certificate holder shall update the revegetation records ~~from time to time~~ as revegetation work occurs. ~~GHWF~~ The certificate holder shall report revegetation activities to the Department every-six months for the first 5-years after the completion of facility construction. After five years, any revegetation actions will be described in the annual report per OAR 345-026-0080(e).

4.6 Monitoring Procedures (Temporarily Disturbed Habitats)

~~The pre-construction inventory (section 3.6) will be repeated post-construction in the areas temporarily disturbed by construction activity to determine the success of the restoration.~~

Following completion of construction, the certificate holder will submit its vegetation monitoring methodology to ODFW and the Department for approval prior to monitoring. Within each revegetation area monitoring site, the investigator shall evaluate the progress of wildlife habitat recovery in comparison to the reference sites. The investigator shall evaluate the following site conditions (within the general revegetation area, revegetation monitoring sites, and within the reference sites):

- Degree of erosion due to disturbance activities (high, moderate or low).
- Vegetation density.
- Relative proportion of desirable vegetation as determined by the average number of stems of desirable vegetation per square foot or by a visual scan of the area, noting overall recovery status.²
- Species diversity of desirable vegetation.

~~Following the initial year of seeding, monitoring these visits will occur annually for the first five years, after the first growing season (year 1), then at year 3 and year 5. After the first growing season following initial seeding (Year 1), a qualified investigator shall inspect all areas of~~
revegetation, including each revegetation area monitoring site, to assess revegetation success based on the success criteria and to recommend remedial actions, if needed.

During the initial 5-years of annual monitoring, the certificate holder's qualified investigator (ecologist or botanist) shall evaluate whether a revegetated wildlife habitat area is trending toward meeting the success criteria by comparing the approved, fixed-point revegetation area monitoring site to an approved, fixed-point reference site. The certificate holder's qualified investigator shall compare the revegetation area monitoring sites to the selected reference sites, unless some event (such as wildfire, tilling, or intensive livestock grazing) has changed the vegetation conditions of a reference site so that it no longer represents undisturbed conditions of the revegetation area monitoring site. If such events have eliminated all suitable reference sites for a revegetation area monitoring site, the investigator, in consultation with the Department and ODFW, shall select one or more new reference sites. Following the selection of a new reference site, an updated table and latitude/longitudinal data shall be provided to the Department within a 6-month revegetation record report or annual compliance report, whichever report is submitted first.

The certificate holder shall submit, electronically, to the Department and ODFW the investigator revegetation inspection report in a semi-annual report. The report shall include the investigator's assessment of whether the revegetated area monitoring sites are trending toward meeting the success criteria; whether the monitoring sites adequately represent revegetation success of equivalent habitat/habitat subtype of non-monitoring site revegetated areas; assessment of factors impacting the ability of the revegetated area monitoring sites to trend towards meeting the success criteria; description of appropriate weed control measures as recommended by the Department in

² Desirable vegetation is defined as native plant species and non-native plant species not occurring on state or county noxious weed lists.

consultation with ODFW and Sherman County Weed Control Authority; and, any remedial actions recommended.

If an area is not trending toward meeting the success criteria at Year 5 and has not been converted by the landowner to an inconsistent use, the certificate holder may propose and the Department may require remedial action and additional monitoring based on an evaluation of site capability. As an alternative, the certificate holder or the Department, in consultation with ODFW, may conclude that revegetation of the area was unsuccessful and propose appropriate mitigation for the permanent loss of habitat quality and quantity. The certificate holder shall implement the remedial action plan, subject to the approval of the Department in consultation with ODFW.

~~After year 5, an annual noxious weed assessment will be conducted on the site. The assessment will be made in May or June, when the largest number of weeds would be evident. If weeds are found, GHWF will make reasonable efforts to eradicate them. Care will be taken to survey areas in all the major habitat types and throughout the geographic extent of the revegetated areas. Each inventory will include:~~

- ~~— the ODFW habitat category for the area disturbed;~~
- ~~— the number of acres impacted;~~
- ~~— photos representing the habitat;~~
- ~~— an assessment of noxious weeds;~~
- ~~— an assessment of dominant plant species; and~~
- ~~— the percentage of vegetative ground cover~~

4.7 Success Criteria

In each monitoring report to the Department, the certificate holder shall provide an assessment of revegetation success for all previously-disturbed wildlife habitat areas. While the monitoring report shall evaluate whether all previously-disturbed wildlife habitat areas are trending towards revegetation success, the success criteria are evaluated based on the revegetation success of the approved revegetated monitoring sites compared to the approved, reference sites. A wildlife habitat area is successfully revegetated when ~~its~~the habitat quality is equal to, or better than, the habitat quality of the pre-construction ODFW habitat category of the ~~disturbed area~~reference sites as follows:-

- Vegetation density is equal to or greater than that of the reference site.
- Relative proportion of desirable vegetation is equal to or greater than that of the reference site.
- Species diversity of desirable vegetation is equal to or greater than that of the reference site

When the Department, in consultation with ODFW, finds that the conditions of ~~a~~the wildlife habitat area revegetation monitoring sites ~~satisfy~~yes the criteria for revegetation success, the Department shall conclude that the certificate holder has met the restoration obligations for that area. If the Department finds that the landowner has converted a temporarily disturbed wildlife habitat area to a use that is inconsistent with these success criteria, prior to the area achieving success criteria, the Department shall conclude that the certificate holder has no further obligation to restore the area for wildlife habitat uses and that the area shall be considered permanently disturbed. However, the certificate holder shall be responsible for meeting the obligations of the

Council's Fish and Wildlife Habitat standard, including providing compensatory mitigation for these areas. Mitigation shall be determined by the Department, in consultation with ODFW.

5.0 Habitat Improvement Procedures (Mitigation Area)

5.1 Introduction

To mitigate for temporal and permanent loss of habitat due to placement of facilities (e.g., turbines, access roads), ~~BPAE the certificate holder has agreed~~ is required to rehabilitate habitat on a 0.5:1 acre ratio for temporary impacts to Category 2 Shrub-steppe and 1:1 acre ratio for Category 3 and 4 habitat like number of acres, of equivalent habitat quality, located in the vicinity of the project facility. The total amount of grassland and shrub-steppe land (including CRP) estimated to be temporally and permanently disturbed by the project facility, and for which compensatory mitigation is proposed ~~is proposed for permanent impacts~~ is 12.176.1 acres.

However, final impact areas will be calculated based on the pre-construction inventory habitat assessment described in Section 3.6 as required per Condition III.C.1. ~~In addition, BPAE has also agreed to mitigate for indirect loss of habitat of an additional 10.45 acres of grassland/shrub-steppe habitat due to potential indirect impacts to grassland birds caused by operation of the wind project. Indirect impacts were calculated based on ODOE ratios used in previous site certificates (see attached spreadsheet). See Appendix A for a description of the habitat mitigation area.~~ One parcel of land of similar size (approximately 22 acres) will be selected from the mitigation area for habitat enhancement based on a number of factors including:

- cost-effectiveness for quality implementation, management, and monitoring
- likelihood of successful enhancement benefiting wildlife
- willingness of landowner to participate in mitigation approach/activities

5.2 Pre-Management Inventory

Prior to any management implementation (e.g., removal of grazing), ~~GHWF the certificate holder~~ will conduct a habitat inventory of the mitigation parcel, to be conducted by a qualified botanist or revegetation specialist. This person will examine a representative cross-section of plots within the mitigation parcel. The mitigation area habitat assessment will include an analysis and supporting figures, including the following:

- ODFW habitat categories for the entire site,
- Photos representing the habitat at each plot,
- As assessment of dominant plant species at each plot
- The percentage of vegetative ground cover at each plot
- Previously recorded wildfires within the mitigation area and remedial action taken on the entire site,
- An assessment of the presence of invasive weeds on the entire site,
- An assessment of special status plants and animals within the mitigation area, based on literature review and any recorded observations

In addition, the certificate holder's qualified biologist shall conduct an avian survey, based upon

survey protocol approved by the Department, in consultation with ODFW. The habitat assessment and avian survey results for the mitigation area shall be submitted for review and approval by the Department, in consultation with ODFW, prior to commencing management activities.-

5.3 Mitigation Area Management Actions

The management actions described in Section 5.3 shall be monitored by the certificate holder's qualified biologist. These visits will occur yearly for the first five years. If, after five years, the Department in consultation with ODFW determines that the success criteria identified in Section 5.5. have been achieved for the mitigation area, monitoring of management actions shall occur, and then take place every five years for the life of the project facility; otherwise, annual monitoring shall continue until the Department, in consultation with ODFW, confirms that the success criteria has been achieved. Monitoring will include an evaluation by a qualified biologist. Care will be taken to survey areas in all the major habitat types and throughout the geographic extent of the revegetated parcel. Ten plots will be established within the mitigation site. At each plot or for the entire site, the investigator shall evaluate of the following parameters:

- The ODFW habitat categories for the entire site,
- Photos representing the habitat at each plot,
- As assessment of dominant plant species at each plot (~~Year 1, Year 5~~)
- The percentage of vegetative ground cover at each plot (~~Year 1, Year 5~~)
- Record any wildfires within the mitigation area and remedial action taken on the entire site,
- An assessment of the presence of invasive weeds on the entire site
- Conduct avian surveys within mitigation area with one station set up at each plot, and
- Record observations of special status plants and animals within the mitigation area

The certificate holder shall submit the monitoring reports with the annual report required per OAR 345-026-0080(e).

5.3.1 Habitat Improvement Procedures

~~Once the habitat improvement parcel has been designated, the following measures will be implemented within its boundary. Ultimate responsibility for implementation and maintenance of these mitigation measures will be the responsibility of BP&E, although other parties may be subcontracted to carry out the procedures.~~

5.3.2 5.3.1 Fencing and Grazing

The parcel will be fenced prior to treatment to exclude cattle and other domestic ungulates. It is expected that regular maintenance will be required to keep the fences functioning. Gates will be installed at regular intervals along the perimeter.

~~GHWF~~ The certificate holder shall prohibit grazing within the habitat mitigation area. Eliminating livestock grazing within the mitigation area will facilitate recovery of native bunchgrass and sagebrush in areas where past grazing has occurred, potentially resulting in better vegetative structure and complexity for a variety of wildlife.

5.3.2 Site Preparation and Planting Methods

Methods and seed mixtures used for revegetation of mitigation areas will follow those described above for temporarily disturbed areas. The mitigation site has been planted in grasses, therefore the site shall be planted and seeded using the same planting and seeding methods described for disturbed sites at sections 4.2~~1~~ and 4.3~~2~~ above. Ground cover canopy and height will be enhanced by the grazing exclusion.

In addition to the plantings described above, the certificate holder shall install a wildlife watering guzzler per ODFW specifications.

5.3.3 Maintenance

Because these improvements are mitigation for permanent and temporal habitat loss, it is necessary to maintain the fences and seedings over the life of the project facility (currently anticipated to be 30 years). This may include such maintenance activities as fence repair, periodic chemical or mechanical weed control, monitoring of improvement success, and re-seeding (in areas where native species establishment falls below the percentages specified in the success criteria described below).

5.3.4 Fire Control

~~GHWF~~ The certificate holder shall implement a fire control plan for wildfire suppression within the mitigation area. ~~GHWF~~ The certificate holder shall provide a copy of the fire control plan to the Department before starting habitat enhancement actions. ~~GHWF~~ The certificate holder shall include in the plan appropriate fire prevention measures, methods to detect fires that occur and a protocol for fire response and suppression. ~~GHWF~~ The certificate holder shall maintain fire control for the life of the facility.

~~5.4 Post-Management Monitoring Procedures~~

~~A qualified botanist or revegetation specialist will re-examine the mitigation parcel and compare the conditions of the site relative to the pre-management period (see section 5.2). A visit to the site will occur yearly to assess the presence of noxious weeds, and record any wildfires within the mitigation area. If noxious weeds are found, GHWF will make reasonable efforts to eradicate them. In addition, focused monitoring will be conducted on a periodic basis to determine the success of the management measures to improve habitat. The investigator shall evaluate the following parameters:~~

~~The ODFW habitat categories mapped and area calculated for the entire mitigation site (Year 1, 5, and every five years for life of project),~~

- ~~• Photos representing the habitat at each selected plot (Year 1, 5, and every five years for life of project);~~
- ~~• An assessment of dominant plant species at each plot (Year 1, 5, and every five years for life of project)~~
- ~~• The percentage of vegetative ground cover at each plot (Year 1, 5, and every five years for life of project)~~
- ~~• Record any wildfires within the mitigation area and remedial action taken (Annual for life of project);~~

- ~~An assessment of the presence of invasive weeds on the site (Annual for life of project)~~
- ~~Assess success of weed control program and recommend remedial actions if needed (Annual for life of project);~~
- ~~Conduct avian surveys within mitigation area in spring (Year 5, 10, 15, 20), and~~
- ~~Record observations of special status plants and animals within the mitigation area when on-site~~

~~GHWF shall submit the monitoring reports with the annual report required by the site certificate.~~

5.5.4 Success Criteria

Mitigation of the permanent and temporal habitat impacts of the facility may be considered successful if the certificate holder protects and enhances sufficient habitat within the mitigation area to meet the ODFW goals of no net loss of habitat in Categories 2, 3 and 4 and a net benefit in habitat quantity or quality for impacts to habitat in Categories 2 ~~and 5~~. The certificate holder must protect the quantity and quality of habitat within the mitigation area for the life of the facility.

The certificate holder shall determine the actual mitigation area requirements, subject to Department approval, before beginning construction of the GHWF facility. If the land selected for the mitigation area does not already contain sufficient habitat in each category to meet these requirements, then the certificate holder must demonstrate improvement of habitat quality sufficient to change lower-value habitat to a higher value (for example, to convert Category 3 habitat to Category 2). The certificate holder may demonstrate improvement of habitat quality based on evidence of indicators such as increased avian use by a diversity of species, more abundant seed production of desirable native bunchgrass, natural recruitment of sagebrush and successful weed control. If the certificate holder cannot demonstrate that the habitat mitigation area is trending toward the habitat quality goals described above within three years, the certificate holder shall investigate the cause of the failure and report the results of the investigation to ODOE within ~~six months after the end of the third year of operation~~ in the monitoring report submitted in the annual report. If the investigation shows that the site is unlikely to reach the required habitat quality, then the certificate holder shall propose an alternate site for Department approval in time for the next planting season. If the investigation shows that the cause of the failure was inadequate implementation of the habitat improvement procedures, then the certificate holder shall repeat those procedures and begin post implementation monitoring as before.

After the Department, in consultation with ODFW, has confirmed that the habitat quantity goals have been achieved ~~certificate holder has demonstrated that the habitat quantity goals have been achieved,~~ the certificate holder's qualified biologist ~~investigator~~ shall verify, during subsequent monitoring visits, that the mitigation area continues to meet the ODFW's "no net loss" and "net benefit" goals described above. The investigator ~~certificate holder's qualified biologist~~ shall recommend remedial action if the habitat quality within the mitigation area falls below the habitat quantity goals listed above. The Department may require other corrective measures and additional monitoring as necessary to ensure that the habitat quantity goals are achieved and maintained.

6.0 Amendment of the Plan

This Habitat Mitigation and Revegetation Plan may be amended from time to time by agreement of the certificate holder and the Council ~~Department~~. Such amendments may be made without amendment of the site certificate. The Council authorizes the Office of Energy ~~Department~~ to agree to amendments to

| this plan. The ~~Office of Energy~~Department shall notify the Council of all amendments, and the Council
| retains the authority to approve, reject or modify any amendment of this plan agreed to by the
~~Office~~Department.

7.0 References

Macdonald, Gerald D., James M. Lamkin, and Roger H. Borine. 1999. Soil Survey of Sherman County, Oregon. Natural Resources Conservation Service, U.S. Department of Agriculture.

Table 3+. Seed mixture and rate (Pure Live Seed, PLS, lbs/acre) to be used for revegetation of temporarily disturbed areas.

Common Name	Scientific Name	Pounds (PLS)/ Acre
Luna pubescent wheatgrass *	<i>Thinopyrum intermedium</i>	1
Sherman big bluegrass	<i>Poa ampla</i>	1
Magnar basin wildrye	<i>Leymus cinereus</i>	1
Whitmar beardless wheatgrass	<i>Pseudoroegneria spicata</i> ssp. <i>inermis</i>	2
Small burnett *	<i>Sanguisorba minor</i>	0.5
Alfalfa*	<i>Medicago sativa</i>	1.5
Sandberg bluegrass	<i>Poa secunda</i>	2
Idaho fescue	<i>Festuca idahoensis</i>	2
Basin big sagebrush	<i>Artemisia tridentata</i> ssp. <i>Tridentate</i>	1
TOTAL		12

* non-native species determined by ODFW to be beneficial to wildlife

APPENDIX A
HABITAT MITIGATION PROJECT

GOLDEN HILLS HABITAT MITIGATION PROJECT

OFF-SITE UPLAND GRASSLAND SHRUB-STEPPE ENHANCEMENT JOHN DAY RIVER BASIN

SITE DESCRIPTION AND PROPOSED MITIGATION MANAGEMENT

John Day River Rim – Upland Grassland Shrub-steppe Enhancement

Current Condition

The mitigation area is located “off-site” approximately 5 miles southeast of the Golden Hills Wind Farm layout (Figure 1). The enhancement area is within approximately 330 acres of fenced rangeland, with large tracts of CRP located immediately to the north and south, and BLM land to the east. The entire property has been extensively grazed historically and recently by livestock, yet harbors mature big sagebrush on the hillside slopes and interior drainage. The site is at the uppermost region of the Willow Springs Canyon tributary of the John Day River, approximately two miles up-drainage of the river (Figure 1). The area selected for enhancement is approximately 21.9 acres within a 40 acre deep-soil parcel (Figure 2). The 21.9 acre enhancement area may be reduced or increased based upon finalized calculations for habitat impacts from the Golden Hills Wind Facility layout. This mitigation parcel includes an upland 1 to 7 degree slope deep-soil area classified by USDA NRCS as 1B Anderly silt loam (1-30 inch typical depth profile; Figure 3). This soil type is considered prime farmland if irrigated. The area has historically been cultivated and seeded to provide better forage for cattle, although currently non-native undesirable cheatgrass dominates the area (see Appendix A photos). Horizontal and vertical vegetative structure, especially of native grasses and forbs, is largely depleted due to livestock grazing impacts (Appendix A). The enhancement area is adjacent to CRP to the west/southwest and BLM to the north, east, and southeast. Areas on all sides of the previously cultivated area have stands of blue bunch wheatgrass, with a variety of forbs including balsamroot, big sagebrush, rigid sagebrush, phlox species, pussy toes, lupine, daisy fleabane, yarrow, and green rabbitbrush (Appendix A).

Potential for Wildlife Habitat Enhancement

This site has the potential to provide more diverse grassland in greater quantity with greater horizontal and vertical structure. If enhanced, the parcel would provide better nesting habitat for grassland bird species, including loggerhead shrikes, and also provide higher quality forage and cover for big game. Limited big game forage such as sandberg bluegrass, bluebunch wheatgrass, and various forbs, would be enhanced with livestock exclusion providing better fall, winter, and early spring rangeland for big game. Summer habitat for ground-nesting birds would also be

enhanced. Enhancement would also likely provide better hunting grounds for raptors as well. Due to the elevational gradient and mixed soil depths, the site has the potential to provide several different quality ecotones.

Proposed Management for Enhancement

Eradication or control of non-desirable invasive/noxious species would be conducted by either using small controlled prescribed burns or spot spraying with herbicide. The area would be reclaimed for desirable grassland/shrub-steppe wildlife habitat using the revegetation methods described in section 4.0 of the Golden Hills Wind Farm revegetation plan for temporarily disturbed upland non-agriculture lands. The entire mitigation parcel would be fenced off and not grazed by domestic livestock. Given the selected mitigation parcel is currently heavily grazed and predominantly cheatgrass, there exists a high potential for successful reclamation of high quality wildlife habitat. In addition, a water catchment (“guzzler”) would be installed providing a water source for wildlife. Prior to any land management change, the ecological condition of the site should be assessed using Oregon protocols for rangeland inventory and evaluation (USDA 2004). This assessment would include photo documentation of the site with additional notes regarding wildlife habitat condition. Post-management site assessment, for example every 5 years, should also be agreed upon by ODFW allowing adaptive management needs.

Advantages

This site lacks public road access and is remote and infrequently disturbed by humans, used largely for hunting by landowner only. The site is approximately 5 miles from the proposed Golden Hills Wind Farm (Figure 1). The landowner has expressed willingness to enter into at least a 25 year conservation easement agreement for the site. The enhancement parcel has suitable soils for successful seeding and is surrounded by existing stands of grassland/shrub- steppe. The area is adjacent to a watershed with riparian habitat to the north, and cliff and riparian corridor habitat of the John Day River to the east; enhancing landscape-level wildlife forage, thermal and security cover, and water. This location presents the opportunity to enhance grassland/shrub-steppe quality and quantity that is limited in availability for wildlife. Successful enhancement would provide greater connectivity between adjacent large tracts of CRP and BLM lands, creating a larger overall mosaic of quality wildlife habitat.

Reference

USDA. 2004. National Range and Pasture Handbook: Amendment 2 600.0401a; Oregon Protocols for Rangeland and Pature / Hayland Inventory and Evaluation. United States Department of Agriculture, Natural Resources Conservation Service, Grazing Lands Technology Institute.

Figure 1. Miller property with mitigation area in relation to the Golden Hills Wind Farm location.

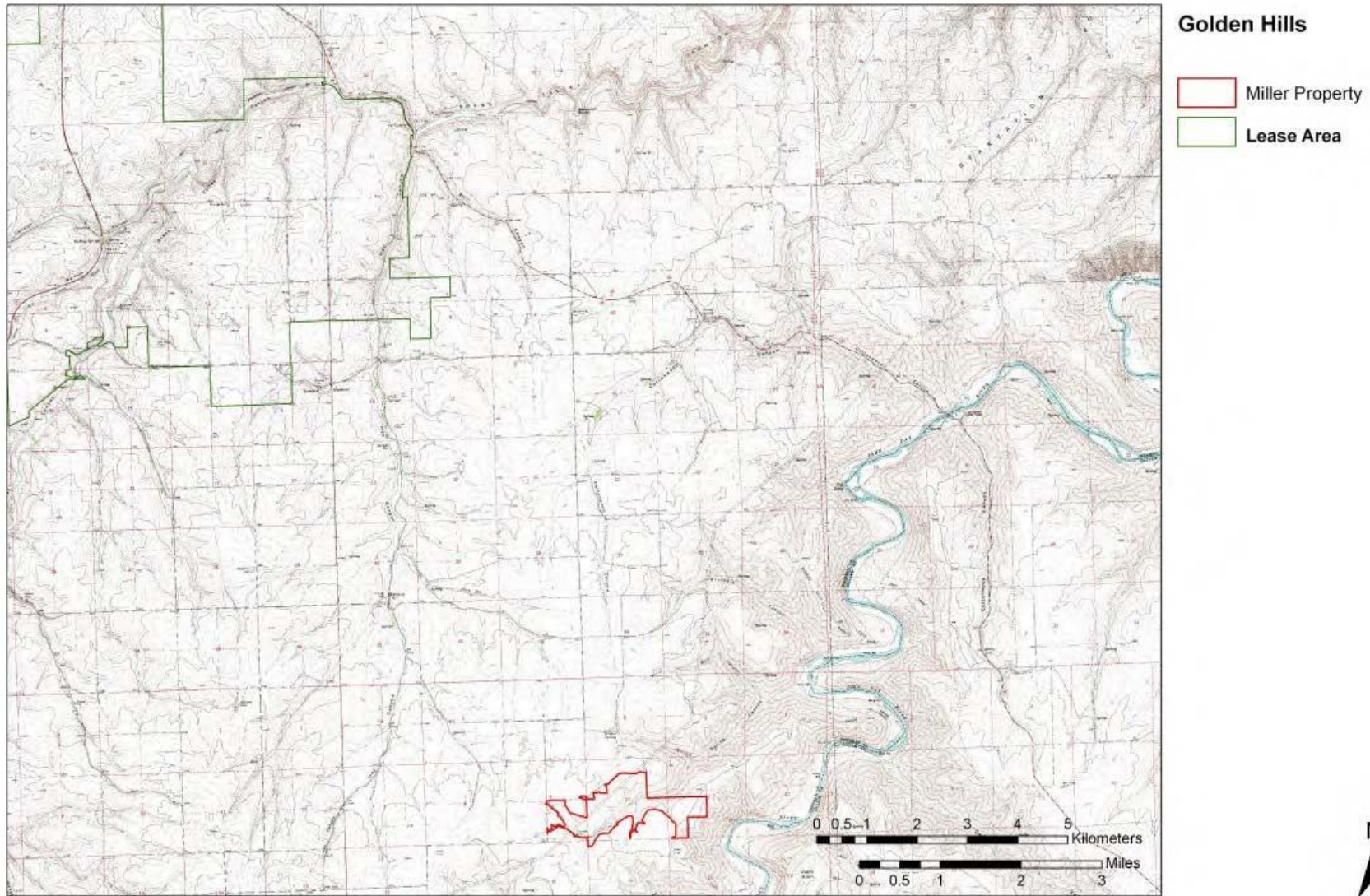


Figure 2. Upland mitigation enhancement parcel within the Miller property rangeland area.

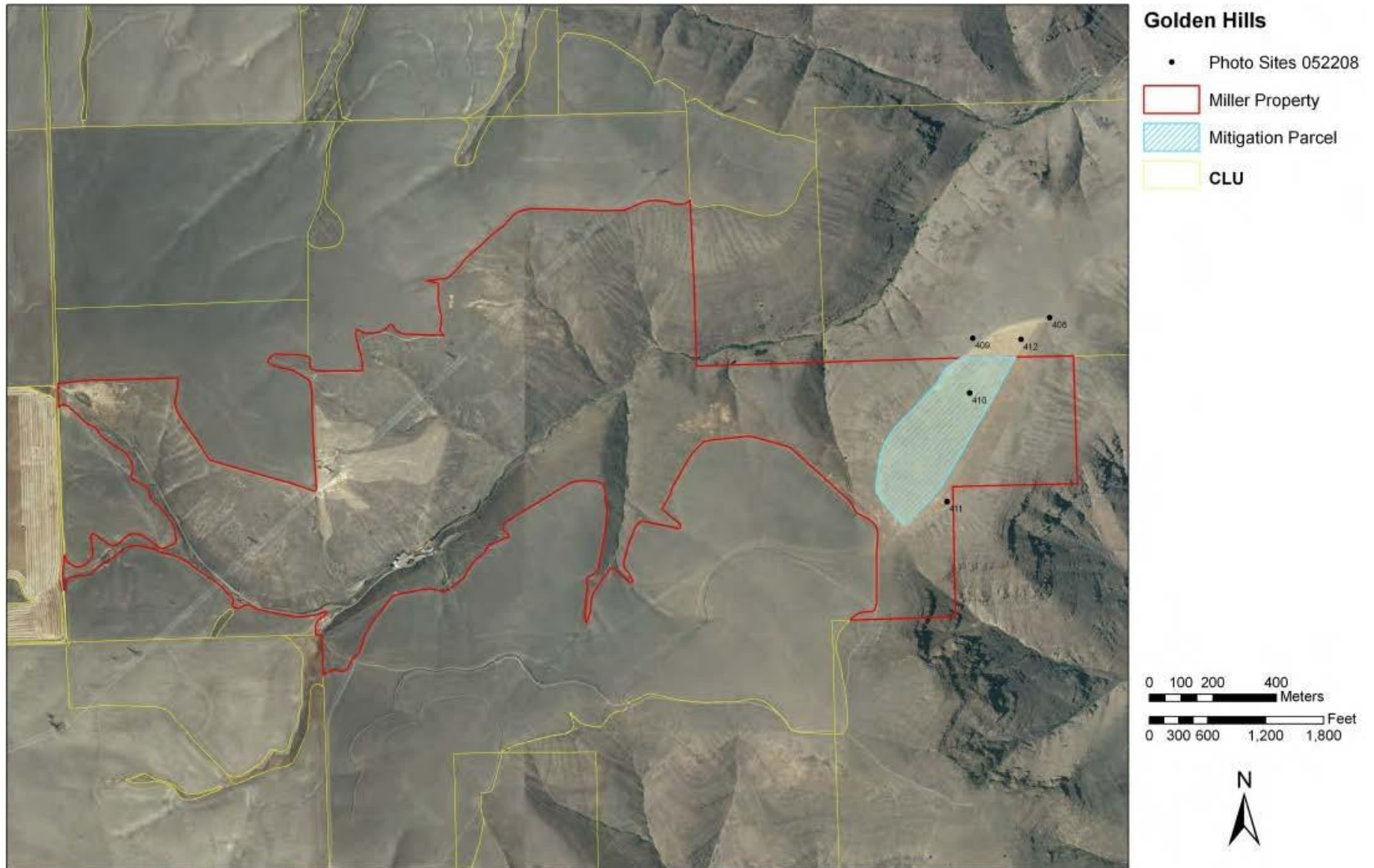
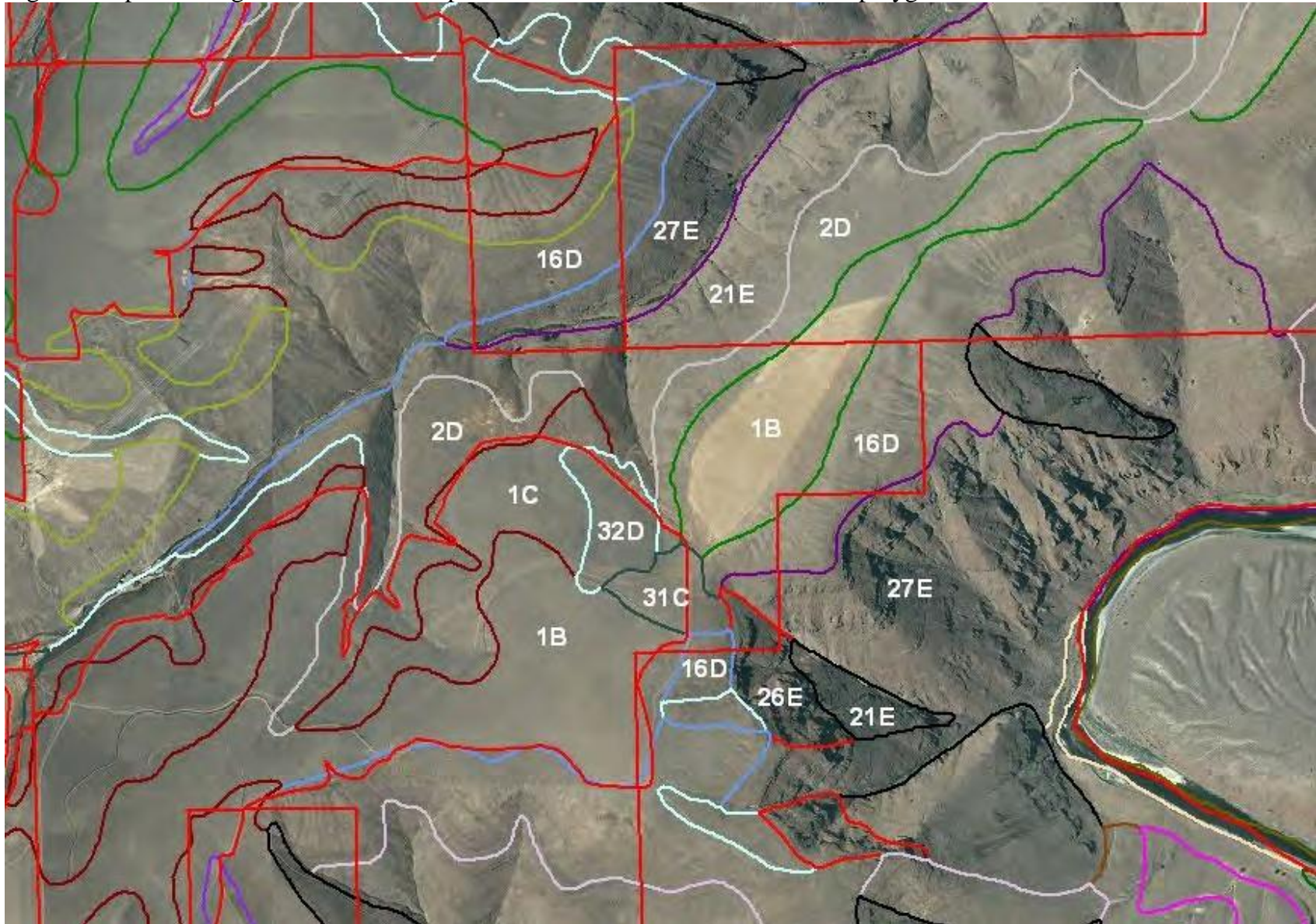


Figure 3. Upland mitigation enhancement parcel USDA NRCS soil classification polygons.



Appendix A (Photo Sites 408-412). Mitigation Enhancement Parcel pictures of vegetation and grazing impacts.
PHOTO SITE 408 – ENHANCEMENT PARCEL WITH ADJACENT BUNCHGRASS



PHOTO SITE 409 – ENHANCEMENT PARCEL WITH ADJACENT BUNCHGRASS (FOREGROUND)



PHOTO SITE 410 – ENHANCEMENT PARCEL



PHOTO SITE 411 – ENHANCEMENT PARCEL WITH ADJACENT BUNCHGRASS



PHOTO SITE 412 – ENHANCEMENT PARCEL



PHOTO – ENHANCEMENT PARCEL WITH CATTLE GRAZING MAY 22, 2008



PHOTO – ENHANCEMENT PARCEL WITH ADJACENT SAGEBRUSH/BUNCHGRASS (FOREGROUND) AND DRILL MAY 22, 2008



Golden Hills Wind Project: Habitat Mitigation & Revegetation Plan

1.0 Introduction

Golden Hills Wind Farm, LLC (certificate holder) received a Site Certificate from the Energy Facility Siting Council in 2009 authorizing the construction and operation of a 400 megawatt (MW) wind energy generation facility in Sherman County, Oregon. The potential turbine strings are spread along ridgecrests located approximately 2.5 miles (mi.) northeast of the town of Wasco, Oregon. In addition to the turbine strings, additional facilities such as access roads, underground and overhead transmission lines, and a substation are being constructed to implement the project.

Golden Hills Wind Farm LLC agrees to mitigate impacts associated with the temporary and temporal loss of habitat, and permanent habitat impacts. The goal for temporarily disturbed habitat areas (such as road shoulders, underground electric cable trenches, and the temporarily disturbed area around tower sites) is to return the disturbed habitat to pre-construction (or better) conditions.

In addition to areas temporarily disturbed during facility construction, certain areas will be permanently affected by the placement of facility components for the life of the facility. These permanently disturbed areas include the location of new or widened roads, the area under tower bases, and the substation area.

Construction of the facility would result in temporary impacts to Category 2, 3, 4 and 6 habitat; operation of the facility would result in permanent impacts to Category 3, 4 and 6 habitat. As presented in Table 1, based on pre-construction estimates, approximately 2.9 acres of Category 2, 57.0 acres of Category 3, 6.5 acres of Category 4, and 1,000.2 acres of Category 6 habitat will be temporarily disturbed. Temporary impacts to Category 2, 3 and 4 habitat will require mitigation. As presented in Table 2, based on pre-construction estimates, approximately 5.5 acres of Category 3, 0.1 acres of Category 4, and 126.7 acres of Category 6 habitat will be permanently disturbed. Permanent impacts to Category 3 and 4 habitat will require mitigation. Mitigation of temporary and permanent habitat impacts must comply with the Council's Fish and Wildlife Habitat standard (OAR 345-022-0060), which requires a demonstration of compliance with ODFW's OAR 635-415-0025 mitigation goals and policies.

Temporary impacts to Category 2 Shrub-steppe would result in a temporal loss of habitat. Temporal loss refers to loss of habitat function and values from the time an impact occurs to the time when the restored habitat provides a pre-impact level of habitat function. Habitat subtypes identified within the site boundary, based on pre-construction estimates, including Conservation Recovery Enhancement Program (CREP), Conservation Reserve Program (CRP) and Grassland, are reasonably expected to be restored within a shorter duration timeframe (i.e. 2-3 years) than Shrub-Steppe (5+ years) and therefore would not be expected to result in temporal loss requiring compensatory mitigation beyond the establishes revegetation requirements of this plan.

To address the temporal loss of temporarily impacted Category 2 Shrub-steppe habitat quality, and to satisfy ODFW's Category 2 habitat mitigation goal of "no net loss of either habitat quantity or quality and to provide a net benefit of habitat quantity or quality," the certificate holder agrees

to enhance or create an additional 0.5 acres of Category 2 Shrub-steppe (representing 0.5:1 acre ratio) within a designated mitigation area. This is in addition to revegetation of the temporarily impacted area to pre-impact habitat quality and function. Temporary impacts to the remaining Category 2, 3 and 4 habitat subtypes including CREP, CRP and Grassland would be mitigated through required revegetation efforts, as described further in this plan. In the event that temporary impacts to CREP, CRP and Native Grassland habitat subtypes within Category 3 and 4 habitat are not restored within a short timeframe (i.e. 2-3 years) following completion of construction, the Department in consultation with ODFW may require compensatory mitigation.

To address the permanent loss of Category 3 and 4 habitat, and to satisfy ODFW’s Category 3 and 4 habitat mitigation goal of “no net loss of either habitat quality or quantity,” the certificate holder agrees to enhance or create 5.5 acres of Category 3 habitat and 0.1 acre of Category 4 habitat (representing a 1:1 acre ratio) within a designated mitigation area.

Table 1: Summary of Estimated Temporary Wildlife Habitat Impacts

Habitat Description	Temporary Impact (Acres)	Mitigation (Mitigation Area Ratio [Acres] or Revegetation)	Mitigation Area (Acres)
Category 2			
Conservation Reserve Enhancement Program (CREP)	2.0	Revegetation	0.0
Shrub-steppe (SS)	0.9	0.5:1	0.5
Category 2 Total =	2.9		0.5
Category 3			
Conservation Reserve Program (CRP)	17.2	Revegetation	0.0
Grassland	39.8	Revegetation	0.0
Category 3 Total =	57.0		0.0
Category 4			
Grassland	6.5	Revegetation	0.0
Category 4 Total =	6.5		0.0
Mitigation Area Required for Temporal Loss of Category 2 Habitat =			0.5

Table 2: Summary of Estimated Permanent Wildlife Habitat Impacts

Habitat Description	Permanent Impact (Acres)	Mitigation Area (Mitigation Area Ratio, Acres)	Mitigation Area (Acres)
Category 3			
CRP	1.3	1:1	1.3
Grassland	4.2	1:1	4.2
Category 3 Total =	5.5		5.5
Category 4			

Table 2: Summary of Estimated Permanent Wildlife Habitat Impacts

Habitat Description	Permanent Impact (Acres)	Mitigation Area (Mitigation Area Ratio, Acres)	Mitigation Area (Acres)
Grassland	0.1	1:1	0.1
Category 4 Total =	0.1		0.1
Mitigation Area Required for Temporal Loss of Category 2 Habitat =			5.6

Approximately 127 acres of cultivated agriculture land may be impacted by permanent facilities. Impacts to the agriculture land will be mitigated by:

- Developing a noxious weed control plan following guidelines based upon consultation with the Sherman County Soil and Water Conservation District and ODFW. The noxious weed control plan will be approved by ODOE and finalized prior to construction.
- The noxious weed control plan will be implemented utilizing Best Management Practices (BMPs) to minimize topsoil loss, and complying with an erosion and sedimentation control plan approved by DEQ as part of the NPDES program in areas adjacent to drainage features.
- Sherman County Soil and Water Conservation District will be consulted for proper procedures for restoring agricultural quality to its original condition.

To achieve these habitat mitigation objectives, this plan has been prepared to guide revegetation efforts and enhancement efforts within the compensatory mitigation area. Seed mixes, planting methods, and weed control techniques have been developed specifically for the project area through consultations with the affected agencies, reviews of current literature, and site visits by revegetation specialists. The plan also specifies monitoring procedures to evaluate the success of revegetation and habitat mitigation area enhancement efforts.

2.0 Facility Description

The facility is approved to be located on private land in an unincorporated area of Sherman County. The facility will interconnect with the Bonneville Power Administration's (BPA) transmission system near Klondike Schoolhouse Substation (200 MW). Transmission from the facility substation to the interconnection point will involve one 8-mile long overhead transmission line.

The facility will consist of a number of turbine strings, with up to 125 turbines. Hub height of the turbines will be up to approximately 95 m (312 feet) tall with a rotor diameter up to 126 m (413 feet), and the total maximum turbine height measuring up to 158 m (518 feet). Up to six permanent meteorological towers will be built. The turbines will be linked by access roads and a 34.5-kV transmission line. The approximately 55-mile long power collection system will be largely underground, but might be overhead in some locations.

One substation is approved for construction and operation. In addition, an operations and maintenance (O&M) facility (including a shop), a control room, a maintenance yard, a kitchen, an office, a washroom, and other provisions typical of this type of facility, will be built.

This facility will convert approximately 132 total acres to permanent structures and roads. Other facilities which will permanently disturb habitat include turnaround areas, substation site, and transmission line pole bases. Less than 5% of the permanent habitat impacts will occur to CRP grassland and native grassland habitats; the remainder of the impact will occur on cultivated land.

It will also be necessary to temporarily disturb additional areas during construction of the facility. Laydown areas and equipment work areas at the tower sites will be needed to construct the turbines. Construction of access roads will also require the temporary disturbance of habitat in addition to permanent disturbance of the roadbed. Construction of powerlines, both above and below ground, will also temporarily impact habitat. For the underground lines, temporary impacts are similar to pipeline installation, while for the overhead lines, disturbance is primarily limited to the tower bases. Additionally, miscellaneous facilities such as staging areas, parking lots, and turnouts will be constructed on a temporary basis. In total, it is estimated that 1,069 acres will be temporarily disturbed during construction; 943 acres of that area will be on land used for agriculture, which is considered Category 6 habitat by ODFW.

3.0 Site Setting

3.1 Physiography, Geology, and Soils

The turbine string sites are located on ridgetops that run along northeast-southwest lines, as well as on flat terrain. Topography within the site boundary is characterized by gently rolling hills with slopes from 0° to 70°. Steeper topography is associated with the Grass Valley Canyon and associated side drainages. Elevations of the turbines strings ranges from 1,066 ft. to 2,201 ft (325 m to 671 m) above mean sea level. Soils within the site boundary are primarily deep, well-drained loams, and are used to cultivate small grains and hay or for livestock grazing (Macdonald et al. 1999).

3.2 Climate

Sherman County averages 11.11 inches (in.) of precipitation annually, most of which falls from October through March. Average winter snowfall is 18.9 in. The average air temperature in winter is 32.9° F and the average summer temperature is 65.4° F (Macdonald et al. 1999).

3.3 Landcover/General Vegetation

Land coverages in the facility area consist primarily of cultivated agriculture (dryland wheat; 83%), followed by shrub-steppe/grassland (10%) and Conservation Reserve Program (CRP) grassland (4%), with less than 2% each of developed, riparian tree, riparian-intermittent stream (IS), upland tree, and Conservation Reserve Enhancement Program (CREP) habitats.

Vegetation communities in the facility vicinity are primarily bunchgrass and shrub-steppe associations including some historic climax communities. Grasses include: bluebunch wheatgrass (*Pseudoroegneria spicata* ssp. *spicata*), Idaho fescue (*Festuca idahoensis*), and Sandberg bluegrass (*Poa secunda*). Forbs representative of these communities include arrowleaf balsamroot (*Balsamorhiza sagittata*), milkvetch (*Astragalus* sp.), lomatium (*Lomatium dissectum*), common yarrow (*Achillea millefolium*), lupine (*Lupinus* sp.), phlox (*Phlox* sp.), and pussytoes (*Antennaria* sp.). Shrub species include gray rabbitbrush (*Ericameria nauseosa*), Greene's rabbitbrush (*Ericameria greenei*), and basin big sagebrush (*Artemisia tridentata* ssp. *tridentata*). In heavily disturbed areas, the following weedy and noxious species occur: cereal rye (*Secale cereale*), cheat grass (*Bromus tectorum*), Russian thistle (*Salsola kali*), tumblemustard (*Thelypodopsis* sp.), China lettuce (*Lactuca serriola*), prostrate knotweed (*Polygonum aviculare*), and knapweed (*Centaurea* sp.) Much of the area has been cultivated with monoculture crops of wheat and other small grains.

3.4 Land Use

The site boundary is located on privately-owned land. As mentioned above, much of the area is used for agricultural activities and cattle grazing. The cultivated land is used for production of small grain crops, primarily dryland wheat and barley. The grazed land is either native shrub-steppe or land previously set aside in the federal Conservation Reserve Program.

3.4 Environmental Conditions

A variety of environmental conditions within the region and facility area make the establishment of desirable plant species difficult. Low precipitation and sandy soils provide very little available moisture for germinating seeds. In addition, extensive past and present disturbance to the vegetative communities has created many areas dominated by non- native, weedy species. These species could spread to areas disturbed by construction activities and compete with planted species for the limited resources. Finally, high winds in the area further complicate efforts to establish desirable vegetation.

4.0 Revegetation Procedures (Temporarily Disturbed Areas)

The following methods and protocol are to be followed for all areas of temporary ground and/or vegetation disturbance in the upland habitats throughout the site boundary. Because no disturbance to wetland habitats is expected, no wetland revegetation methods have been specified.

4.1 Pre-Disturbance Wildlife Habitat Vegetation Inventory

The site certificate for the facility requires restoration of disturbed areas to satisfy the requirements of the Fish and Wildlife Habitat standard (OAR 345-022-0060), which aligns with the mitigation goals and policies within the ODFW Fish and Wildlife Habitat Mitigation Policy (OAR 635 Division 415). In order to meet the ‘no net loss of habitat quality’ goal of the mitigation policy, the certificate holder shall revegetate disturbed areas according to a set of agreed-upon success criteria that return the site to pre-disturbance condition. Revegetation success is measured at approved, fixed-point monitoring sites within the disturbed area and compared to habitat conditions of approved, fixed-point reference sites. Reference sites are used as a proxy for pre-disturbance condition while accounting for change outside the control of the certificate holder such as climatic variability and landscape-scale shifts in plant communities.

Prior to facility construction, the certificate holder shall identify reference and monitoring sites in consultation with ODFW and the Department. Reference sites should be identified that closely resemble the pre-disturbance characteristics of the revegetation area monitoring site as indicated by site conditions, including vegetation density, relative proportion of desirable vegetation and species diversity of desirable vegetation. “Desirable vegetation” means those species included in the seed mix or native or native-like species, excluding noxious weeds. The certificate holder shall consider land use patterns, soil type, local terrain and noxious weed densities in selecting monitoring and reference sites.

It is likely that different reference sites will be needed to represent different pre-disturbance habitat conditions of the disturbed area monitoring sites. Once monitoring and reference sites are selected by the certificate holder and approved by the Department and ODFW, the monitoring and reference sites shall remain in the same location unless approval for use of a differing reference site is obtained by the Department and ODFW.

Pre-disturbance wildlife habitat conditions of the reference and monitoring sites shall be determined based on a pre-construction vegetation inventory, to be conducted by a qualified biologist. The pre-construction wildlife habitat vegetation inventory shall include:

- The ODFW habitat category for the area disturbed (Consistent with the evaluation approved per Condition III.C.1)
- Photos representing the habitat,
- Vegetation density (percent cover, percent bare ground, percent cover by plant species)
- Vegetation structural stage, slope, soil type
- An assessment of the relative proportion of desirable vegetation as determined by the average number of stems of desirable vegetation per square foot or by a visual scan of the area, noting overall recovery status.¹
- As assessment of species diversity of desirable vegetation.

The pre-disturbance vegetation inventory shall be submitted for review and approval by the Department, in consultation with ODFW prior to the agency consultation described in Section 4.2 of this plan.

4.2 Pre-Revegetation Agency Consultation and Revegetation Methods

Prior to construction, the certificate holder shall consult with ODFW, ODOE and Sherman County Weed Control Authority to discuss the pre-disturbance vegetation inventory including habitat category and habitat subtype conditions, monitoring and reference site locations and conditions, revegetation methods, erosion and sediment control measures, and implementation schedule.

During construction, the certificate holder will implement site stabilization measures including seeding of temporarily disturbed areas according to its National Pollutant Discharge Elimination System (NPDES) 1200-C general construction permit. Six months prior to commercial operation, the certificate holder will meet with ODFW, ODOE, and Sherman County Weed Control Authority to review the actual extent and conditions of temporarily disturbed areas, confirm the revegetation methods agreed to during pre-construction review are still appropriate, and to re-visit reference and monitoring sites.

4.2 Seed Mixture (Temporarily Disturbed Non-Agricultural Upland Areas)

As noted in section 2.0 above, the facility is expected to result in temporary disturbance to approximately 67 acres of non-agricultural land, subject to verification as part of the preconstruction habitat impact assessment required per Condition III.C.1. The certificate holder will reseed this area after construction. One seed mixture was developed for use in revegetating all temporarily disturbed upland habitats within the site boundary (Table 3). This seed mixture will be used, unless an alternative mixture is requested by a landowner, or agency biologist. The certificate holder will submit a request for approval from the Department, in consultation with ODFW, for any alternative mixture. To re-establish plant communities of most value to wildlife, native species are included in the seed mixture, as well as certain non-native species that ODFW has determined to be beneficial to wildlife. Species were selected based on a variety of factors including tolerance to xeric conditions and seed availability.

4.3 Seed Planting Methods

¹ Desirable vegetation is defined as native plant species and non-native plant species not occurring on state or county noxious weed lists.

During the first five years following facility construction, planting should be done within disturbed areas annually, or as needed, in March-April (for disturbance that occurs during the winter and spring), and/or in October-November (for disturbance that occurs in the summer and fall). Disturbed, unseeded ground may require annual chemical or mechanical weed control in May or June, before weeds have a chance to go to seed.

In general, a weed-free seedbed should be prepared using conventional tillage equipment. Herbicide should be sprayed to control weedy and/or noxious species, following Oregon's buffer requirements for pesticide use (e.g., 300 feet from water sources). Summer fallowing may be required.

During the first five years following facility construction, areas to be seeded should be disked twice in early spring and spot-sprayed on the ground with an herbicide annually or as needed based on the preceding year's seed planting activities. This area should then be harrowed prior to seeding, ideally by the beginning of April. A conventional seed drill shall be used, except in areas where a rangeland drill is deemed more applicable, with a spacing less than 12 inches and at a depth of 1/8-1/4 inch. The prescribed seed mixture (Table 3) should be drilled at a rate of 12 pounds of pure live seed (PLS) per acre. If fallowing the area is to be used to increase soil moisture content, then the same procedure should be followed, but without seeding. If bare, disturbed soil is not seeded immediately, it will be protected from erosion. Seeding would then occur the following spring.

Completion of seed planting in accordance with the above-described methods should be included in the Revegetation Records as described in Section 4.5 of this plan.

4.4 Restoration of Cropland

The certificate holder shall consult with the landowner and farm operator to determine appropriate reseeding on disturbed cropland, including species composition, seed and fertilizer application rates and application methods.

4.5 Revegetation Records

The certificate holder shall maintain a record of revegetation activities. In the record, the certificate holder shall include the date that construction activity was completed in the area to be restored, a description of the affected area (location, acres affected and pre-disturbance condition) and supporting figures representing the revegetated area, the date that revegetation work began and a description of the work done within the affected area. The certificate holder shall update the revegetation records as revegetation work occurs. The certificate holder shall report revegetation activities to the Department every-six months for the first 5-years after the completion of facility construction. After five years, any revegetation actions will be described in the annual report per OAR 345-026-0080(e).

4.6 Monitoring Procedures (Temporarily Disturbed Habitats)

Following completion of construction, the certificate holder will submit its vegetation monitoring methodology to ODFW and the Department for approval prior to monitoring. Within each revegetation area monitoring site, the investigator shall evaluate the progress of wildlife habitat recovery in comparison to the reference sites. The investigator shall evaluate the following site conditions (within the general revegetation area, revegetation monitoring sites, and within the reference sites):

- Degree of erosion due to disturbance activities (high, moderate or low).
- Vegetation density.
- Relative proportion of desirable vegetation as determined by the average number of stems of desirable vegetation per square foot or by a visual scan of the area, noting overall recovery status.²
- Species diversity of desirable vegetation.

Following the initial year of seeding, monitoring will occur annually for the first five years. After the first growing season following initial seeding (Year 1), a qualified investigator shall inspect all areas of revegetation, including each revegetation area monitoring site, to assess revegetation success based on the success criteria and to recommend remedial actions, if needed.

During the initial 5-years of annual monitoring, the certificate holder's qualified investigator (ecologist or botanist) shall evaluate whether a revegetated wildlife habitat area is trending toward meeting the success criteria by comparing the approved, fixed-point revegetation area monitoring site to an approved, fixed-point reference site. The certificate holder's qualified investigator shall compare the revegetation area monitoring sites to the selected reference sites, unless some event (such as wildfire, tilling, or intensive livestock grazing) has changed the vegetation conditions of a reference site so that it no longer represents undisturbed conditions of the revegetation area monitoring site. If such events have eliminated all suitable reference sites for a revegetation area monitoring site, the investigator, in consultation with the Department and ODFW, shall select one or more new reference sites. Following the selection of a new reference site, an updated table and latitude/longitudinal data shall be provided to the Department within a 6-month revegetation record report or annual compliance report, whichever report is submitted first.

The certificate holder shall submit, electronically, to the Department and ODFW the investigator revegetation inspection report in a semi-annual report. The report shall include the investigator's assessment of whether the revegetated area monitoring sites are trending toward meeting the success criteria; whether the monitoring sites adequately represent revegetation success of equivalent habitat/habitat subtype of non-monitoring site revegetated areas; assessment of factors impacting the ability of the revegetated area monitoring sites to trend towards meeting the success criteria; description of appropriate weed control measures as recommended by the Department in consultation with ODFW and Sherman County Weed Control Authority; and, any remedial actions recommended.

² Desirable vegetation is defined as native plant species and non-native plant species not occurring on state or county noxious weed lists.

If an area is not trending toward meeting the success criteria at Year 5 and has not been converted by the landowner to an inconsistent use, the certificate holder may propose and the Department may require remedial action and additional monitoring based on an evaluation of site capability. As an alternative, the certificate holder or the Department, in consultation with ODFW, may conclude that revegetation of the area was unsuccessful and propose appropriate mitigation for the permanent loss of habitat quality and quantity. The certificate holder shall implement the remedial action plan, subject to the approval of the Department in consultation with ODFW.

4.7 Success Criteria

In each monitoring report to the Department, the certificate holder shall provide an assessment of revegetation success for all previously-disturbed wildlife habitat areas. While the monitoring report shall evaluate whether all previously-disturbed wildlife habitat areas are trending towards revegetation success, the success criteria are evaluated based on the revegetation success of the approved revegetated monitoring sites compared to the approved, reference sites. A wildlife habitat area is successfully revegetated when the habitat quality is equal to, or better than, the habitat quality of the pre-construction ODFW habitat category of the reference sites as follows:

- Vegetation density is equal to or greater than that of the reference site.
- Relative proportion of desirable vegetation is equal to or greater than that of the reference site.
- Species diversity of desirable vegetation is equal to or greater than that of the reference site

When the Department, in consultation with ODFW, finds that the conditions of the wildlife habitat area revegetation monitoring sites satisfy the criteria for revegetation success, the Department shall conclude that the certificate holder has met the restoration obligations for that area. If the Department finds that the landowner has converted a temporarily disturbed wildlife habitat area to a use that is inconsistent with these success criteria, prior to the area achieving success criteria, the Department shall conclude that the certificate holder has no further obligation to restore the area for wildlife habitat uses and that the area shall be considered permanently disturbed. However, the certificate holder shall be responsible for meeting the obligations of the Council's Fish and Wildlife Habitat standard, including providing compensatory mitigation for these areas. Mitigation shall be determined by the Department, in consultation with ODFW.

5.0 Habitat Improvement Procedures (Mitigation Area)

5.1 Introduction

To mitigate for temporal and permanent loss of habitat due to placement of facilities (e.g., turbines, access roads), the certificate holder is required to rehabilitate habitat on a 0.5:1 acre ratio for temporary impacts to Category 2 Shrub-steppe and 1:1 acre ratio for Category 3 and 4 habitat of equivalent habitat quality, located in the vicinity of the facility. The total amount of grassland and shrub-steppe land (including CRP) estimated to be temporally and permanently disturbed by the facility, and for which compensatory mitigation is proposed is 6.1 acres.

However, final impact areas will be calculated based on the pre-construction habitat assessment as

required per Condition III.C.1. One parcel of land of similar size (approximately 22 acres) will be selected from the mitigation area for habitat enhancement based on a number of factors including:

- cost-effectiveness for quality implementation, management, and monitoring
- likelihood of successful enhancement benefiting wildlife
- willingness of landowner to participate in mitigation approach/activities

5.2 Pre-Management Inventory

Prior to any management implementation (e.g., removal of grazing), the certificate holder will conduct a habitat inventory of the mitigation parcel, to be conducted by a qualified botanist or revegetation specialist. This person will examine a representative cross-section of plots within the mitigation parcel. The mitigation area habitat assessment will include an analysis and supporting figures, including the following:

- ODFW habitat categories for the entire site,
- Photos representing the habitat at each plot,
- Assessment of dominant plant species at each plot
- The percentage of vegetative ground cover at each plot
- Previously recorded wildfires within the mitigation area and remedial action taken on the entire site,
- An assessment of the presence of invasive weeds on the entire site,
- An assessment of special status plants and animals within the mitigation area, based on literature review and any recorded observations

In addition, the certificate holder's qualified biologist shall conduct an avian survey, based upon survey protocol approved by the Department, in consultation with ODFW. The habitat assessment and avian survey results for the mitigation area shall be submitted for review and approval by the Department, in consultation with ODFW, prior to commencing management activities.

5.3 Mitigation Area Management Actions

The management actions described in Section 5.3 shall be monitored by the certificate holder's qualified biologist yearly for the first five years. If, after five years, the Department in consultation with ODFW determines that the success criteria identified in Section 5.5. have been achieved for the mitigation area, monitoring of management actions shall occur every five years for the life of the facility; otherwise, annual monitoring shall continue until the Department, in consultation with ODFW, confirms that the success criteria has been achieved. Monitoring will include an evaluation by a qualified biologist of the following parameters:

- The ODFW habitat categories for the entire site,
- Photos representing the habitat at each plot,
- Assessment of dominant plant species at each plot
- The percentage of vegetative ground cover at each plot
- Record any wildfires within the mitigation area and remedial action taken on the entire site,
- An assessment of the presence of invasive weeds on the entire site
- Conduct avian surveys within mitigation area with one station set up at each plot, and
- Record observations of special status plants and animals within the mitigation area

The certificate holder shall submit the monitoring reports with the annual report required per OAR 345-026-0080(e).

5.3.1 Fencing and Grazing

The parcel will be fenced prior to treatment to exclude cattle and other domestic ungulates. It is expected that regular maintenance will be required to keep the fences functioning. Gates will be installed at regular intervals along the perimeter.

The certificate holder shall prohibit grazing within the habitat mitigation area. Eliminating livestock grazing within the mitigation area will facilitate recovery of native bunchgrass and sagebrush in areas where past grazing has occurred, potentially resulting in better vegetative structure and complexity for a variety of wildlife.

5.3.2 Site Preparation and Planting Methods

Methods and seed mixtures used for revegetation of mitigation areas will follow those described above for temporarily disturbed areas. The mitigation site has been planted in grasses, therefore the site shall be planted and seeded using the same planting and seeding methods described for disturbed sites at sections 4.2 and 4.3 above. Ground cover canopy and height will be enhanced by the grazing exclusion.

In addition to the plantings described above, the certificate holder shall install a wildlife watering guzzler per ODFW specifications.

5.3.3 Maintenance

Because these improvements are mitigation for permanent and temporal habitat loss, it is necessary to maintain the fences and seedings over the life of the facility (currently anticipated to be 30 years). This may include such maintenance activities as fence repair, periodic chemical or mechanical weed control, monitoring of improvement success, and re-seeding (in areas where native species establishment falls below the percentages specified in the success criteria described below).

5.3.4 Fire Control

The certificate holder shall implement a fire control plan for wildfire suppression within the mitigation area. The certificate holder shall provide a copy of the fire control plan to the Department before starting habitat enhancement actions. The certificate holder shall include in the plan appropriate fire prevention measures, methods to detect fires that occur and a protocol for fire response and suppression. The certificate holder shall maintain fire control for the life of the facility.

5.4 Success Criteria

Mitigation of the permanent and temporal habitat impacts of the facility may be considered successful if the certificate holder protects and enhances sufficient habitat within the mitigation area to meet the

ODFW goals of no net loss of habitat in Categories 2, 3 and 4 and a net benefit in habitat quantity or quality for impacts to habitat in Categories 2. The certificate holder must protect the quantity and quality of habitat within the mitigation area for the life of the facility.

The certificate holder shall determine the actual mitigation area requirements, subject to Department approval, before beginning construction of the facility. If the land selected for the mitigation area does not already contain sufficient habitat in each category to meet these requirements, then the certificate holder must demonstrate improvement of habitat quality sufficient to change lower-value habitat to a higher value (for example, to convert Category 3 habitat to Category 2). The certificate holder may demonstrate improvement of habitat quality based on evidence of indicators such as increased avian use by a diversity of species, more abundant seed production of desirable native bunchgrass, natural recruitment of sagebrush and successful weed control. If the certificate holder cannot demonstrate that the habitat mitigation area is trending toward the habitat quality goals described above within three years, the certificate holder shall investigate the cause of the failure and report the results of the investigation to ODOE within in the monitoring report submitted in the annual report. If the investigation shows that the site is unlikely to reach the required habitat quality, then the certificate holder shall propose an alternate site for Department approval in time for the next planting season. If the investigation shows that the cause of the failure was inadequate implementation of the habitat improvement procedures, then the certificate holder shall repeat those procedures and begin post implementation monitoring as before.

After the Department, in consultation with ODFW, has confirmed that the habitat quantity goals have been achieved, the certificate holder's qualified biologist shall verify, during subsequent monitoring visits, that the mitigation area continues to meet ODFW's "no net loss" and "net benefit" goals described above. The certificate holder's qualified biologist shall recommend remedial action if the habitat quality within the mitigation area falls below the habitat quantity goals listed above. The Department may require other corrective measures and additional monitoring as necessary to ensure that the habitat quantity goals are achieved and maintained.

6.0 Amendment of the Plan

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

7.0 References

Macdonald, Gerald D., James M. Lamkin, and Roger H. Borine. 1999. Soil Survey of Sherman County, Oregon. Natural Resources Conservation Service, U.S. Department of Agriculture.

Table 3. Seed mixture and rate (Pure Live Seed, PLS, lbs/acre) to be used for revegetation of temporarily disturbed areas.

Common Name	Scientific Name	Pounds (PLS)/ Acre
Luna pubescent wheatgrass *	<i>Thinopyrum intermedium</i>	1
Sherman big bluegrass	<i>Poa ampla</i>	1
Magnar basin wildrye	<i>Leymus cinereus</i>	1
Whitmar beardless wheatgrass	<i>Pseudoroegneria spicata</i> ssp. <i>inermis</i>	2
Small burnett *	<i>Sanguisorba minor</i>	0.5
Alfalfa*	<i>Medicago sativa</i>	1.5
Sandberg bluegrass	<i>Poa secunda</i>	2
Idaho fescue	<i>Festuca idahoensis</i>	2
Basin big sagebrush	<i>Artemisia tridentata</i> ssp. <i>Tridentate</i>	1
TOTAL		12

* non-native species determined by ODFW to be beneficial to wildlife

APPENDIX A
HABITAT MITIGATION PROJECT

GOLDEN HILLS HABITAT MITIGATION PROJECT

OFF-SITE UPLAND GRASSLAND SHRUB-STEPPE ENHANCEMENT JOHN DAY RIVER BASIN

SITE DESCRIPTION AND PROPOSED MITIGATION MANAGEMENT

John Day River Rim – Upland Grassland Shrub-steppe Enhancement

Current Condition

The mitigation area is located “off-site” approximately 5 miles southeast of the Golden Hills Wind Farm layout (Figure 1). The enhancement area is within approximately 330 acres of fenced rangeland, with large tracts of CRP located immediately to the north and south, and BLM land to the east. The entire property has been extensively grazed historically and recently by livestock, yet harbors mature big sagebrush on the hillside slopes and interior drainage. The site is at the uppermost region of the Willow Springs Canyon tributary of the John Day River, approximately two miles up-drainage of the river (Figure 1). The area selected for enhancement is approximately 21.9 acres within a 40 acre deep-soil parcel (Figure 2). The 21.9 acre enhancement area may be reduced or increased based upon finalized calculations for habitat impacts from the Golden Hills Wind Facility layout. This mitigation parcel includes an upland 1 to 7 degree slope deep-soil area classified by USDA NRCS as 1B Anderly silt loam (1-30 inch typical depth profile; Figure 3). This soil type is considered prime farmland if irrigated. The area has historically been cultivated and seeded to provide better forage for cattle, although currently non-native undesirable cheatgrass dominates the area (see Appendix A photos). Horizontal and vertical vegetative structure, especially of native grasses and forbs, is largely depleted due to livestock grazing impacts (Appendix A). The enhancement area is adjacent to CRP to the west/southwest and BLM to the north, east, and southeast. Areas on all sides of the previously cultivated area have stands of blue bunch wheatgrass, with a variety of forbs including balsamroot, big sagebrush, rigid sagebrush, phlox species, pussy toes, lupine, daisy fleabane, yarrow, and green rabbitbrush (Appendix A).

Potential for Wildlife Habitat Enhancement

This site has the potential to provide more diverse grassland in greater quantity with greater horizontal and vertical structure. If enhanced, the parcel would provide better nesting habitat for grassland bird species, including loggerhead shrikes, and also provide higher quality forage and cover for big game. Limited big game forage such as sandberg bluegrass, bluebunch wheatgrass, and various forbs, would be enhanced with livestock exclusion providing better fall, winter, and early spring rangeland for big game. Summer habitat for ground-nesting birds would also be

enhanced. Enhancement would also likely provide better hunting grounds for raptors as well. Due to the elevational gradient and mixed soil depths, the site has the potential to provide several different quality ecotones.

Proposed Management for Enhancement

Eradication or control of non-desirable invasive/noxious species would be conducted by either using small controlled prescribed burns or spot spraying with herbicide. The area would be reclaimed for desirable grassland/shrub-steppe wildlife habitat using the revegetation methods described in section 4.0 of the Golden Hills Wind Farm revegetation plan for temporarily disturbed upland non-agriculture lands. The entire mitigation parcel would be fenced off and not grazed by domestic livestock. Given the selected mitigation parcel is currently heavily grazed and predominantly cheatgrass, there exists a high potential for successful reclamation of high quality wildlife habitat. In addition, a water catchment (“guzzler”) would be installed providing a water source for wildlife. Prior to any land management change, the ecological condition of the site should be assessed using Oregon protocols for rangeland inventory and evaluation (USDA 2004). This assessment would include photo documentation of the site with additional notes regarding wildlife habitat condition. Post-management site assessment, for example every 5 years, should also be agreed upon by ODFW allowing adaptive management needs.

Advantages

This site lacks public road access and is remote and infrequently disturbed by humans, used largely for hunting by landowner only. The site is approximately 5 miles from the proposed Golden Hills Wind Farm (Figure 1). The landowner has expressed willingness to enter into at least a 25 year conservation easement agreement for the site. The enhancement parcel has suitable soils for successful seeding and is surrounded by existing stands of grassland/shrub-steppe. The area is adjacent to a watershed with riparian habitat to the north, and cliff and riparian corridor habitat of the John Day River to the east; enhancing landscape-level wildlife forage, thermal and security cover, and water. This location presents the opportunity to enhance grassland/shrub-steppe quality and quantity that is limited in availability for wildlife. Successful enhancement would provide greater connectivity between adjacent large tracts of CRP and BLM lands, creating a larger overall mosaic of quality wildlife habitat.

Reference

USDA. 2004. National Range and Pasture Handbook: Amendment 2 600.0401a; Oregon Protocols for Rangeland and Pature / Hayland Inventory and Evaluation. United States Department of Agriculture, Natural Resources Conservation Service, Grazing Lands Technology Institute.

Figure 1. Miller property with mitigation area in relation to the Golden Hills Wind Farm location.

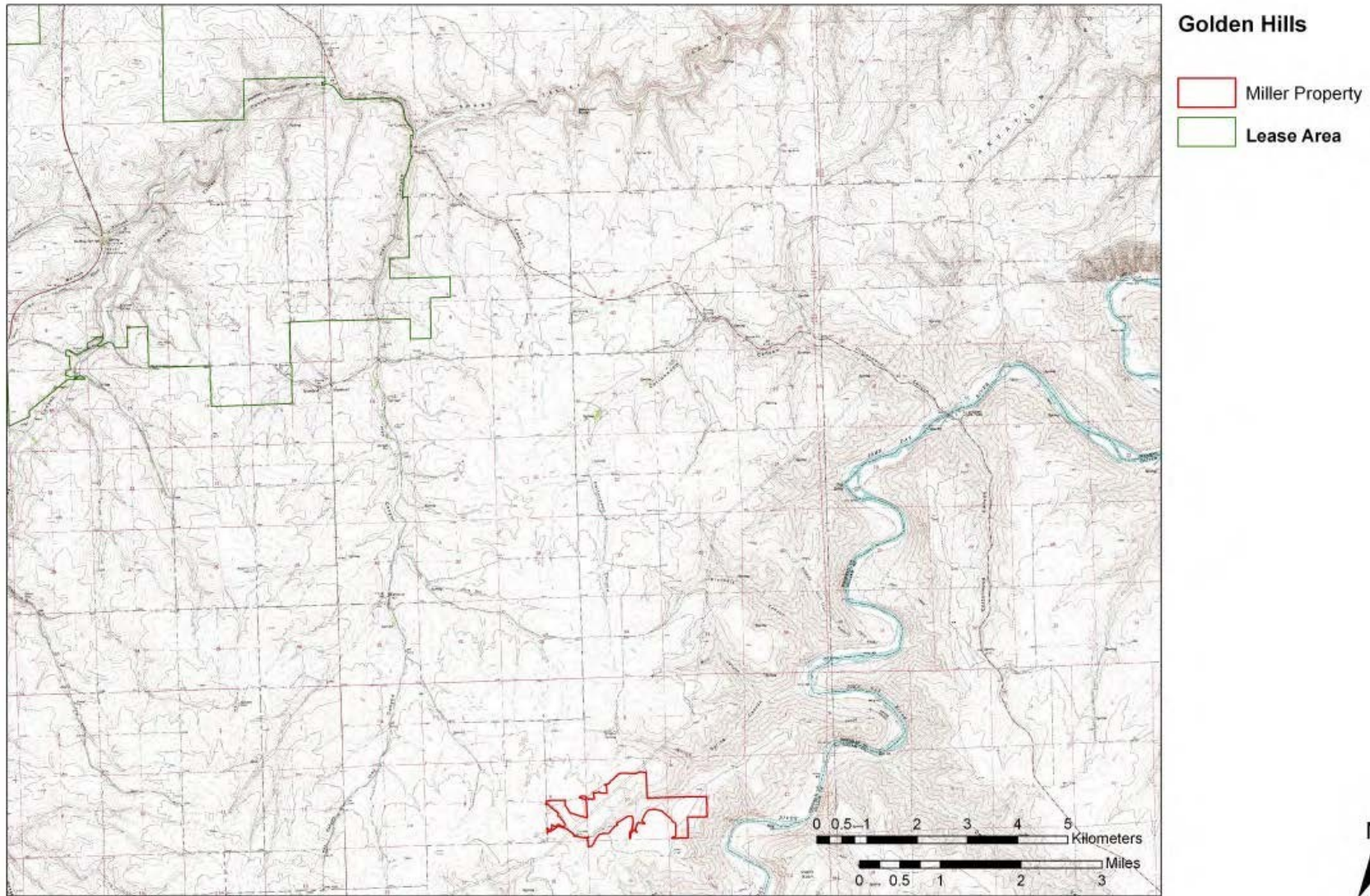


Figure 2. Upland mitigation enhancement parcel within the Miller property rangeland area.

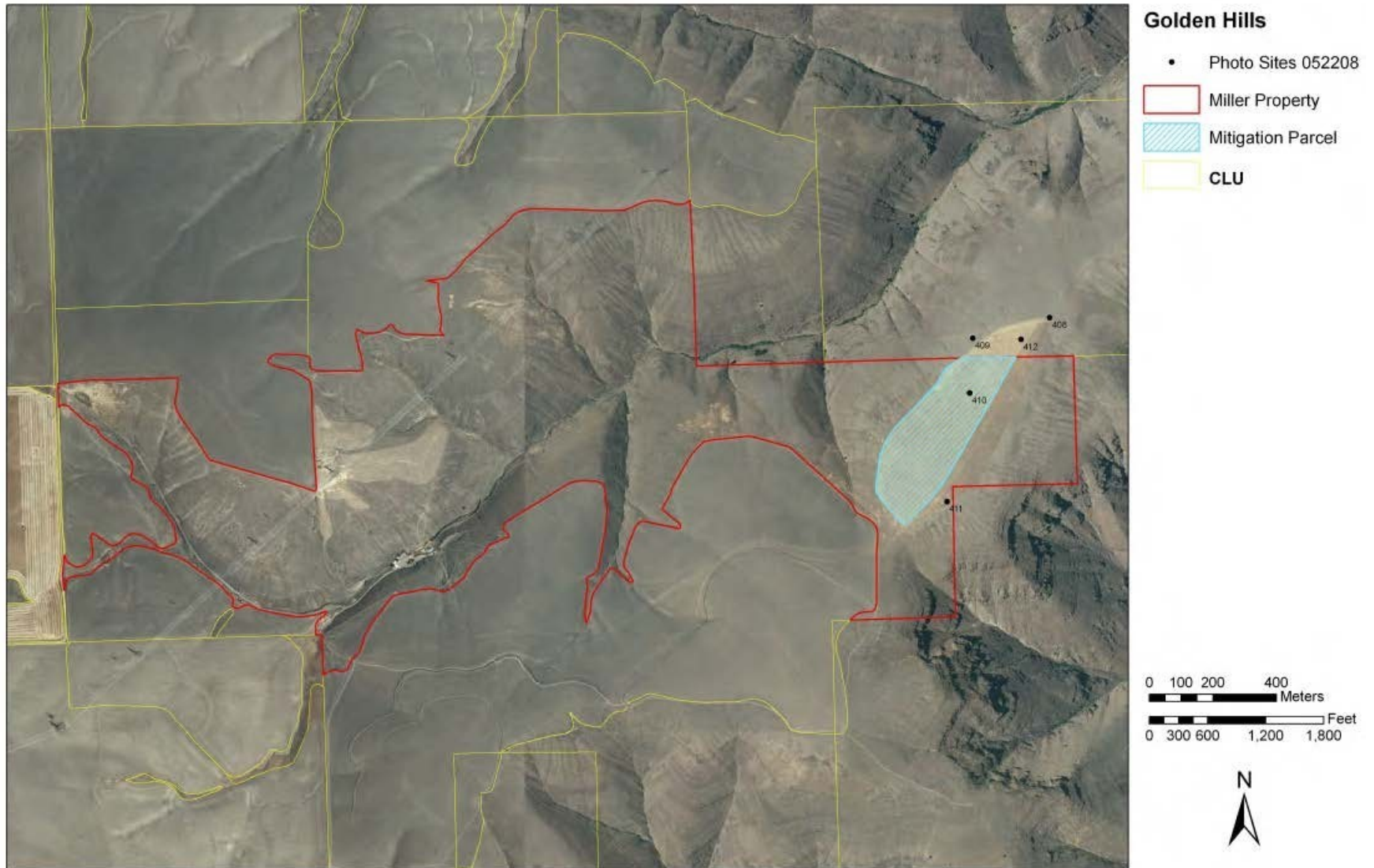
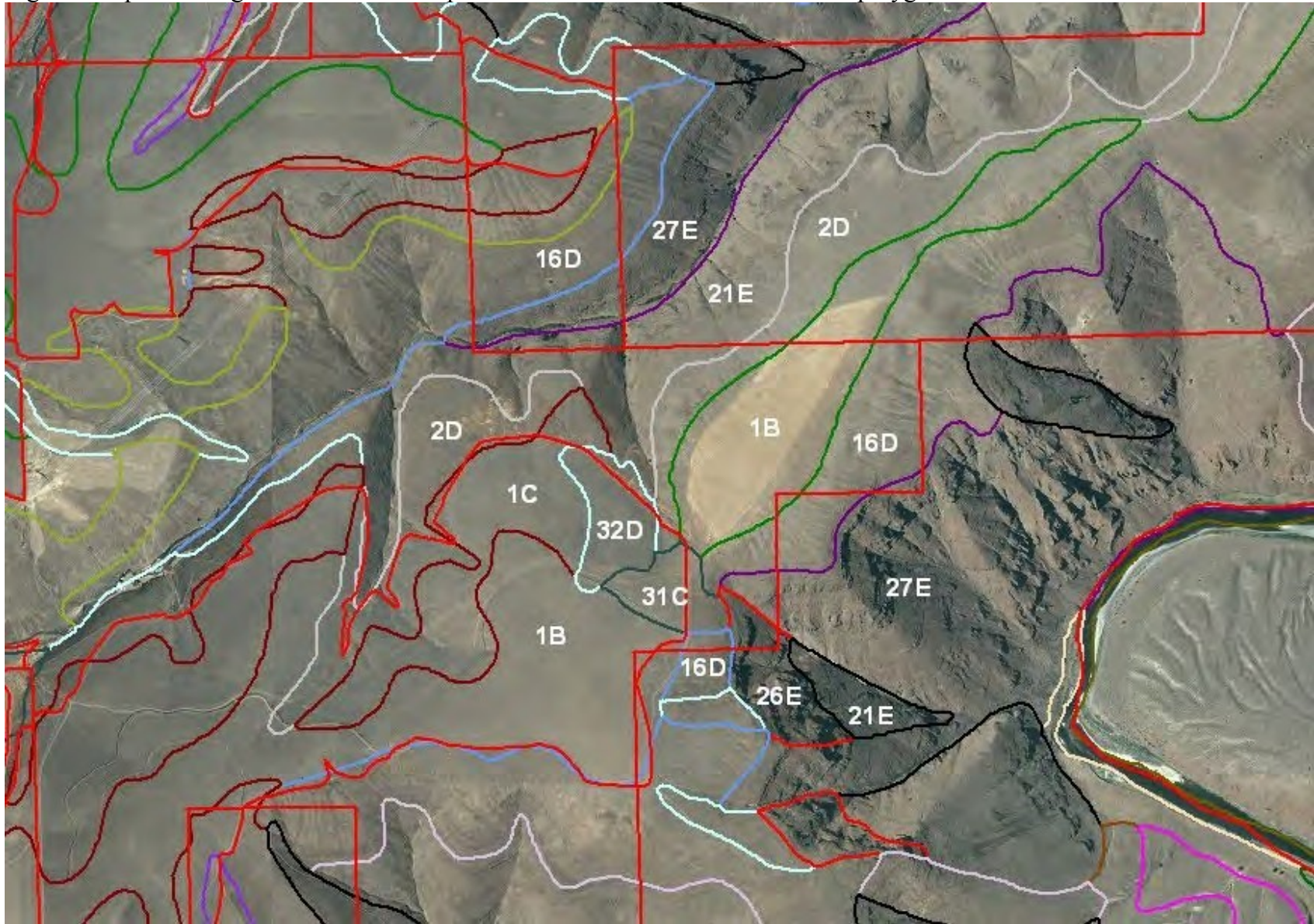


Figure 3. Upland mitigation enhancement parcel USDA NRCS soil classification polygons.



Appendix A (Photo Sites 408-412). Mitigation Enhancement Parcel pictures of vegetation and grazing impacts.
PHOTO SITE 408 – ENHANCEMENT PARCEL WITH ADJACENT BUNCHGRASS



PHOTO SITE 409 – ENHANCEMENT PARCEL WITH ADJACENT BUNCHGRASS (FOREGROUND)



PHOTO SITE 410 – ENHANCEMENT PARCEL



PHOTO SITE 411 – ENHANCEMENT PARCEL WITH ADJACENT BUNCHGRASS



PHOTO SITE 412 – ENHANCEMENT PARCEL



PHOTO – ENHANCEMENT PARCEL WITH CATTLE GRAZING MAY 22, 2008



PHOTO – ENHANCEMENT PARCEL WITH ADJACENT SAGEBRUSH/BUNCHGRASS (FOREGROUND) AND DRILL MAY 22, 2008



ATTACHMENT D
RAPTOR NEST SURVEY PROTOCOL (AS APPROVED IN JANUARY 2015 IN THE *FINAL ORDER ON*
***AMENDMENT 2*)**



ENVIRONMENTAL & STATISTICAL CONSULTANTS

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MEMORANDUM

Date: September 11, 2014
To: Golden Hills Wind Farm LLC
From: WEST, Inc.
Subject: Proposed raptor nest survey protocol for Golden Hills Wind Project

Introduction

Golden Hills Wind Farm LLC (Golden Hills) is in the process of requesting an extension of the site certificate for the Golden Hills Wind Project (GHWP) in Sherman County, OR. During review of the application to extend the site certificate, it was recommended by Oregon Department of Fish and Wildlife (ODFW) that additional raptor nest surveys be conducted prior to the start of construction utilizing currently recommended survey protocols to update the data gathered during previous surveys. Raptor nest surveys for the GHWP were last conducted in 2007 and covered the project area boundary and a 2-mile buffer, with an extended survey area to the east of the project along Grass Valley Canyon and the John Day River, which specifically targeted cliff nesting species such as golden eagles and peregrine falcons. This memo was prepared to summarize the proposed survey protocol that Golden Hills intends to implement at the GHWP to satisfy the recommendation of ODFW.

Proposed Raptor Nest Survey Methods

The objective of the raptor nest survey will be to locate nests of raptors that may be subject to disturbance and displacement effects from construction and operation of the GHWP. The initial raptor nest survey will be conducted prior to leaf out to enhance the ability of observers to located nests in deciduous trees and will be timed with the early courtship period for golden eagles. This means the initial survey will likely occur late January or early February. To better document nest occupancy at all nests located during the initial survey, a follow-up survey will be conducted later in the nesting season (~April) when most species should be actively incubating eggs or brooding young.

Nest surveys will be conducted from a helicopter flown at an altitude of tree-top level to approximately 250 ft (76 m) aboveground. Surveys will target all potential raptor nesting substrates, with an emphasis on tree and cliff nesting raptors, such as red-tailed hawk (*Buteo jamaicensis*), Swainson's hawk (*Buteo swainsoni*), great-horned owl (*Bubo virginianus*), golden



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eagle (*Aquila chrysaetos*) and peregrine falcon (*Falcon peregrinus*). Other species that nest on the ground, or in cavities, will be recorded if observed, but will not be the focus of surveys as they are difficult to detect from the air. Systematic surveys for all raptor nests will be conducted within 2-miles of proposed turbine corridors, with additional surveys targeting golden eagle nests conducted out to a maximum of 10 miles from proposed turbine corridors. Per the USFWS Eagle Conservation Plan Guidance (ECP Guidance; USFWS 2013), if recent data (i.e., with the past 5 years) are available on spacing of occupied eagle nests for the project-area nesting population, the data may be used to delineate an appropriate survey area boundary, as described in Appendix H of the ECP Guidance. If recent survey data suggest a final survey area buffer that is less than 10 miles, it will be brought to the attention of the USFWS/ODFE prior to implementation.

The Oregon Eagle Foundation (OEF) has been conducting surveys for eagle nests and monitoring known golden eagle nests throughout Oregon for several years (Isaacs 2013). Prior to implementing surveys, OEF will be contacted regarding the location of known nesting sites and recent monitoring efforts in the vicinity of the GHWP. Coordination with OEF, and potentially others (e.g., ODFW, other developers), will be used to minimize survey overlap/duplication and reduce potential disturbance from survey efforts at known nest sites. To the extent practicable, surveys will follow the methods described in the USFWS Eagle Conservation Plan Guidance document (USFWS 2013). The initial survey will include a detailed search of all potentially suitable nesting substrates, while the second survey will only target nests identified during the initial survey. New nests identified while traveling between known sites will also be documented during the second survey.

When a nest is observed, the helicopter will be moved to a position where nest status and species present can be determined. Efforts will be made to minimize disturbance to breeding raptors; generally, the greatest possible distance at which the species can be identified will be maintained, with distances varying depending upon nest location and wind conditions. Data recorded for each nest location will include species occupying the nest, nest status (inactive, eggs present, incubating, young present, adult present, unknown, or other), nest substrate (tree, shrub, rocky outcrop, cliff, or power line), number of eggs or young present, time and date of observation, and the nest location (recorded with handheld GPS units). Locations of inactive nests will be recorded and mapped as they may be occupied during subsequent years.

References

- Isaacs, F.B. 2013. Golden eagles (*Aquila chrysaetos*) nesting in Oregon 2011-2013: Draft Annual Report, 31 December 2013. Oregon Eagle Foundation, Inc., Klamath Falls, Oregon. USA.
- US Fish and Wildlife Service (USFWS). 2013. Eagle Conservation Plan Guidance. Module 1 - Land-Based Wind Energy. Version 2. Division of Migratory Bird Management, USFWS. April 2013. Available online at: [http://www.fws.gov/migratorybirds/Eagle Conservation Plan Guidance-Module%201.pdf](http://www.fws.gov/migratorybirds/Eagle%20Conservation%20Plan%20Guidance-Module%201.pdf)

ATTACHMENT E
WILDLIFE MONITORING AND MITIGATION PLAN (AS APPROVED MAY 2009 IN THE *FINAL*
***ORDER ON THE APPLICATION*)**

1
2
3 **GOLDEN HILLS WIND PROJECT**
4 **WILDLIFE MONITORING AND MITIGATION PLAN**
5

6 This plan describes wildlife monitoring that the certificate holder shall conduct during
7 operation of the Golden Hills Wind Project (GHWP).¹ The monitoring objectives are to
8 determine whether operation of the facility causes significant fatalities of birds and bats and to
9 determine whether the facility results in a loss of habitat quality. Golden Hills wind power
10 project consists of a number of turbine strings, with up to 267 turbines. Each turbine will likely
11 either be a 1.65 MW or 2.5 MW capacity turbine. Hub height of the turbines will be up to
12 approximately 80 (m) tall with a rotor diameter of either 82m (1.65 MW) or 96m (2.5 MW). Up
13 to six permanent meteorological towers will be built. The turbines will be linked by access roads
14 and a 34.5-kV transmission line. The 62-mile-long power collection system will be largely
15 underground, but might be overhead in some locations.
16

17 The certificate holder shall use experienced personnel to manage the monitoring required
18 under this plan and properly trained personnel to conduct the monitoring, subject to approval by
19 the Oregon Department of Energy (Department) as to professional qualifications. For all
20 components of this plan except the Raptor Nesting Surveys and the Wildlife Incident Response
21 and Handling System, the certificate holder shall direct a qualified independent third-party
22 biological monitor, as approved by the Department, to perform monitoring tasks.
23

24 The Wildlife Monitoring and Mitigation Plan for the GHWP has the following
25 components:
26

- 27 1) Fatality Monitoring Program including:
28 a) Removal Trials
29 b) Searcher Efficiency Trials
30 c) Fatality Monitoring Search Protocol
31 d) Statistical Analysis
32 2) Raptor Nesting Surveys
33 3) Avian Use and Behavior Surveys
34 4) Wildlife Incident Response and Handling System
35

36 Following is a discussion of the components of the monitoring plan, statistical analysis
37 methods for fatality data, data reporting and potential mitigation.
38

39 The selection of the mitigation actions that the certificate holder may be required to
40 implement under this plan should allow for flexibility in creating appropriate responses to
41 monitoring results that cannot be known in advance. If the Department determines that
42 mitigation is needed, the certificate holder shall propose appropriate mitigation actions to the

¹ This plan is incorporated by reference in the site certificate for the GHWP 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.

1 Department and shall carry out mitigation actions approved by the Department, subject to review
2 by the Oregon Energy Facility Council (Council).

3
4 **1. Fatality Monitoring**

5
6 (a) Definitions and Methods

7
8 Seasons

9
10 This plan uses the following dates for defining seasons:

11

Season	Dates
Spring Migration	March 16 to May 15
Summer/Breeding	May 16 to August 15
Fall Migration	August 16 to October 31
Winter	November 1 to March 15

12
13 Search Plots

14
15 The certificate holder shall conduct fatality monitoring within search plots. The
16 certificate holder, in consultation with the Oregon Department of Fish and Wildlife (ODFW),
17 will select search plots based on a systematic sampling design that ensures the selected search
18 plots are representative of the habitat in different parts of the site. Each search plot will contain
19 one turbine. Search plots will be square or circular. Circular search plots will be centered on the
20 turbine location and will have a radius equal to the maximum blade tip height of the turbine
21 contained within the plot. "Maximum blade tip height" is the turbine hub-height plus one-half
22 the rotor diameter. Square search plots will be of sufficient size to contain a circular search plot
23 as described above.

24
25 The certificate holder shall provide maps of the search plots to the Department and
26 ODFW before beginning fatality monitoring at the facility. The certificate holder will use the
27 same search plots for each search conducted during each monitoring year. During the second
28 monitoring year, new search plots will be selected from the turbines not sampled during the first
29 monitoring year.

30
31 Sample Size

32
33 The sample size for fatality monitoring is the number of turbines searched per monitoring
34 year. The certificate holder shall conduct fatality monitoring during the each monitoring year in
35 search plots at 1/3 of the turbines. If fewer than 150 turbines are built, GHWF shall monitor a
36 minimum of 50 turbines.

37
38 As described in Exhibit B of the ASC, GHWF may choose a combination of smaller
39 turbines with rotor diameter of 82 meters, or larger turbines with rotor diameter greater than 82
40 meters. If the final design of GHWP includes both large and small turbines, then GHWF shall,
41 before beginning fatality monitoring, consult with an independent expert with experience in

1 statistical analysis of avian fatality data to determine whether it would be possible to design a 50-
2 turbine sample with a sufficient number of turbines in each size class to allow statistical
3 comparison of fatality rates for all birds as a group. GHWF shall submit the expert's written
4 analysis to the Department. If the analysis shows that a comparison study is possible and if the
5 Department approves, GHWF shall sample the appropriate number of turbines in each class and
6 conduct the comparison study. GHWF may choose to sample more than 50 turbines in a each
7 monitoring year, if a larger sample size would allow the comparison study to be done.
8

9 Scheduling and Sampling Frequency

10
11 Fatality monitoring will begin upon the commencement of commercial operation of the
12 facility.
13

14 The first fatality monitoring year will commence on the first day of the month following
15 the commercial operation date of the facility and will conclude twelve months later (for example,
16 if commercial operation begins in October of 2008, the monitoring year will commence on
17 November 1, 2008, and conclude on October 31, 2009). Subsequent monitoring years will follow
18 the same schedule (for example, the second monitoring year would begin November 1 of the
19 year in which monitoring is performed, and conclude October 31 of the following year)
20

21 In each monitoring year, the certificate holder shall conduct fatality-monitoring searches
22 at the rates of frequency shown below. Over the course of one monitoring year, the certificate
23 holder would conduct 16 searches², as follows:
24

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

25
26 Duration of Fatality Monitoring
27

28 GHWF shall perform one complete monitoring cycle during its first full year of
29 operation. At the end of the first year of monitoring, GHWF will report the results for joint
30 evaluation by ODOE, GHWF and ODFW. In the evaluation, results for GHWP will be compared
31 with the threshold table in section 1(g) of this plan, and with analogous fatality monitoring
32 results for Klondike III, Biglow Canyon, Combine Hills, Nine Canyon, Hopkins Ridge and, if
33 available, Leaning Juniper. Fatality monitoring results from other wind power facilities in the
34 Columbia Basin may also be included, if available. If fatality results for the first year of
35 monitoring at GHWP do not exceed any of the thresholds of concern and are within the range of
36 all results from the facilities listed above, then GHWF will perform its second year of monitoring
37 in year 5 of operations.
38

² GHWF may omit the searches on some turbines, if searches are not possible due to safety reasons .

1 Otherwise, GHWF shall propose additional mitigation within 6 months, for ODOE and
2 ODFW review. Alternately, GHWF may opt to perform a second year of fatality monitoring
3 immediately if it believes that the results of year 1 monitoring were anomalous. If GHWF takes
4 this option, then it will still perform the monitoring in year 5 of operations described above.

5
6 *Meteorological Towers*
7

8 The facility will most likely use non-guyed meteorological towers. Non-guyed towers are
9 known to cause little if any bird and bat mortality. Therefore, monitoring will not occur at non-
10 guyed meteorological towers. If the meteorological towers are guyed, the certificate holder shall
11 search all towers on the same monitoring schedule as fatality monitoring. The certificate holder
12 will use circular search plots. The radius of the circular search plots will extend a minimum of 5
13 meters beyond the most distant guy wire anchor point.

14
15 (b) Removal Trials
16

17 The objective of the removal trials is to estimate the length of time avian and bat
18 carcasses remain in the search area. Carcass removal studies will be conducted during each
19 season in the vicinity of the search plots. Estimates of carcass removal rates will be used to
20 adjust carcass counts for removal bias. “Carcass removal” is the disappearance of a carcass from
21 the search area due to predation, scavenging or other means such as farming activity. Removal
22 rates will be estimated by size class, habitat and season.

23
24 During the first year, the certificate holder shall conduct carcass removal trials within
25 each of the seasons defined above during the years in which fatality monitoring occurs. During
26 the first year in which fatality monitoring occurs, trials will occur in at least eight different
27 calendar weeks in a year, with at least one calendar week between starting dates. Trials will be
28 spread throughout the year to incorporate the effects of varying weather, farming practices and
29 scavenger densities. At least two trials will be started in each season. Each trial will use at least 6
30 carcasses. For each trial, 3 small bird carcasses and 3 large bird carcasses will be distributed in
31 cultivated agriculture habitat and 3 small bird carcasses and 3 large bird carcasses will be
32 distributed in non-cultivated habitat (grassland/shrub-steppe and CRP). In a year, approximately
33 48 carcasses will be placed in cultivated agriculture and 48 carcasses in non-cultivated
34 grassland/shrub-steppe and CRP for a total of about 96 trial carcasses. The number of removal
35 trials may be adjusted up or down during the second year of fatality monitoring, subject to
36 approval by the Department, if the certificate holder can demonstrate that the calculation of
37 fatality rates will continue to have statistical validity with the new sample size.

38
39 The “small bird” size class will use carcasses of house sparrows, starlings, commercially
40 available game bird chicks or legally obtained native birds to simulate passerines. The “large
41 bird” size class will use carcasses of raptors provided by agencies, commercially available adult
42 game birds or cryptically colored chickens to simulate raptors, game birds and waterfowl. If
43 fresh bat carcasses are available, they may also be used.

44
45 To avoid confusion with turbine-related fatalities, planted carcasses will not be placed in
46 fatality monitoring search plots. Planted carcasses will be placed in the vicinity of search plots

1 but not so near as to attract scavengers to the search plots. The planted carcasses will be located
2 randomly within the carcass removal trial plots.
3

4 Carcasses will be placed in a variety of postures to simulate a range of conditions. For
5 example, birds will be: 1) placed in an exposed posture (e.g., thrown over the shoulder), 2)
6 hidden to simulate a crippled bird (e.g., placed beneath a shrub or tuft of grass) and, 3) partially
7 hidden. Trial carcasses will be marked discreetly for recognition by searchers and other
8 personnel. Trial carcasses will be left at the location until the end of the carcass removal trial.
9

10 It is expected that carcasses will be checked as follows, although actual intervals may
11 vary. Carcasses will be checked for a period of 40 days to determine removal rates. They will be
12 checked about every day for the first 4 days, and then on day 7, day 10, day 14, day 20, day 30
13 and day 40. This schedule may vary depending on weather and coordination with the other
14 survey work. At the end of the 40-day period, the trial carcasses and scattered feathers will be
15 removed.
16

17 (c) Searcher Efficiency Trials 18

19 The objective of searcher efficiency trials is to estimate the percentage of bird and bat
20 fatalities that searchers are able to find. The certificate holder shall conduct searcher efficiency
21 trials on the fatality-monitoring search plots in both grassland/shrub-steppe and cultivated
22 agriculture habitat types. Searcher efficiency will be estimated by size class, habitat type, and
23 season. Estimates of searcher efficiency will be used to adjust carcass counts for detection bias.
24

25 Searcher efficiency trials will be conducted in each season as defined above, during the
26 years in which the fatality monitoring occurs. Trials will be spread throughout the year to
27 incorporate the effects of varying weather, farming practices and scavenger densities. At least
28 two trials will be conducted in each season. Each trial will use about 12 carcasses, although the
29 number will be variable so that the searcher will not know the total number of trial carcasses
30 being used in any trial. For each trial, both small bird and large bird carcasses will be used in
31 about equal numbers. “Small bird” and “large bird” size classes and carcass selection are as
32 described above for the removal trials. An equal proportion of the trial carcasses will be
33 distributed in cultivated agriculture habitat and in non-cultivated habitat (grassland/shrub steppe
34 and CRP). In a year, about 48 carcasses will be placed in cultivated agriculture and about 48 in
35 non-cultivated grassland/shrub steppe and CRP for a total of about 96 trial carcasses. The
36 number of searcher efficiency trials may be reduced to one per season during the second year of
37 fatality monitoring, subject to approval by the Department, if the certificate holder can
38 demonstrate that the calculation of fatality rates will continue to have statistical validity with the
39 reduced sample size.
40

41 Personnel conducting searches will not know in advance when trials are conducted; nor
42 will they know the location of the trial carcasses. If suitable trial carcasses are available, trials
43 during the fall season will include several small brown birds to simulate bat carcasses. Legally
44 obtained bat carcasses will be used if available.
45

1 On the day of a standardized fatality monitoring search (described below) but before the
2 beginning of the search, efficiency trial carcasses will be placed at random locations within areas
3 to be searched. If scavengers appear attracted by placement of carcasses, the carcasses will be
4 distributed before dawn.

5
6 Searcher efficiency trials will be spread over the entire season to incorporate effects of
7 varying weather and vegetation growth. Carcasses will be placed in a variety of postures to
8 simulate a range of conditions. For example, birds will be: 1) placed in an exposed posture
9 (thrown over the shoulder), 2) hidden to simulate a crippled bird and 3) partially hidden.

10
11 Each non-domestic carcass will be discreetly marked so that it can be identified as an
12 efficiency trial carcass after it is found. The number and location of the efficiency trial carcasses
13 found during the carcass search will be recorded. The number of efficiency trial carcasses
14 available for detection during each trial will be determined immediately after the trial by the
15 person responsible for distributing the carcasses.

16
17 If new searchers are brought into the search team, additional detection trials will be
18 conducted to ensure that detection rates incorporate searcher differences. If GHWF does not
19 perform a second year of monitoring until the 5th year of operation, then searcher efficiency and
20 removal trials shall be repeated to ensure that the removal and detection rates used to estimate
21 overall fatalities account for new searchers and changed predation or scavenger behavior
22 patterns.

23 24 (d) Coordination with the other Wind Projects

25
26 It is anticipated that other wind projects in Sherman County may be monitored at the
27 same time that Golden Hills is monitored. If these projects are permitted through EFSEC, they
28 will require similar wildlife monitoring. Subject to the approval of both certificate holders and
29 the Department, the number of trials at each site and the number of trial carcasses used at each
30 site can be reduced by combining the removal data and efficiency data from multiple facilities, if
31 the certificate holder can demonstrate that the calculation of fatality rates will continue to have
32 statistical validity for both facilities and that combining the data will not affect any other
33 requirements of the monitoring plans for either facility.

34 35 (e) Fatality Monitoring Search Protocol

36
37 The objective of fatality monitoring is to estimate the number of bird and bat fatalities
38 that are attributable to facility operation and associated variances. The certificate holder shall
39 conduct fatality monitoring using standardized carcass searches.

40
41 The certificate holder shall use a worst-case analysis to resolve any uncertainty in the
42 results and to determine whether the data indicate that additional mitigation should be
43 considered. The Department may require additional, targeted monitoring if the data indicate the
44 potential for significant impacts that cannot be addressed by worst-case analysis and appropriate
45 mitigation.

1 The certificate holder shall estimate the number of avian and bat fatalities attributable to
2 operation of the facility based on the number of avian and bat fatalities found at the facility site.
3 All carcasses located within areas surveyed, regardless of species, will be recorded and, if
4 possible, a cause of death determined based on blind necropsy results. If a different cause of
5 death is not apparent, the fatality will be attributed to facility operation. The total number of
6 avian and bat carcasses will be estimated by adjusting for removal and searcher efficiency bias.
7

8 Personnel trained in proper search techniques (“the searchers”) will conduct the carcass
9 searches by walking parallel transects within the search plots.³ Transects will be initially set at 6
10 meters apart in the area to be searched. A searcher will walk at a rate of about 45 to 60 meters
11 per minute along each transect searching both sides out to three meters for casualties. Search area
12 and speed may be adjusted by habitat type after evaluation of the first searcher efficiency trial.
13 The searchers will record the condition of each carcass found, using the following condition
14 categories:
15

- 16 § Intact – a carcass that is completely intact, is not badly decomposed and shows no
17 sign of being fed upon by a predator or scavenger
- 18 § Scavenged – an entire carcass that shows signs of being fed upon by a predator or
19 scavenger, or portions of a carcass in one location (e.g., wings, skeletal remains, legs,
20 pieces of skin, etc.)
- 21 § Feather Spot – 10 or more feathers at one location indicating predation or scavenging
22 or 2 or more primary feathers
23

24 All carcasses (avian and bat) found during the standardized carcass searches will be
25 photographed as found, recorded and labeled with a unique number. Distance from observer to
26 the carcass will be measured (to the nearest 0.25 meters), as will the perpendicular distance from
27 the transect line to the carcass. Each carcass will be bagged and frozen for future reference and
28 possible necropsy. A copy of the data sheet for each carcass will be kept with the carcass at all
29 times. For each carcass found, searchers will record species, sex and age when possible, date and
30 time collected, location, condition (e.g., intact, scavenged, feather spot) and any comments that
31 may indicate cause of death. Searchers will map the find on a detailed map of the search area
32 showing the location of the wind turbines and associated facilities such as power lines. The
33 certificate holder shall coordinate collection of state endangered, threatened, sensitive or other
34 state protected species with ODFW. The certificate holder shall coordinate collection of
35 federally-listed endangered or threatened species and Migratory Bird Treaty Act protected avian
36 species with the U.S. Fish and Wildlife Service (USFWS). The certificate holder shall obtain
37 appropriate collection permits from ODFW and USFWS.
38

39 The searchers might discover carcasses incidental to formal carcass searches (e.g., while
40 driving within the project area). For each incidentally discovered carcass, the searcher shall
41 identify, photograph, record data and collect the carcass as would be done for carcasses within
42 the formal search sample during scheduled searches
43

³ Where search plots are adjacent, the search area may be rectangular.

1 If the incidentally discovered carcass is found within a formal search plot, the fatality
2 data will be included in the calculation of fatality rates. If the incidentally discovered carcass is
3 found outside a formal search plot, the data will be reported separately.
4

5 The certificate holder shall coordinate collection of incidentally discovered state
6 endangered, threatened, sensitive or other state protected species with ODFW. The certificate
7 holder shall coordinate collection of incidentally discovered federally-listed endangered or
8 threatened species and Migratory Bird Treaty Act protected avian species with the USFWS.
9

10 The certificate holder shall develop and follow a protocol for handling injured birds. Any
11 injured native birds found on the facility site will be carefully captured by a trained project
12 biologist or technician and transported to Jean Cypher (wildlife rehabilitator) in The Dalles, the
13 Blue Mountain Wildlife Rehabilitation Center in Pendleton or the Audubon Bird Care Center in
14 Portland in a timely fashion.⁴ The certificate holder shall pay costs, if any are charged, for time
15 and expenses related to care and rehabilitation of injured native birds found on the site, unless
16 the cause of injury is clearly demonstrated to be unrelated to the facility operations.
17

18 (f) Statistical Methods for Fatality Estimates

19

20 The estimate of the total number of wind facility-related fatalities is based on:

- 21
- 22 (1) The observed number of carcasses found during standardized searches during the two
23 monitoring years for which the cause of death is attributed to the facility.⁵
24
 - 25 (2) Searcher efficiency expressed as the proportion of planted carcasses found by
26 searchers.
27
 - 28 (3) Non-removal rates expressed as the estimated average probability a carcass is
29 expected to remain in the study area and be available for detection by the searchers
30 during the entire survey period.
31

32 Definition of Variables

33

34 The following variables are used in the equations below:

- 35 c_i the number of carcasses detected at plot i for the study period of interest (e.g., one
36 year) for which the cause of death is either unknown or is attributed to the facility
37 n the number of search plots
38 k the number of turbines searched (includes the turbines centered within each
39 search plot and a proportion of the number of turbines adjacent to search plots to
40 account for the effect of adjacent turbines on the 90-meter search plot buffer area)
41 \bar{c} the average number of carcasses observed per turbine per year
42 s the number of carcasses used in removal trials
43 s_c the number of carcasses in removal trials that remain in the study area after 40
44 days

⁴ The people and centers listed here may be changed with Department approval.

⁵ If a different cause of death is not apparent, the fatality will be attributed to facility operation.

1	se	standard error (square of the sample variance of the mean)
2	t_i	the time (days) a carcass remains in the study area before it is removed
3	\bar{t}	the average time (days) a carcass remains in the study area before it is removed
4	d	the total number of carcasses placed in searcher efficiency trials
5	p	the estimated proportion of detectable carcasses found by searchers
6	I	the average interval between searches in days
7	$\hat{\rho}$	the estimated probability that a carcass is both available to be found during a
8		search and is found
9	m_t	the estimated annual average number of fatalities per turbine per year, adjusted
10		for removal and observer detection bias
11	C	nameplate energy output of turbine in megawatts (MW)

12
13 Observed Number of Carcasses

14
15 The estimated average number of carcasses (\bar{c}) observed per turbine per year is:

16
17
$$\bar{c} = \frac{\sum_{i=1}^n c_i}{k} . \tag{1}$$

18
19 Estimation of Carcass Removal

20
21 Estimates of carcass removal are used to adjust carcass counts for removal bias. Mean
22 carcass removal time (\bar{t}) is the average length of time a carcass remains at the site before it is
23 removed:

24
25
$$\bar{t} = \frac{\sum_{i=1}^s t_i}{s - s_c} . \tag{2}$$

26
27 This estimator is the maximum likelihood estimator assuming the removal times follow an
28 exponential distribution and there is right-censoring of data. Any trial carcasses still remaining at
29 40 days are collected, yielding censored observations at 40 days. If all trial carcasses are
30 removed before the end of the trial, then s_c is 0, and \bar{t} is just the arithmetic average of the
31 removal times. Removal rates will be estimated by carcass size (small and large) and season.

32
33 Estimation of Observer Detection Rates

34
35 Observer detection rates (i.e., searcher efficiency rates) are expressed as p , the proportion
36 of trial carcasses that are detected by searchers. Observer detection rates will be estimated by
37 carcass size and season.

38
39 Estimation of Facility-Related Fatality Rates

1 The estimated per turbine annual fatality rate (m_t) is calculated by:

$$2 \quad m_t = \frac{\bar{c}}{\hat{\rho}}, \quad (3)$$

4
5 where $\hat{\rho}$ includes adjustments for both carcass removal (from scavenging and other means) and
6 observer detection bias assuming that the carcass removal times t_i follow an exponential
7 distribution unless a different assumption about carcass removal is made with the approval of the
8 Department. Under these assumptions, this detection probability is estimated by:

$$9 \quad \hat{\rho} = \frac{\bar{t} \times p}{I} \times \frac{\exp\left(\frac{I}{\bar{t}}\right) - 1}{\exp\left(\frac{I}{\bar{t}}\right) - 1 + p}. \quad (4)$$

11 The estimated per MW annual fatality rate (m) is calculated by:

$$12 \quad m = \frac{m_t}{C}. \quad (5)$$

13
14
15 The certificate holder shall calculate fatality estimates for: (1) all birds, (2) small birds,
16 (3) large birds, (4) raptors, (5) target grassland birds, (6) nocturnal avian migrants, 7) avian State
17 Sensitive Species listed under OAR 635-100-0040, and 8) bats. The final reported estimates of
18 m , associated standard errors and 90% confidence intervals will be calculated using
19 bootstrapping (Manly 1997). Bootstrapping is a computer simulation technique that is useful for
20 calculating point estimates, variances and confidence intervals for complicated test statistics. For
21 each iteration of the bootstrap, the plots will be sampled with replacement, trial carcasses will be
22 sampled with replacement and \bar{c} , \bar{t} , p , $\hat{\rho}$ and m will be calculated. A total of 5,000 bootstrap
23 iterations will be used. The reported estimates will be the means of the 5,000 bootstrap estimates.
24 The standard deviation of the bootstrap estimates is the estimated standard error. The lower 5th
25 and upper 95th percentiles of the 5000 bootstrap estimates are estimates of the lower limit and
26 upper limit of 90% confidence intervals.

27 Nocturnal Migrant and Bat Fatalities

28
29 Differences in observed nocturnal avian migrant and bat fatality rates for lit turbines,
30 unlit turbines that are adjacent to lit turbines, and unlit turbines that are not adjacent to lit
31 turbines will be compared graphically and statistically.

32 (g) Mitigation

33
34 Mitigation may be appropriate if analysis of the fatality data collected after the first
35 monitoring year shows fatality rates for avian species that exceed a threshold of concern. For the
36 purpose of determining whether a threshold has been exceeded, the certificate holder shall
37 calculate the average annual fatality rates for the species groups after the initial two years of

1 monitoring. Based on current knowledge of the species that are likely to use the habitat in the
 2 area of the facility, the following thresholds apply to the GHWP:
 3

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
Target grassland birds (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.)	0.20
Bat species as a group	2.50
Guyed Meteorological Tower Mortality	
Raptor T&E species and raptor species of special concern, as a group (Swainson’s hawk, ferruginous hawk, golden eagle and burrowing owl; bald eagle, peregrine falcon, and any other federal threatened or endangered raptor species)	0.20/ guyed tower
Avian State Sensitive Species listed under OAR 635-100-0040 (Excluding raptors)	0.20/ guyed tower

4
 5 Before the end of the first monitoring year, GHWF shall form a technical advisory
 6 committee (TAC) that will include at least GHWF, ODOE and ODFW. Other stakeholders, such
 7 as USFWS, may also serve on the TAC. The TAC shall consider the fatality monitoring results
 8 from Klondike III, Biglow Canyon, Nine Canyon, Leaning Juniper, Hopkins Ridge, Combine
 9 Hills, and other wind projects in Sherman County if available, and determine if the thresholds
 10 should be adjusted.

11
 12 In addition, mitigation may be appropriate if fatality rates for individual species
 13 (especially State Sensitive Species) are higher than expected and at a level of biological concern.
 14 If the data show that a threshold of concern for a species group has been exceeded or that the
 15 fatality rate for any individual species is at a level of biological concern, mitigation shall be
 16 required if the Department determines that mitigation is appropriate based on analysis of the data
 17 and any other significant information available at the time. If mitigation is appropriate, the
 18 certificate holder, in consultation with ODFW, shall propose mitigation measures designed to
 19 benefit the affected species. This may take into consideration whether mitigation required or
 20 provided for other impacts, such as raptor nesting or grassland bird displacement, would also
 21 benefit the affected species.

22
 23 The certificate holder shall implement mitigation as approved by the Council. The
 24 Department may recommend additional, targeted data collection if the need for mitigation is
 25 unclear based on the information available at the time. The certificate holder shall implement
 26 such data collection as approved by the Council.

1
2 Mitigation shall be designed to benefit the affected species group. Mitigation may
3 include, but is not limited to, protection of nesting habitat for the affected group of native species
4 through a conservation easement or similar agreement. Tracts of land that are intact and
5 functional for wildlife are preferable to degraded habitat areas. Preference should be given to
6 protection of land that would otherwise be subject to development or use that would diminish the
7 wildlife value of the land. In addition, mitigation measures might include: enhancement of the
8 protected tract by weed removal and control; increasing the diversity of native grasses and forbs;
9 planting sagebrush or other shrubs; constructing and maintaining artificial nest structures for
10 raptors; reducing cattle grazing; improving wildfire response; and local research that would aid
11 in understanding more about the species and conservation needs.

12
13 If the threshold for bats species as a group is exceeded, the certificate holder shall
14 contribute to Bat Conservation International or to a Pacific Northwest bat conservation group
15 (\$10,000 per year for three years) to fund new or ongoing research in the Pacific Northwest to
16 better understand impacts to the bat species impacted by the facility and to develop possible
17 ways to reduce impacts to the affected species.

18
19 In addition, mitigation may be appropriate if fatality rates for a State Sensitive bat species
20 listed under OAR 635-100-0040 are higher than expected and at a level of concern. If the data
21 show that a threshold of concern for a species group has been exceeded or that the fatality rate
22 for any individual species is at a level of concern, mitigation shall be required if the Department
23 determines that mitigation is appropriate based on analysis of the data and any other significant
24 information available at the time. If mitigation is appropriate, the certificate holder, in
25 consultation with ODFW, shall propose mitigation measures designed to benefit the affected
26 species. The certificate holder shall implement mitigation as approved by the Council.

27 28 **2. Raptor Nest Surveys**

29
30 The objectives of raptor nest surveys are to estimate the size of the local breeding
31 populations of tree or other above-ground-nesting raptor species in the vicinity of the facility and
32 to determine whether operation of the facility results in a reduction of nesting activity or nesting
33 success in the local populations of the following raptor species: Swainson's hawk, ferruginous
34 hawk and golden eagle. The certificate holder shall direct a qualified biologist, approved by the
35 Department, to conduct the raptor nest surveys. The certificate holder may select other qualified
36 biologists to conduct the raptor nest surveys, subject to Department approval.

37 38 (a) Survey Protocol

39
40 For the species listed above, aerial and ground surveys will be used to gather nest success
41 data on active nests, nests with young and young fledged. The certificate holder will share the
42 data with state and federal biologists. The certificate holder shall conduct two years of post-
43 construction raptor nest surveys for the completed facility during the sensitive nesting and
44 breeding season. One year of post-construction surveys will be done in the first nesting season
45 after construction is completed. The second year of post-construction surveys will be done at a
46 time recommended by the certificate holder and approved by the Department. The certificate

1 holder may collaborate with other certificate holders in the vicinity of the facility in the
2 development of useful information about future impacts on raptor nesting activity and nesting
3 success.
4

5 Prior to the raptor nesting surveys, the certificate holder shall review the locations of
6 known raptor nests based on the GHWP, the Biglow Canyon Wind Farm and Klondike Wind
7 Project pre-construction surveys as well as any nest survey data collected after construction. All
8 known nest sites and any new nests observed within the GCWF site and within two miles of the
9 GHWP site will be given identification numbers. Nest locations will be recorded on U.S.
10 Geological Survey 7.5-minute quadrangle maps. Global positioning system coordinates will be
11 recorded for each nest and integrated with the baseline database. Locations of inactive nests will
12 also be recorded as they may become occupied during future years.
13

14 During each raptor nesting monitoring year, the certificate holder shall conduct a
15 minimum of one helicopter survey in late May or early June within the GHWP site and a 2-mile
16 zone around the turbines to determine nest occupancy. Determining nest occupancy will likely
17 require two visits to each nest: The second visit may be done by air or by ground as appropriate.
18 For occupied nests of the species identified above, the certificate holder shall determine nesting
19 success by a minimum of one ground visit to determine species, number of young and nesting
20 success. "Nesting success" means that the young have successfully fledged (the young are
21 independent of the core nest site). Nests that cannot be monitored due to the landowner denying
22 access will be checked from a distance where feasible.
23

24 (b) Mitigation 25

26 The certificate holder shall analyze the raptor nesting data collected after two monitoring
27 years to determine whether a reduction in either nesting success or nest use has occurred in the
28 vicinity of the GHWP. If the analysis indicates a reduction in nesting success by Swainson's
29 hawk, ferruginous hawk or golden eagle within two miles of the facility (including the area
30 within the GHWP site), then the certificate holder shall propose appropriate mitigation and shall
31 implement mitigation as approved by the Council. At a minimum, if the analysis shows that any
32 of these species has abandoned a nest territory within the facility site or within ½ mile of the
33 facility site, or has not fledged any young over the two survey years within the facility site or
34 within ½ mile of the facility site, the certificate holder shall assume the abandonment or
35 unsuccessful fledging is the result of the facility unless another cause can be demonstrated
36 convincingly. If the GHWP facility and the Klondike III facility are both required to provide
37 mitigation for the same nest, the two certificate holders shall coordinate the required mitigation
38 with the approval of the Department.
39

40 Given the very low buteo nesting densities in the area, statistical power to detect a
41 relationship between distance from a wind turbine and nesting parameters (*e.g.*, number of
42 fledglings per reproductive pair) will be very low. Therefore, impacts may have to be judged
43 based on trends in the data, results from other wind energy facility monitoring studies and
44 literature on what is known regarding the populations in the region.
45

1 If the analysis shows that mitigation is appropriate, the certificate holder shall propose
2 mitigation for the affected species in consultation with the Department and ODFW, and shall
3 implement mitigation as approved by the Council. Mitigation should be designed to benefit the
4 affected species or contribute to overall scientific knowledge and understanding of what causes
5 nest abandonment or nest failure. Mitigation may be designed to proceed in phases over several
6 years. It may include, but is not limited to, additional raptor nest monitoring, protection of
7 natural nest sites from human disturbance or cattle activity (preferably within the general area of
8 the facility), or participation in research projects designed to improve scientific understanding of
9 the needs of the affected species. Mitigation may take into consideration whether mitigation
10 required or provided for other impacts, such as fatality impacts or grassland bird displacement,
11 would also benefit the raptor species whose nesting success was adversely affected.

12 13 (c) Long-term Raptor Nest Monitoring and Mitigation 14

15 In addition to the two years of post-construction raptor nest surveys described in
16 subsection (a), GHWF shall conduct long-term raptor nest surveys at five year intervals for the
17 life of the facility. GHWF shall conduct the first long-term raptor nest survey in the ninth year
18 after construction is completed. In conducting long-term surveys, GHWF shall follow the same
19 survey protocols as described above in subsection (a) unless GHWF proposes an alternative
20 protocol that is approved by the Department. In developing an alternative protocol, GHWF shall
21 consult with ODFW.
22

23 GHWF shall analyze the raptor nesting data collected after each year of long-term raptor
24 nest surveys to determine whether a reduction in either nesting success or nest use has occurred
25 in the vicinity of the GHWP. If the analysis indicates a reduction in nesting success or nest use
26 by Swainson's hawks, golden eagles, or ferruginous hawks within the facility site or within 2
27 miles of the site, then GHWF shall propose appropriate mitigation for the affected species as
28 described in subsection (b) and shall implement mitigation as approved by the Council. At a
29 minimum, if the analysis shows that any raptors of these species have abandoned a nest territory
30 within the facility site or within ½ mile of the facility site or has not fledged any young within
31 that same area, GHWF shall assume the abandonment or unsuccessful fledging is due to
32 operation of the facility unless another cause can be demonstrated convincingly.
33

34 Any reduction in nesting success or nest use could be due to operation of the GHWP
35 facility, operation of another wind facility in the vicinity or some other cause. GHWF shall
36 attribute the reduction to operation of GHWP if the wind turbine closest to the affected nest site
37 is a GHWP turbine unless GHWF demonstrates, and the Department agrees, that the reduction
38 was due to a different cause.
39

40 Given the low raptor nesting densities in the area, statistical power to detect a relationship
41 between distance from a wind turbine and nesting parameters (e.g. number of fledglings per
42 reproductive pair) will be very low. Therefore, impacts may have to be judged based on trends in
43 the data, results from other wind energy facility monitoring studies and literature on what is
44 known regarding the population in the region.
45

46 **3. Avian Use and Behavior Surveys**

1
2 Searchers will also record bird species observed and their behavior relative to turbine
3 locations before or after each standardized carcass search (as described in Section 1(e) above).
4 Observations will be recorded during 5-minute surveys at each turbine sampled during the
5 fatality-monitoring program, using standard variable circular plot point count survey methods.
6 Collection and recording of these additional observations of live birds will be carried out in a
7 manner that does not distract searchers from carrying out the standardized carcass searches.
8

9 All of these avian use and behavior data, as well as raptor and waterfowl mortality
10 observed at the turbines near these stations, will be used to understand direct and indirect impacts
11 of the GHWP facility on raptors, waterfowl and other avian species. The certificate holder shall
12 include an analysis of this data in the reports described in Section 5.
13

14 **4. GHWP Wildlife Incident Response and Handling System**

15
16 The Wildlife Incident Response and Handling System is a monitoring program set up for
17 responding to and handling avian and bat casualties found by construction and maintenance
18 personnel during construction and operation of the facility. This monitoring program includes the
19 initial response, the handling and the reporting of bird and bat carcasses discovered incidental to
20 construction and maintenance operations (“incidental finds”). Construction and maintenance
21 personnel will be trained in the methods needed to carry out this program.
22

23 All carcasses discovered by construction or maintenance personnel will be photographed,
24 recorded and collected.
25

26 If construction or maintenance personnel find carcasses within the plots for protocol
27 searches, they will notify a qualified biologist, as approved by the Department, who will collect
28 the carcasses. The fatality data will be included in the calculation of fatality rates.
29

30 If construction or maintenance personnel discover incidental finds that are not within
31 plots for fatality monitoring protocol searches, they will notify a qualified biologist, as approved
32 by the Department, and the carcass will be collected by a carcass-handling permittee (a person
33 who is listed on state and federal scientific or salvage collection permits). Data for these
34 incidental finds will be reported separately from standardized fatality monitoring data.
35

36 The certificate holder shall coordinate collection of state endangered, threatened,
37 sensitive or other state protected species with ODFW. The certificate holder shall coordinate
38 collection of federally-listed endangered or threatened species and Migratory Bird Treaty Act
39 protected avian species with the USFWS.
40

41 **5. Data Reporting**

42
43 The certificate holder will report the monitoring data and analysis to the Department.
44 Monitoring data include fatality monitoring program data, raptor nest survey data, avian use and
45 behavior survey data and data on incidental finds by fatality searchers and GHWF personnel.
46 The report may be included in the annual report required under OAR 345-026-0080 or may be

1 submitted as a separate document at the same time the annual report is submitted. In addition, the
2 certificate holder shall provide to the Department any data or record generated in carrying out
3 this monitoring plan upon request by the Department.
4

5 The certificate holder shall immediately notify USFWS and ODFW, respectively, in the
6 event that any federal or state endangered or threatened species are killed or injured on the
7 facility site.
8

9 The public will have an opportunity to receive information about monitoring results and
10 to offer comment. Within 30 days after receiving the annual report of monitoring results, the
11 Department will make the report available to the public on its website and will specify a time in
12 which the public may submit comments to the Department.⁶
13

14 **6. Amendment of the Plan**

15

16 This Wildlife Monitoring and Mitigation Plan may be amended from time to time by
17 agreement of the certificate holder and the Council. Such amendments may be made without
18 amendment of the site certificate. The Council authorizes the Department to agree to
19 amendments to this plan and to mitigation actions that may be required under this plan. The
20 Department shall notify the Council of all amendments and mitigation actions, and the Council
21 retains the authority to approve, reject or modify any amendment of this plan or mitigation action
22 agreed to by the Department.
23
24

⁶ The certificate holder may establish a Technical Advisor Committee (TAC) but is not required to do so. If the certificate holder establishes a TAC, the TAC may offer comments to the Council about the results of the monitoring required under this plan.

ATTACHMENT F
REQUEST FOR AMENDMENT COMMENT SUMMARY TABLE

Attachment F: Request for Amendment Comment Summary Table

Golden Hills Wind Project Request for Amendment #4 – Comment Summary Table				
Date Comment Received	Unique Record ID	Commenter Identification		
		Last Name	First Name	Organization
<i>Reviewing Agency Comments</i>				
2017-12-18	GH1AMD4Doc8	Thompson	Jeremy	Oregon Department of Fish and Wildlife
2018-01-03	GH1AMD4Doc14	Wang	Yumei	Oregon Department of Geology and Mineral Industries
2018-01-22	GH1AMD4Doc14	Reif	Sarah	Oregon Department of Fish and Wildlife
<i>Special Advisory Group</i>				
2017-12-08	GH1AMD4Doc7	Macnab	Georgia	Sherman County Commissioners
<i>Members of the Public</i>				
2017-11-10	GH1AMD4Doc5	Fields	John	Public