MWPAMD3Doc34

BEFORE THE
ENERGY FACILITY SITING COUNCIL
OF THE STATE OF OREGON

In the Matter of the Request for Amendment #3 of the Site Certificate for the Montague Wind Power Facility	))))	FINAL ORDER ON AMENDMENT #3 OF THE SITE CERTIFICATE

July 12, 2017

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Attachment B: Council Chair Approval of Expedited Review
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I. INTRODUCTION

The Energy Facility Siting Council (Council) issues this final order in accordance with Oregon Revised Statute (ORS) 469.405 and Oregon Administrative Rule (OAR) 345-027-0080 for the request by Montague Wind Power, LLC (Montague or certificate holder) for Amendment #3 of the Montague Wind Power Facility Site Certificate (RFA #3).

The certificate holder requested Council approval for a differing turbine model that would have a larger rotor diameter, lower minimum aboveground blade tip clearance, and higher individual turbine nameplate capacity. The minimum aboveground blade tip clearance is currently limited by Site Certificate Condition 27 to 20 meters (approximately 66 feet); the change reduces the clearance from 20 to 14 meters (approximately 46 feet). The individual turbine nameplate capacity is currently limited by Site Certificate Condition 27 to 3.0 MW; the change increases the individual turbine capacity from 3.0 to 3.6 MW. In addition, RFA #3 includes a request for expedited review pursuant to OAR 345-027-0080. On May 11, 2017, the Council Chair issued a determination granting expedited review for RFA #3. Expedited review requires certain timelines found in the general amendment review process, and allows the Council to issue a temporary order amending the site certificate, pending the final amendment decision.

Based upon review of the proposed order during its June 23, 2017 Council meeting, the Council approved RFA #3 and issued a temporary order, temporarily amending the Montague Wind Power Facility Site Certificate (site certificate). As there were no requests for contested case received by the July 10, 2017 deadline, the Council's temporary order is adopted as the final order. The Council issues this final order in accordance with ORS 469.405 and OAR 345-027-0080.

I.A. Name and Address of Certificate Holder

Montague Wind Power Facility, LLC
1125 NW Couch Street, Suite 700
Portland, OR 97209

Parent Company of Certificate Holder

Avangrid Renewables, LLC,
The U.S. division of Iberdrola, S.A.
1125 NW Couch Street, Suite 700
Portland, OR 97209

Individual Responsible for Submitting this Amendment Request:

Brian Walsh, Senior Developer
Avangrid Renewables, LLC
1125 NW Couch Street, Suite 700
Portland, OR 97209

I.B. Description of the Previously Approved Facility

The Council issued the site certificate for the Montague Wind Power Facility (facility) on September 10, 2010, authorizing the construction and operation of a wind energy generation facility with an average electric generating capacity of up to 134.7 megawatts (MW) and a peak generating capacity of not more than 404 (MW). The facility was approved to include up to 269 wind turbines. The certificate holder previously represented that the maximum peak generating capacity of each turbine would not exceed 3.0 MW.

On March 21, 2017, Montague Wind Power, LLC submitted a Change Request asking the Department to determine whether a site certificate amendment was necessary to authorize Montague Wind Power, LLC to utilize a differing turbine model option with a higher individual nameplate capacity of 3.6 MW.[1] Following review of the Change Request and responses to additional information requested by the Department, the Department notified Montague Wind Power, LLC on May 9, 2017 of the Department's determination that a site certificate amendment would not be necessary to authorize construction and operation using a differing turbine model option with a higher 3.6 MW nameplate capacity.[2]

The approved facility includes the following related or supporting facilities, which are briefly described below:

- Power collection system
- Control system
- Substations and 230-kV transmission lines
- Meteorological towers
- Operations and maintenance (O&M) facilities
- Access roads
- Public roadway modifications
- Temporary construction areas

[1] MWPOPS Change Request 1 2017-03-21; MWPOPS RAI Response re Change Request 1 2017-04-21
[2] MWPOPS Change Request Determination Letter 2017-05-09

Power Collection System

A power collection system operating at 34.5 kilovolts (kV) would transport power from each turbine to a collector substation. To the extent practicable, the collection system would be installed underground at a depth of at least three feet. Not more than 27 miles of the collector system would be installed aboveground.

Control System

A fiber optic communications network would link the wind turbines to a central computer at the O&M facilities. A Supervisory, Control and Data Acquisition (SCADA) system would collect operating and performance data from each wind turbine and from the facility as a whole and would allow remote operation of the wind turbines.

Substations and 230-kV Transmission Lines

The facility, as approved, may include up to two collector substations. An aboveground, single-circuit 230-kV transmission line would connect the western substation to the central substation. An aboveground, single-circuit 230-kV transmission line would connect the central substation to the 500-kV Slatt-Buckley transmission line owned by the Bonneville Power Administration (BPA) at the Slatt substation.

Meteorological Towers

The facility, as approved, may include up to eight permanent meteorological towers.

Operations and Maintenance Facilities

The facility, as approved, may include one or two O&M facilities. An on-site well at each O&M facility would supply water for use during facility operation. Sewage is discharged to an on-site septic system.

On March 21, 2017, Montague Wind Power, LLC submitted a Change Request asking the Department to determine whether a site certificate amendment was necessary to authorize Montague Wind Power, LLC to utilize an existing O&M facility at the Leaning Juniper IIB Wind Power Facility under a shared use agreement.[3] Following review of the Change Request and responses to additional information requested by the Department, the Department notified

[3] MWPOPS Change Request 1 2017-03-21; MWPOPS RAI Response re Change Request 1 2017-04-21

Montague Wind Power, LLC on May 22, 2017 of the Department's determination that a site certificate amendment would not be necessary to authorize the shared use of an existing O&M building, operated as a related and supporting facility to the Leaning Juniper IIB Wind Power Facility energy facility.[4] Because the shared O&M building is an existing structure, and would not be substantially modified in connection with the Montague Wind Power Facility energy facility, it would not be considered a related and supporting facility to the Montague Wind Power Facility. The shared O&M building would continue to be a related and supporting facility to the Leaning Juniper IIB Wind Power Facility energy facility. Site certificate conditions contained in the Leaning Juniper IIB Wind Power Facility site certificate apply to the operation and maintenance of the shared O&M building and compliance with these conditions are the responsibility of Leaning Juniper IIB, LLC.

Access Roads

The facility, as approved, would include access roads to provide access to the turbine strings.

Public Roadway Modifications

The certificate holder may construct improvements to existing state and county public roads that are necessary for construction of the facility. These modifications would be confined to the existing road rights-of-way and would be undertaken with the approval of the Gilliam County Road Department or the Oregon Department of Transportation, depending on the location of the improvement.

Temporary Construction Areas

During construction, the facility, as approved, would include temporary laydown areas to stage construction and store supplies and equipment. Construction crane paths would be used to move construction cranes between turbine strings.

I.C. Description of Approved Facility Site Location

The facility site is located on private land south of the City of Arlington, in Gilliam County, Oregon. The facility, once constructed, will connect to the regional transmission system through Bonneville Power Administration's Slatt Substation and an existing 500-kV Slatt-Buckley transmission line via an overhead 230-kV transmission line.

The site boundary encompasses 33,402 acres, which is also defined as the micrositing corridor, approved by Council in 2010 allowing the certificate holder flexibility to site components of the

[4] MWPOPS Change Request Determination Letter 2017-05-09

facility within the micrositing corridor based on an evaluation of impacts from any location. The facility has not yet been constructed.

I.D. Requested Amendment

Montague requested Council approval to amend its site certificate to utilize a differing turbine model option with a wider rotor diameter, lower minimum aboveground blade tip clearance from 20 to 14 meters, and increase the individual nameplate capacity from 3.0 to 3.6 MW.

OAR 345-027-0060(1)(d) requires that the certificate holder provide the specific language of the site certificate, including affected conditions, that the certificate holder proposes to change, add, or delete by an amendment. The certificate holder requested to amend Condition 27 to account for the change in minimum aboveground blade-tip clearance, currently limited to 20 meters aboveground.

No additional facility modifications were included in the amendment request.

II. THE AMENDMENT PROCESS

Under ORS 469.405, "a site certificate may be amended with the approval of the Energy Facility Siting Council." The Council has adopted rules for determining when a site certificate amendment is necessary (OAR 345-027-0030 and -0050) and rules setting out the procedure for amending a site certificate (OAR 345-027-0060 and -0070). While RFA #3 is being processed under expedited review (OAR 345-027-0080), the Council's review criteria and standards remain the same as under a non-expedited amendment review.

OAR 345-027-0070 Review of a Request for Amendment

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

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

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

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

B. Whether there has been any change of circumstances that affects a previous Council finding that was required for issuance of a site certificate or amended site certificate; and

C. Whether the facility complies with all Council standards, except that the Council may choose not to apply a standard if the Council finds that:

i. The certificate holder has spent more than 50 percent of the budgeted costs on construction of the facility;

ii. The inability of the certificate holder to complete the construction of the facility by the deadline in effect before the amendment is the result of unforeseen circumstances that are outside the control of the certificate holder;

iii. The standard, if applied, would result in an unreasonable financial burden on the certificate holder; and

iv. *The Council does not need to apply the standard to avoid a significant threat to the public health, safety or the environment;*

(c) For any amendment not described above, the Council shall consider whether the amendment would affect any finding made by the Council in an earlier order.

(d) For all amendments, the Council shall consider whether the amount of the bond or letter of credit required under OAR 345-022-0050 is adequate.

OAR 345-027-0070(10)(c) requires that for amendments that are not related to construction deadline extensions or expansion of a site boundary, the Council consider whether the amendment would affect any finding made by Council in an earlier order. In this case, RFA #3 includes components that must be reviewed under this provision. The Council assessed the amended facility against all applicable Council standards below.

II.A. Procedural History

The Council issued the *Final Order on the Application for Site Certificate for the Montague Wind Power Facility (Final Order on the Application)* on September 10, 2010. The site certificate became effective upon execution, on September 14, 2010.

On December 28, 2012 certificate holder submitted to the Department its RFA #1 for the facility. RFA #1 requested extension of the construction commencement and completion deadlines by two years, reduction in the minimum aboveground blade-tip clearance, and transfer of the site certificate from Montague Wind Power Facility, LLC to Portland General Electric.[5] The Council issued a *Final Order on Amendment #1 of the Site Certificate* on June 21, 2013, which authorized an extension of the construction commencement deadline from September 14, 2013 to September 14, 2015; and, extension of the construction completion deadline from September 14, 2016 to September 14, 2018.

On March 11, 2015, the certificate holder submitted to the Department RFA #2. RFA #2 requested extension of the construction commencement and completion deadlines by two years. The Council issued a *Final Order on Amendment #2 of the Site Certificate* on December 4, 2015 which authorized an extension of the construction commencement deadline from September 14, 2015 to September 14, 2017; and, extension of the construction completion deadline from September 14, 2018 to September 14, 2020.

On May 4, 2017, the Department received the certificate holder's submittal of RFA #3, including a request for expedited review pursuant to OAR 345-027-0080. On May 11, 2017, the Council Chair issued a determination granting expedited review for RFA #3. In granting expedited review, the Chair found that, based on the certificate holder's representations, a delay in the decision on RFA #3 would unduly harm the certificate holder by either impacting the certificate holder's ability to meet the September 2017 construction commencement deadline or limiting

[5] Transfer of the site certificate to PGE was not completed and Montague Wind Power Facility LLC remains the site certificate holder.

the certificate holder from selecting a more productive and viable turbine. The Chair also found that, based on an evaluation of the RFA #3 materials to date, the proposed reduction in aboveground blade-tip clearance would not result in a significant new adverse impact and that the overall impacts of the differing turbine type, based on the increase in individual turbine generating capacity, would decrease due to the reduction in total number of turbines needed at the site to produce the facility's maximum permitted generating capacity of 404 MW.[6]

On May 12, 2017, the Department sent notice of the amendment request to all persons on the Council's general mailing list, to the special list established for the facility, to an updated list of property owners supplied by the certificate holder, and to a list of reviewing agencies as defined in OAR 345-001-0010(52).[7] The notice included a request for public comments and established a comment deadline of May 26, 2017, in accordance with OAR 345-027-0080(3)(a) which establishes that the comment period for site certificate amendment requests undergoing expedited review shall not exceed 21 days. In addition to issuing the notice, the Department posted the public notice and RFA #3 materials on the agency website.

The Department also sent electronic copies of RFA #3 to a distribution list, which included reviewing agencies, with a memorandum requesting agency comments by May 30, 2017. Public and reviewing agency comments received on RFA #3 are presented in Section II.B and II.C below, and in Section III under the applicable standards.

The Department requested additional information on May 9, 2017 and received a response from the certificate holder on May 19, 2017 (see Attachment D). The Department issued the proposed order on June 2, 2017. On June 2, 2017, the Department issued notice of the proposed order in accordance with OAR 345-027-0070 and OAR 345-027-0080(5), specifying a June 16, 2017 deadline for written public comments and a July 10, 2017 deadline for filing requests for a contested case proceeding. In addition to issuing the notice, the Department posted the public notice and proposed order on the agency website.[8] Based upon the

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[6] MWPAMD3Doc5 2017-05-1 Chair Beyeler Approval of Request for Expedited Review. See Attachment B of this final order.

[7] As explained in RFA #3, Montague provided, and the Department utilized, two property owner lists including property owners located between 1) 500 feet and 2) 1,000 feet of the site boundary in Gilliam County to extend notification beyond the required 500-foot site boundary. There were no Morrow County property owners between 500 and 1,000 feet of the site boundary.

[8] In comments received on the proposed order, Ms. Gilbert expressed that the original application for site certificate (ASC) was not available on the Department's project website and expressed that access to this information is necessary for the public to understand references included in the amendment request and in orders issued by Council that rely and refer back to analysis and information included in the ASC. MWPAMD3Doc29 2017-06-16. The Department agreed with Ms. Gilbert and on June 20, 2017 ensured that the original ASC and subsequent amendment materials were posted to the Department's project website.

recommendations included in the Department's proposed order, the Council adopted a temporary order at its June 23, 2017 meeting at the Office of the Department in Salem, Oregon temporarily amending the site certificate, pending the final amendment decision.

The Council Chair executed the final order on July 12, 2017, following the July 10, 2017 deadline for submitting requests for contested case on the temporary order, of which none were received.[9] The Council previously issued the temporary order on the amendment request at its June 23, 2017 Council meeting. Pursuant to OAR 345-027-0080(10), if there are no requests for contested case, the temporary order is adopted as the final order.

Pursuant to ORS 469.403, only parties to a contested case proceeding may appeal the Council's decision to the Oregon Supreme Court. Because there were requests for contested case, there were subsequently no parties to a contested case. Therefore, no party has standing to appeal this final order.

II.B. Reviewing Agency Comments on RFA #3

As presented in Attachment C of the final order, the Department received comments on Montague's RFA #3 from the following reviewing agencies:

- Oregon Department of Fish and Wildlife
- Oregon Department of State Lands
- Oregon Public Utilities Commission
- Morrow County Court and Morrow County Planning Department
- Gilliam County Planning Department
- Confederated Tribes of the Umatilla Indian Reservation

Issues raised by reviewing agencies regarding compliance with an applicable Council standard are addressed in Section III of this final order.

[9] In its review of the Temporary Order on Request for Amendment #3, the Department identified an administrative error in Attachment E, where the attachment was a draft Wildlife Monitoring and Mitigation Plan dated September 2010, but should have been the draft Wildlife Monitoring and Mitigation Plan dated December 2015 as amended during the Council's review of Request for Amendment #2 of the site certificate. To ensure accuracy and consistency in attachments to orders, the Department updated Attachment E in the Final Order on Request for Amendment #3 to reflect the December 2015 draft amended Wildlife Monitoring and Mitigation Plan as considered during Council's review of the certificate holder's Request for Amendment #2 of the site certificate.

II.C. Public Comments on RFA #3

The Department received two public comments during the RFA #3 comment period, which are addressed in Section III of this final order.[10] Issues raised that are within the Council's jurisdiction are addressed under the applicable standards section below. Issues raised that are outside the Council's jurisdiction or are not applicable to the Council's decision on this site certificate amendment request are not further addressed in this final order.[11]

II.D. Comments on the Proposed Order

The Department received two public comments during the proposed order comment period. To the extent the comments are within Council's jurisdiction, related to a Council standard, and the facility modifications proposed in RFA #3, the comments are addressed in Section III of the final order.[12, 13, 14]

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[10] MWPAMD3Doc20 Public Comment Severe 2017-05-14; MWPAMD3Doc21 Public Comment Jackson 2017-05-16

[11] Comments by C. Severe included a request to deny the amendment request and request for expedited review without identifying specific issues or standards of concern. Therefore, these comments are not within Council's jurisdiction and are not considered in the temporary order. MWPAMD3Doc20 Public Comment Severe 2017-05-14

[12] In comments received on the proposed order, Ms. Gilbert alleges bias on the part of an Energy Facility Siting Council member, and requests that the specific Council member recuse himself from discussions and decisions related to her comments. MWPAMD3Doc29 2017-06-16. Ms. Gilbert's allegation of bias is personal in nature and not specifically related to any facts that show a predisposition toward a particular decision on the part of the Council member related to RFA #3 or the comments submitted by Ms. Gilbert. During the Council's review of the proposed order on June 23, 2017, Council addressed this comment and agreed the allegation of bias was not raised with merit; therefore this comment is not considered further.

[13] In comments received on the proposed order, J. Weatherford and J. Cushing provided comments related to a lease agreement executed between them and First Wind and requested clarification of their potential wind farm rights south of Baseline Road. MWPAMD3Doc28. This comment is not related to applicable siting standard or to the scope of the amendment request under review, and therefore is outside the scope of the Council's consideration of comments received on the proposed order and is not considered further.

[14] In comments received on the proposed order, J. Weatherford and J. Cushing requested reasonable additional setbacks to minimize impacts of noise, shadow flicker, and to protect their properties from the increased wind stream resulting from the larger rotor diameter of the differing turbine model option proposed in RFA #3. MWPAMD3Doc28. Condition 42 establishes the required setbacks from any residential property at 1,320 feet. Condition 104 establishes that turbine towers shall use the minimum turbine tower lighting required or as recommended by the Federal Aviation Administration. While this comment refers to the differing turbine model options proposed in RFA #3, it does not identify an applicable standard that would establish a requirement for additional setbacks not previously included in an existing condition, or identify any particular analysis included in RFA #3 or the proposed order that presents a need for additional or different setbacks to minimize impacts to resources protected by a Council standard. Therefore, the Council does not consider new or amended conditions necessary to satisfy an applicable standard and has not addressed this comment further.

III. REVIEW OF THE REQUESTED AMENDMENT

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

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

> *(1) To issue a site certificate for a proposed facility or to amend a site certificate, the Council shall determine that the preponderance of evidence on the record supports the following conclusions:*
>
> > *(a) The facility complies with the requirements of the Oregon Energy Facility Siting statutes, ORS 469.300 to ORS 469.570 and 469.590 to 469.619, and the standards adopted by the Council pursuant to ORS 469.501 or the overall public benefits of the facility outweigh the damage to the resources protected by the standards the facility does not meet as described in section (2);*
> >
> > *(b) Except as provided in OAR 345-022-0030 for land use compliance and except for those statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council, the facility complies with all other Oregon statutes and administrative rules identified in the project order, as amended, as applicable to the issuance of a site certificate for the proposed facility. If the Council finds that applicable Oregon statutes and rules, other than those involving federally delegated programs, would impose conflicting requirements, the Council shall resolve the conflict consistent with the public interest. In resolving the conflict, the Council cannot waive any applicable state statute.*
> > ** * **
>
> *(4) In making determinations regarding compliance with statutes, rules and ordinances normally administered by other agencies or compliance with requirement of the Council statutes if other agencies have special expertise, the Department of Energy shall consult such other agencies during the notice of intent, site certificate application and site certificate amendment processes. Nothing in these rules is intended to interfere with the state's implementation of programs delegated to it by the federal government.*

Findings of Fact

OAR 345-022-0000 provides the Council's General Standard of Review and requires the Council to find that a preponderance of evidence on the record supports the conclusion that the amended facility complies with the requirements of the Oregon Energy Facility Siting statutes

and the siting standards adopted by the Council and that the amended facility complies with all other Oregon Statues and administrative rules identified in the project order, as amended, and as applicable to the issuance of a site certificate for the proposed facility.[15]

The requirements of OAR 345-022-0000 are discussed in the sections that follow. The Department consulted with other state agencies and Gilliam County during review of RFA #3 to aid in the evaluation of whether the facility, as amended, would maintain compliance with statutes, rules and ordinances otherwise administered by other agencies. Additionally, in many circumstances the Department relies upon these reviewing agencies' special expertise in evaluating compliance with the requirements of Council standards.

Based on the following analysis, the Council amends several existing conditions in the site certificate, as presented in Attachment A (Amended Site Certificate) of the final order. Based upon compliance with the existing and amended site certificate conditions, the Council finds that the facility, as amended, satisfies the requirements of OAR 345-022-0000.

Conclusions of Law

Based on the following findings of fact and conclusions of law, and subject to compliance with existing and amended conditions, the Council finds that the amended facility satisfies the requirements of OAR 345-022-0000.

III.B. Organizational Expertise: OAR 345-022-0010

> *(1) To issue a site certificate, the Council must find that the applicant has the organizational expertise to construct, operate and retire the proposed facility in compliance with Council standards and conditions of the site certificate. To conclude that the applicant has this expertise, the Council must find that the applicant has demonstrated the ability to design, construct and operate the proposed facility in compliance with site certificate conditions and in a manner that protects public health and safety and has demonstrated the ability to restore the site to a useful, non-hazardous condition. The Council may consider the applicant's experience, the applicant's access to technical expertise and the applicant's past performance in*

[15] In comments received on the proposed order, Ms. Gilbert expressed that a certificate holder's analysis and recommended site certificate conditions shall demonstrate compliance with the required rule, and shall be based on a preponderance of evidence on the record. MWPAMD3Doc29 2017-06-16. The Council's General Standard of Review (OAR 345-022-0000) requires that the Council determine, based on a preponderance of evidence on the record, that the facility complies with applicable statutes and standards. The Council agrees that the General Standard of Review applies to Montague Wind Power Facility, LLC (certificate holder) and its Request for Amendment 3 of the Site Certificate, and as presented in the final order, the Council finds that the facility, as amended, would continue to satisfy the requirements of that standard.

constructing, operating and retiring other facilities, including, but not limited to, the number and severity of regulatory citations issued to the applicant.

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

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

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

Findings of Fact

Subsections (1) and (2) of the Council's Organizational Expertise standard require that the applicant demonstrate its ability to design, construct and operate the facility in compliance with Council standards and all site certificate conditions, as well as its ability to restore the site to a useful, non-hazardous condition. The Council may consider the applicant's experience and past performance in constructing, operating and retiring other facilities in determining compliance with the Council's Organizational Expertise standard. Subsections (3) and (4) address third party permits.

The Council addressed the Organizational Expertise standard in in the *Final Order on the ASC*, *Final Order on Amendment 1*, and *Final Order on Amendment 2*. The Council found that, based

upon compliance with Condition 29,[16] the certificate holder has the expertise to construct, operate and retire the facility in compliance with Council standards and that it has a reasonable likelihood of obtaining all third party permits necessary.[17]

The certificate holder is wholly owned by Avangrid Renewables, formerly Iberdrola Renewables. The certificate holder asserts that there have been no changes to their organizational expertise that would impact the Council's prior findings and states that the requested amendment would not cause a change to the certificate holder's ability to construct, operate and retire the facility, as amended, in compliance with Council standards and conditions of the site certificate.

The Council finds that because there have been no changes in the organizational structure or expertise of the certificate holder or its parent company, and the change in turbine model option would not require differing expertise, and because the certificate holder would remain subject to the requirements of the site certificate, that the certificate holder continues to satisfy the requirements of the Organizational Expertise standard.

Conclusions of Law

Based on the evidence in the record, and subject to compliance with the existing site certificate conditions, the Council finds that the certificate holder continues to satisfy the requirements of the Council's Organizational Expertise standard.

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

> *(1) Except for facilities described in sections (2) and (3), to issue a site certificate, the Council must find that:*
>
> > *(a) The applicant, through appropriate site-specific study, has adequately characterized the site as to the Maximum Considered Earthquake Ground Motion as shown for the site in the 2009 International Building Code and maximum probable ground motion, taking into account ground failure and amplification for the site specific soil profile under the maximum credible and maximum probable seismic events; and*
> >
> > *(b) The applicant can design, engineer, and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from maximum probable ground motion events. As used in this rule "seismic*

[16] Condition 29 requires that the certificate holder provide confirmation to the department that third party contractors have obtained all necessary permits.
[17] MWPAPPDoc147 MWP Final Order 2010-09-10, p. 17

hazard" includes ground shaking, ground failure, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement, and subsidence;

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

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

(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.

(3) The Council may issue a site certificate for a special criteria facility under OAR 345-015-0310 without making 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

As provided in section (1) above, the Structural standard generally requires the Council to evaluate whether the applicant has adequately characterized the potential seismic, geological and soil hazards of the site, and that the applicant can design, engineer and construct the facility to avoid dangers to human safety from these hazards.[18] Pursuant to OAR 345-022-0020(2), the Council may issue a site certificate for a wind energy facility without making findings regarding compliance with the Structural standard; however, the Council may apply the requirements of the standard to impose site certificate conditions. OAR 345-022-0020(3) does not apply to this facility because the facility is a not a special criteria facility under OAR 345-015-0310.

The Council addressed the Structural Standard in the *Final Order on the ASC*, *Final Order on Amendment 1*, and *Final Order on Amendment 2*. The Council imposed conditions 12, 13, 14, 52, 53 and 54 but did not make findings. Conditions 12, 13 and 14 in the site certificate are mandatory conditions regarding geotechnical investigation and protection of the public from seismic hazards. Condition 52 requires the certificate holder to perform appropriate site-specific geotechnical investigations before beginning construction to evaluate the subsurface

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

and foundation support characteristics at the locations of the turbine towers and other significant facility structures. Condition 53 requires the certificate holder to design all components of the facility to meet or exceed minimum standards required by the Oregon Structural Specialty Code and the 2006 International Building Code. Condition 54 requires the certificate holder to design and build the facility to avoid dangers to human safety presented by non-seismic hazards.

RFA #3 seeks approval for use of a new turbine model option that, if selected by the certificate holder, would lower the aboveground blade tip clearance from 20 to 14 meters and increase the individual turbine nameplate capacity. This change in turbine specification would also result in turbines with longer blades and a correspondingly larger rotor-swept (diameter) area.

As explained in Section I.C of the final order, the area within the site boundary was previously approved by Council as a micrositing corridor, authorizing placement of facility components at any location within the micrositing corridor based on the ASC's evaluation of impacts. The certificate holder explains that while RFA #3 requests to use a differing turbine model option, turbines would be located within the previously approved micrositing corridor. The certificate holder asserts that potential geological and soils hazards were previously addressed for areas within the micrositing corridor and that the change in turbine model option would not impact or result in greater potential geological and soils hazards than was previously evaluated in the ASC. Further, based upon compliance with Condition 52, the Council finds that any changes in turbine torque, weight or physical structure resulting from the differing turbine model option that may require specific foundation characteristics, would be evaluated during the pre-construction site-specific investigation.

For the reasons described above, the Council finds that the facility modification included in RFA #3 would not affect the certificate holder's characterization of the site or seismic hazards, or its ability to design, engineer, and construct the amended facility to avoid dangers to human safety presented by seismic, geologic or soils hazards.

Conclusions of Law

Based on the foregoing analysis, and in compliance with OAR 345-022-0020(2), the Council relies on the existing site certificate conditions to address the Structural Standard.

III.D. Soil Protection: OAR 345-022-0022

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

Findings of Fact

The soil protection 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 a significant adverse impact to soils.

The Council addressed the Soil Protection Standard in the *Final Order on the ASC*, *Final Order on Amendment 1*, and *Final Order on Amendment 2*. 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. In the original site certificate the Council adopted nine conditions (Conditions 38, 44, 55, 56, 80, 81, 82, 85 and 92) to control and mitigate potential adverse impact to soils and to mitigate the risk of soil contamination during construction and operation.[19]

RFA #3 seeks approval for use of a new turbine model option that, if selected by the certificate holder, would lower the aboveground blade tip clearance from 20 to 14 meters and increase the individual turbine nameplate capacity. This change in turbine specification would also result in turbines a higher individual nameplate capacity of 3.6 MW, longer blades and a correspondingly larger rotor-swept (diameter) area.

As explained in Section I.C of the final order, the area within the site boundary was previously approved by Council as a micrositing corridor, authorizing placement of facility components at any location within the micrositing corridor based on the ASC's evaluation of impacts. The certificate holder explains that while RFA #3 requests to use a differing turbine model option, turbines would be located in the previously approved micrositing corridor. The certificate holder asserts that because the change in turbine model option would result in an increase in individual nameplate capacity from 3.0 to 3.6 MW, that if selected, fewer turbines would be needed at the site to meet the overall capacity. The potential reduction in overall number of turbines needed at the site would further reduce permanent impacts and any associated soil and erosion impacts during construction and operation. The certificate holder also explains that the amendment would not impact the certificate holder's ability to comply with the best management practices and erosion control measures as required under the NPDES-1200-C permit.

For the reasons described above, the Council finds that the facility modification included in RFA #3 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 amended facility without significant adverse impact to soils, and that new or amended conditions would not be necessary for the facility, as amended, to satisfy the standard.

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[19] *Final Order on Application* at 60

Conclusions of Law

Based on the reasoning discussed above, and subject to continued compliance with the related conditions in the amended site certificate, the Council finds that the facility, as amended, complies with the Council's Soil Protection standard.

III.E. Land Use: OAR 345-022-0030

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

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

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

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

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

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

(C) For a proposed facility that the Council decides, under sections (3) or (6), to evaluate against the statewide planning goals, the proposed facility complies with the applicable statewide planning goals or that an exception to any applicable statewide planning goal is justified under section (4).
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For the amendment request, the Council will continue to make its land use determination under ORS 469.504(1)(b), which requires:

(A) The facility complies with applicable substantive criteria from the affected local government's acknowledged comprehensive plan and land use regulations that are required by the statewide planning goals and in effect on the date the application is submitted, and with any Land Conservation and Development Commission

administrative rules and goals and any land use statutes that apply directly to the facility under ORS 197.646.

(B) For an energy facility or a related or supporting facility that must be evaluated against the applicable substantive criteria pursuant to subsection (5) of this section, that the proposed facility does not comply with one or more of the applicable substantive criteria but does otherwise comply with the applicable statewide planning goals, or that an exception to any applicable statewide planning goal is justified under subsection (2) of this section.

(C) For a facility that the council elects to evaluate against the statewide planning goals pursuant to subsection (5) of this section, that the proposed facility complies with the applicable statewide planning goals or that an exception to any applicable statewide planning goal is justified under subsection (2) of this section.[20]

ORS 469.504(5) provides, in relevant part that:

Upon request by the State Department of Energy, the special advisory group established under ORS 469.480 shall recommend to the council, within the time stated in the request, the applicable substantive criteria under subsection (1)(B)(A) of this section. If the special advisory group does not recommend applicable substantive criteria within the time established in the department's request, the council may either determine and apply the applicable substantive criteria under subsection (1)(b) of this section or determine compliance with the statewide planning goals under subsection (1)(b)(B) or (C) of this section.

Findings of Fact

The Land Use standard requires the Council to find that the amended facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission (LCDC). As described above, the Council may find compliance with the statewide planning goals by applying the applicable substantive criteria from the local governing body under ORS 469.504(1)(b)(A) or ORS 469.504(1)(b)(B). In the original application, the Council made a determination of compliance under ORS 469.504(1)(b)(B).[21] The Council appointed the Gilliam County Board of Commissioners as a special advisory group (SAG). The SAG identified the

[20] ORS 469.504(b)(2) provides the exceptions process for a facility that does not otherwise comply with one or more of the statewide planning goals. No party has identified the need for any exception in this amendment request.

[21] *Final Order on the Application* at 24.

following as applicable substantive criteria: Gilliam County Zoning and Land Development Ordinance (GCZO) Sections 4.020(A), 4.020(D)(14), 4.020(D)(29), 4.020(D)(34), 4.020(H), 4.020(J), 7.010 and 7.020(T).[22] The Council applied the applicable substantive criteria identified and found that the proposed facility complied with each of the applicable substantive criteria identified by Gilliam County, except for GCZO Section 4.020(D)(14), which limited the area that a power generation facility could occupy in an Exclusive Farm Use Zone. With regard to that criterion, the Council found that the facility otherwise complied with the applicable statewide planning goals in accordance with ORS 469.504(1)(b)(B).[23]

RFA #3 seeks approval for use of a new turbine model option that, if selected by the certificate holder, would lower the aboveground blade tip clearance from 20 to 14 meters. This change in turbine specification would also result in turbines a higher individual nameplate capacity of 3.6 MW, longer blades and a correspondingly larger rotor-swept (diameter) area. As explained in Section I.C of the final order, the area within the site boundary was previously approved by Council as a micrositing corridor, authorizing placement of facility components at any location within the micrositing corridor based on the ASC's evaluation of impacts. The certificate holder explains that while RFA #3 requests to use a differing turbine model option, turbines would be located in the previously approved micrositing corridor.

In RFA #3, the certificate holder confirmed that (GCZO does not currently contain standards or criteria that would apply to aboveground blade-tip clearance for wind turbines, and confirmed that there have been no modifications to the GCZO since the *Final Order on Amendment 2* that would impact the Council's prior findings under the Land Use Standard.[24] In addition, Gilliam County Planning Director commented as a reviewing agency during the RFA #3 comment period, that the county was neutral on the proposed changes included in RFA #3.[25] Similarly, on behalf of the Morrow County Board of Commissioners, the Morrow County Planning Director commented that the county had no comments on the proposed amendment.[26]

The certificate holder asserts that the facility modification included in RFA #3 would not increase the temporary or permanent impacts to agricultural land, impair the certificate holder's ability to comply with the local setback requirements, or change construction haul routes or required road improvements when transporting turbines to the site. The certificate holder explains that while the differing turbine model option would result in a longer turbine blade, the same type of truck, as evaluated in ASC Exhibit U, would be used for turbine delivery and that additional road modification (i.e. changes in turning radii) would not be required. Therefore, the certificate holder asserted that the impacts to county and state roads from

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[22] *Id.* at 26
[23] Id. at 57
[24] MWPAMD3Doc1, Personal communication, voicemail to Paul Hicks/CH2M from Michelle Colby, April 6, 2017.
[25] MWPAMD3Doc17 Reviewing Agency Comment Gilliam County 2017-05-30
[26] MWPAMD3Doc16 Reviewing Agency Comment Morrow County 2017-05-23

construction-related truck trips would be similar to or less than the impacts evaluated in ASC Exhibit U.

The Council finds that the facility modification included in RFA #3 would not result in any changes that affect the Council's previous analysis of compliance with the Land Use standard. Because the certificate holder will remain subject to the conditions included in the amended site certificate, the Council finds that the certificate holder continues to satisfy the requirements of the Land Use standard.

Conclusion

Based on reasons identified and discussed above, and subject to compliance with existing site certificate conditions, the Council finds that the facility, as amended, satisfies the Council's Land Use standard.

III.F. Protected Areas: OAR 345-022-0040

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(n) Research forests established by the College of Forestry, Oregon State University, including but not limited to McDonald Forest, Paul M. Dunn Forest, the Blodgett

Tract in Columbia County, the Spaulding Tract in the Mary's Peak area and the Marchel Tract;

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

(p) State wildlife areas and management areas identified in OAR chapter 635, Division 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.[27] As required under OAR 345-021-0010(L), the certificate holder identified the protected areas within the analysis area and confirmed that there are seven protected areas: Horn Butte Wildlife Area, Arlington State Park, John Day Wildlife Refuge, John Day Wild and Scenic River, John Day State Scenic Waterway, John Day (Hildebrand) State Park, and Willow Creek Wildlife Area. Potential impacts on these protected areas were evaluated based on noise, traffic, water use and wastewater disposal, and visual impacts.

Evaluation of Potential Impacts to Protected Areas

Noise Impacts

Under OAR 340-035-0035(5)(g), noise produced during construction is exempt from DEQ noise regulations.

To evaluate potential noise impacts at protected areas during facility operation, noise modeling was previously conducted based on operation of turbines with a maximum sound power level of 110 decibels on an A-weighted scale (dBA) (ASC Exhibit X, Table X-6) and a layout of 134 turbines. Based on the previous analysis included in *the Final Order on the ASC*, and as relied upon in the *Final Order on Amendment 1* and *Final Order on Amendment 2*, the Council

[27] OAR 345-001-0010(53) defines "Significant" as "…having an important consequence, either alone or in combination with other factors, based upon the magnitude and likelihood of the impact on the affected human population or natural resources, or on the importance of the natural resource affected, considering the context of the action or impact, its intensity and the degree to which possible impacts are caused by the proposed action. Nothing in this definition is intended to require a statistical analysis of the magnitude or likelihood of a particular impact."

concluded that the facility would not result in significant adverse noise impacts at protected areas.

As explained in RFA #3, the differing turbine model option, represented by a Vestas V136, has a maximum sound power level of 108.2 dBA and if selected, only 112 turbines would be constructed within the previously approved micrositing corridor.[28][29] Therefore, the certificate holder asserts and the Council agrees that noise impacts at protected areas within the analysis area would be less than previously analyzed and would not result in significant adverse noise impacts at protected areas.

The Council previously imposed several conditions (condition 97 and 107) to ensure compliance with DEQ's noise standards and to minimize noise related impacts at protected areas. Based on the nature of the change, the Council would not expect the facility modification included in RFA #3 to impact the certificate holder's ability to comply with these conditions.

In comments received on the proposed order, Ms. Gilbert requests that Condition 97 be amended establishing a construction buffer distance of 2,640- feet from the BLM Horn Butte Wildlife Area, versus the currently imposed 1,300-feet buffer distance, during the long-billed curlew nesting season. She expresses that the reasoning provided in the Council's 2010 *Final order on the ASC* is flawed because it relies on a conclusion included in the 2008 *Final Order on the ASC* for the Shepherds Flat Wind Farm (SFWF) that found that operational noise would not be likely to result in a significant impact at the BLM Horn Butte Wildlife Area based on

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[28] Turbine noise specifications and data for the Vestas V136 were submitted to the Oregon Department of Energy under separate, confidential cover on May 3, 2017.

[29] In comments received on the proposed order, Ms. Gilbert asserts that noise specifications for the differing turbine model option needs to be made available to the public and that this information is not confidential. She also alleges concern over the legitimacy of projections being made in the amendment request. MWPAMD3Doc29 2017-06-16.

Specific information that is required for ASCs or amendments may be exempt from the Public Records Law including trade secrets. On May 1, 2017, the certificate holder submitted to the Department a request that the turbine performance specifications for the proposed differing turbine model option represented in RFA #3 be treated as confidential because the noise data is considered trade secret information. The Department and the Department's legal Counsel at Department of Justice agreed with the certificate holder's assessment of the noise data as trade secret information and agreed to treat to the information as confidential and exempt from public disclosure pursuant to ORS 192.501.

The Department reviewed the noise data and confirmed that the representations included in RFA #3 were accurate and consistent with the turbine noise levels and operating modes identified in the confidential performance specifications. The Council conclude that the turbine performance specifications meet the trade secret criteria established in ORS 192.501 and that therefore the performance specifications are appropriately exempt from the Public Records Law. As noted, the turbine model is stated in the performance specification as having a maximum operational noise level of 108.2 dBA, compared to the previously-approved turbine model, 110 dBA.

compliance with a site certificate condition requiring a 2,640-foot buffer during the nesting season.

Based on the Department's review of the record for both MWP and SFWF, the buffer distances of 2,640-feet and 1,300-feet were buffers specifically proposed by the certificate holders during the ASC phase and therefore were imposed as site certificate conditions, in accordance with OAR 345-027-0020(10), representing binding commitments by the certificate holder. In addition to the buffer distance limitation, Condition 97 restricts certain types of construction activities during the long-billed curlew nesting season including blasting, grading or other major ground disturbing activities. The certificate holder, in ASC Exhibit X, represented that construction noise levels during any phase of construction would not exceed 60 dBA at a distance of 1,500-feet, and that the subjective impression of noise levels at 60 dBA is "quiet" and the typical sound level of a vacuum cleaner.

Ms. Gilbert's comment does not raise concern regarding the potential construction-related noise impacts from the proposed differing turbine model option or identify how the previously evaluated construction-related noise would result in a potentially significant adverse impact at the identified protected area. Because the Council previously found that based upon compliance with Condition 97, which includes limits on construction activities and establishes a setback distance of 1,300 feet during the long-billed curlew nesting season, that the certificate holder would comply with the Council's Protected Areas standard, and because the facility modification included in RFA #3 would result in the same or fewer noise impacts due to the decrease in overall number of turbines to be constructed, the Council does not consider amending Condition 97 necessary to satisfy the requirements of the Protected Areas standard.[30]

Additionally, Ms. Gilbert commented on the proposed order requesting that Condition 107 be amended to require noise modeling to demonstrate that operational noise levels at the BLM Horn Butte Wildlife Area demonstrate compliance with the "quiet areas" standard.[31] OAR 340-035-0035(1)(c) establishes allowable statistical noise levels at "quiet areas" designated by the Environmental Quality Commission. The Council has, in some instances, referred to operational noise levels of a wind facility in comparison to the "quiet areas" standard and determined that because noise levels would be lower than the standard, that noise levels would not be likely to result in significant adverse impacts at a protected area within the analysis area. However, the Environmental Quality Commission has not designated the Horn Butte Wildlife Area or any other area within Oregon as a "quiet area." Therefore, while the "quiet areas" noise standard establishes an allowable noise level for Environmental Quality Commission-designated "quiet areas", it does not specifically apply to any protected area in Oregon and therefore would not be appropriate for the Council to impose a requirement that the certificate holder demonstrate

[30] MWPAMD3Doc29 2017-06-16
[31] *Id.*

that operational noise levels would comply with the "quite areas" noise standard. Moreover, this comment does not explain why additional noise analysis would be required as a result of the proposed differing turbine model option and does not appear to be specific to the facility modification proposed in RFA #3, and therefore would be considered outside the scope of this amendment review. In addition, as noted, the differing turbine model option proposed in RFA #3 is quieter than the turbine model option previously approved by Council, and the certificate holder represents that, if selected, fewer turbines would be required based on the increased power output per turbine, thus further reducing the overall operational noise of the facility. Based on the certificate holder's representation of turbine noise level for the Vestas V136, and subject to compliance with Condition 97 and 107, the Council finds that the noise generated by the operation of the facility, amended, would not be likely to result in significant adverse noise impacts to protected areas.

Traffic Impacts

As evaluated in the *Final Order on the ASC*, the proposed primary and alternate transportation routes (off of Interstate 84) for construction and operational traffic do not pass through any protected areas.[32] The closest portion of the primary transportation route to a protected area is a portion of Fourmile Road that passes within two miles of the Horn Butte Wildlife Area. Portions of an alternate transporter route along Oregon Highway 74 may also pass within a mile of portions of the Horn Butte Wildlife Area.

As evaluated in the *Final Order on the ASC*, Fourmile Road has annual average daily traffic (ADT) volumes of less than 200 vehicles per day, and Oregon Highway 74 has an ADT volume of 110 to 150 vehicles per day.[33] In the ASC, the certificate holder estimated that construction vehicles carrying turbine components, machinery, electrical equipment, water and other materials would make 156 to 269 trips going to or coming from the facility site, depending on the size and number of turbines in the final design of the facility.[34] Not all of these trips, however, would utilize Fourmile Road or Highway 74. Construction traffic is not likely to result in significant traffic impacts affecting the Horn Butte Wildlife Area.

In RFA #3, the certificate holder explains that while the differing turbine model option would result in longer turbine blades, the same or similar number and type of haul/delivery trucks as evaluated in the ASC would be used, and that additional modification of roads (for wider

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[32] Access to the facility during construction and operation would be along transporter routes that are described in Exhibit U (App, Exhibit U, p. 3-4). The Arlington State Park and the Willow Creek Wildlife Area are adjacent to I-84. Construction and operation of the facility would not significantly increase traffic volume on I-84 (App, Exhibit U, p. 17).

[33] The applicant estimated the ADT volume for Fourmile Road, based on the 1999 Gilliam County Transportation System Plan. ADT volumes for Highway 74 are based on ODOT 2008 traffic volume data (App, Exhibit U, Table U-3).

[34] App, Exhibit U, p. 16, and email from Sara Parsons, May 5, 2010.

turning radii) would not be required as a result of the larger turbine blades. The certificate holder asserts that, if selected, the differing turbine model option would reduce the total number of turbines needed at the site to produce the generating capacity of the facility. Therefore, fewer overall haul and delivery truck trips would be required. Because the Council previously found that traffic generated by construction and operation of the facility would not be likely to result in significant traffic impacts to protected areas and due to the potential reduction in haul and delivery truck trips from the differing turbine model option, the Council finds that the impacts associated with the facility modification included in RFA #3 would be similar to or less than previously evaluated in the ASC and subsequent amendments.
The Council finds that potential traffic-related impacts during construction and operation of the facility, as amended, would not likely result in significant adverse impacts to any protected areas.

Water Use and Wastewater Disposal

As evaluated in the *Final Order on the ASC*, the certificate holder expects to use approximately 37 million gallons of water during construction activities for dust control, road and earthwork compaction, and concrete mixing.[35] The certificate holder would obtain water for construction purposes from sources subject to an existing water right or a limited water use license. No water used on the site would be discharged into streams, wetlands or other water bodies.[36]

During operation, water would be used for domestic and incidental purposes at the O&M facilities and for washdown of equipment. In the ASC, the certificate holder estimated that the maximum operational water use would be approximately 2,100 gallons per day.[37] The certificate holder would obtain water during facility operation from new on-site wells located at the O&M facilities. Sanitary wastewater would be discharged to an on-site septic system at each O&M facility and stormwater would infiltrate on-site.[38]
The certificate holder explains that, if selected, the differing turbine model option would allow for siting of fewer overall turbines at the site to produce the generating capacity. The certificate holder explains that the facility modification included in RFA #3 would not impact water use or wastewater disposal during construction and operation of the amended facility, as previously evaluated in the ASC.

Therefore, the Council finds that water use and disposal during construction and operation of the facility, as amended, would not affect water quantity or water quality within any protected area.

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[35] App, Exhibit O, p. 1.
[36] App, Exhibit L, p. 5.
[37] App, Exhibit O, p. 3.
[38] App, Exhibit L, p. 5.

Visual Impacts

As explained in the *Final Order on the ASC*, the Council at that time analyzed two scenarios in the evaluation of visual impacts at protected areas: (1) a maximum layout of 269 turbines using 1.5-MW turbines, and (2) a minimum layout of 134 turbines using 3.0-MW turbines. Both scenarios were analyzed using the relevant turbine dimensions; that is, the maximum layout was analyzed using the dimensions of a 1.5-MW turbine (hub height of 80 meters and turbine blade tip height of 119 meters), while the minimum layout was analyzed using the dimensions of the 3.0-MW turbine (hub height of 100 meters, maximum turbine blade tip height of 150 meters).[39] Based on this analysis, the Council concluded that there would be no significant adverse visual impact from either of these layouts on protected areas.[40]

The facility modification included in RFA #3 would not change the maximum blade tip height of 150 meters and would reduce the overall total number of turbines needed to achieve 404 MW for the facility, as amended. This modification falls within the scope of impacts evaluated under either two visual analyses in the ASC, i.e., the turbine tip is no greater and there will be no greater number of turbines. Therefore, the certificate holder asserts and the Council agrees that the change would not modify the previous analysis of potential visual impacts on protected areas. The Council finds that the facility, as amended, is not expected to have any significant adverse visual impacts on protected areas

The amendment would not result in any impacts to protected areas that have not been addressed by the Council in a previous order, or otherwise affect the certificate holder's ability to design, construct and operate the facility without significant adverse impact to protected areas. The certificate holder will remain subject to the conditions included in the amended site certificate.

<u>Conclusions of Law</u>

Based on the analysis above, the Council finds that the facility, as amended, would satisfy the requirements of the Protected Areas standard.

[39] MWPAMD3Doc1 (Sited Reference: Iberdrola Renewables, Montague Wind Power Facility Application for Site Certificate, Exhibit R, pp. R-1 and R-2 (January 21, 2010))
[40] MWPAMD3Doc1 (Sited Reference: Final Order on the Application for Site Certificate for the Montague Wind Power Facility, p. 65 (September 10, 2010).

III.G. 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.

To satisfy this standard, the Council must find that the site can be restored to a useful, non-hazardous condition following permanent cessation of the facility and that the certificate holder has a reasonable likelihood of obtaining a bond or comparable security, satisfactory to the Council, in an amount adequate to restore the site.

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.[41] In addition, it requires a demonstration that the applicant (certificate holder) can obtain a bond or letter of credit to restore the site to a useful, non-hazardous condition.

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 previously imposed four conditions (Condition 8, 9, 32 and 33) to address the certificate holder's site restoration and financial assurance obligations.[42] Before restoring the site, the certificate holder must submit a final retirement plan for approval by the Council (Condition 9). The retirement plan must describe the activities necessary to restore the site to a useful, non-hazardous condition. After Council approval of the plan, the certificate holder must obtain the necessary authorizations from the appropriate regulatory agencies to proceed with restoration of the site. Conditions 32 and 33 require the certificate holder to maintain a bond or letter of credit to ensure that funds would be available to the Council to restore the site if the

[41] OAR 345-022-0050(1).
[42] Conditions 8 and 9 are mandatory conditions under OAR 345-027-0020.

certificate holder does not retire the facility as required by Condition 8). None of these conditions would change or be affected by the changes requested in RFA #3.

Estimated Cost of Site Restoration

As described above, RFA #3 seeks approval for use of a new turbine model option that, if approved by the Council and selected by the certificate holder, would lower the aboveground blade tip clearance from 20 to 14 meters. This change in turbine specification would also result in turbines a higher individual nameplate capacity of 3.6 MW, longer blades and a correspondingly larger rotor-swept (diameter) area. The increase in individual turbine nameplate capacity, from 3.0 to 3.6 MW, would allow the certificate holder to reduce the total number of turbines needed at the site to produce the same overall generating capacity. The certificate holder asserts that the amendment would not affect the ability of the certificate holder to restore the site to a useful, non-hazardous condition; however, the reduction in total number of turbines would likely result in a substantial decrease in the estimated site restoration cost.

In the *Final Order on the ASC*, the cost of site restoration was estimated at $21.511 million (3rd Quarter 2010 dollars), excluding any deduction for scrap or salvage value.[43] In RFA #3, certificate holder asserts that because the original estimate was based on removal of a maximum of 269 GE 1.5-MW turbines, and the amendment would allow a significant decrease in the total number of turbines used at the site, that the original cost estimate remains adequate for site restoration.

Ability of the Applicant (Certificate Holder) to Obtain a Bond or Letter of Credit

OAR 345-022-0050(2) requires the Council to find that the applicant (certificate holder) has a reasonable likelihood of obtaining a bond or letter of credit in a form and amount necessary to restore the proposed facility site to a useful non-hazardous condition. A bond or letter of credit provides a site restoration remedy to protect the state of Oregon and its citizens if the certificate holder fails to perform its obligation to restore the site. The bond or letter of credit must remain in force until the certificate holder has fully restored the site. OAR 345-027-0010(8) establishes a mandatory condition, Condition 8, which ensures compliance with this requirement.

As part of the Council's review of the previous amendment request, RFA #2, the certificate holder provided a new comfort letter dated July 17, 2015 from Santander Bank, N.A. as proof that the certificate holder has a reasonable likelihood of obtaining a bond or letter of credit of at least $21.511 million (3rd Quarter 2010 Dollars). The Council considers the 2015 comfort

[43] App, Exhibit W, Attachment W-1, Table W-1.

letter as evidence of a reasonable likelihood that the certificate holder has the ability of obtaining a bond or letter of credit of at least $21.511 million (3rd Quarter 2010 Dollars).

Conditions 8 and 32 require that prior to construction the certificate holder submit to the State of Oregon, through the Council, the actual bond or letter of credit based upon an updated retirement cost estimate adjusted to reflect final facility design. The construction commencement deadline is September 14, 2017; RFA #3 did not include a request to extend the construction commencement deadline. Therefore, because the certificate holder submitted an updated comfort letter less than 2-years from the date of issuance of the final order, and because the actual bond or letter of credit is required within 3-months of the date of issuance of this final order, the Council concludes that based upon compliance with pre-construction conditions the certificate holder has a reasonable likelihood of obtaining a bond or letter of credit in an amount necessary to restore the site.

Conclusions of Law

Based on the foregoing findings of fact, the Council finds that the facility, as amended, continues to comply with the Council's Retirement and Financial Assurance standard.

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

> *To issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025 in effect as of September 1, 2000.*

Findings of Fact

The Fish and Wildlife Habitat standard requires the Council to find that the design, construction, and operation of a facility are consistent with fish and wildlife habitat mitigation goals as set forth in OAR 635-415-0025.

The Council addressed the Fish and Wildlife Habitat standard in the *Final Order on the ASC*, *Final Order on Amendment 1*, and *Final Order on Amendment 2*. The Council made findings regarding the characteristics of the habitat types within the site boundary and the State sensitive species observed within or near the site boundary during avian point-counts and other wildlife surveys. Based on those findings, the Council found that, subject to specified conditions, the design, construction and operation of the facility, taking mitigation into consideration, would be consistent with ODFW's habitat mitigation goals and standards.[44] To ensure compliance with the Fish and Wildlife Habitat standard, the Council adopted the

[44] MWPAPPDoc147 MWP Final Order 2010-09-10, p. 113

following site certificate conditions, all related to ensuring appropriate construction and operation design, monitoring and mitigation to avoid adverse effects on affected habitats:

- Condition 31 requires the certificate holder to provide the Department a description of the final design configuration and an assessment of the affected habitats before beginning construction, and to consult with ODFW at the time of the pre-construction habitat assessments
- Condition 93 requires the certificate holder to protect and enhance a mitigation area as described in the Habitat Mitigation Plan
- Condition 94 requires that the certificate conduct pre-construction Washington ground squirrel surveys, and requires that survey results be provided to the Department and ODFW for review and coordination to ensure adequate protection of the species[45]
- Conditions 95 require the certificate holder to conduct pre-construction plant surveys, wildlife surveys, avian use surveys, and raptor nest surveys
- Condition 96 requires avoidance of construction impacts to raptors during the nesting season
- Condition 98 restricts the location of construction activities
- Condition 99 addresses facility design measures to reduce potential adverse effects to avian species
- Condition 91 incorporates the Wildlife Monitoring and Mitigation Plan and requires the certificate holder to conduct wildlife monitoring as described in that Plan
- Condition 100 requires the certificate holder to instruct personnel about sensitive species, exclusion areas, permit requirements and other environmental issues.

In the original habitat site assessment, as described in ASC Exhibit P, habitat types within the site boundary were categorized using ODFW's wildlife habitat categories as defined in OAR 635-415-0025. To avoid and minimize both temporary and permanent impacts to high-quality native

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[45] In comments received on the proposed order, Ms. Gilbert requests Condition 94 be amended to specify that the survey area for Washington Ground squirrels (WGS) include "all areas of suitable habitat within 785 of where permanent components would be located..." versus the currently stated, "...all areas of suitable habitat where permanent facility components would be located…" MWPAMD3Doc29.

Condition 94 requires that the certificate holder's protocol for pre-construction WGS surveys be reviewed and approved by ODFW. The survey protocol was approved by ODFW in March 2017; the pre-construction WGS surveys required to satisfy the requirements of Condition 94 have been completed; the reports have not yet been submitted to the Department and ODFW for review. The ODFW approved protocol stated that a qualified biologist would conduct surveys in areas of suitable WGS habitat within 1,000-feet of the facility. Survey corridors would not include unsuitable WGS habitat.

The Council considers the requirements of the condition in conjunction with the approved protocol, which ensure that the pre-construction WGS surveys would include all areas of suitable habitat where permanent facility components would be located, areas where construction disturbance could occur, and all areas of suitable habitat within 1,000-feet of facility components. Based on compliance with the condition and approved protocol, the Council considers Ms. Gilbert's comment to be addressed.

habitat, the certificate holder proposes to place turbines and facility components in areas of cultivated dry land wheat (i.e., Category 6 habitat). In its comment letter, ODFW confirmed that wheat fields are considered Category 6 habitat under the ODFW Mitigation Policy, which provides very little if any wildlife benefit, and therefore did not recommend any additional compensatory mitigation.

Proposed Facility Modification Impacts to Sensitive Wildlife within the Analysis Area

RFA #3 seeks approval for use of a new turbine model option that, if selected by the certificate holder, would lower the aboveground blade tip clearance from 20 to 14 meters. This change in turbine specification would also increase the individual turbine nameplate capacity from 3.0 to 3.6 MW, and would result in turbines with longer blades and a correspondingly larger rotor-swept (diameter) area.

The certificate holder asserts that, based on a literature review, there is no supporting research documenting effects of minimum blade clearance on wildlife. However, the certificate holder explains that a larger rotor-swept area may increase the risk to birds and migratory bats from collision with turbine blades and that a lower minimum blade tip clearance could make low flying avian species, such as gamebirds or songbirds, more susceptible to collision. Further, the certificate holder explains that while some avian species, including grassland-nesting birds, are indirectly impacted by displacement from siting of a wind energy generation facility, it is uncertain whether displacement would be impacted by a reduction in minimum aboveground blade tip clearance.

RFA #3 explains that avian species known to fly within the 14- to 20-meter altitude range, or that were observed during facility specific avian use surveys, include the common raven, horned lark, and long-billed curlew. Therefore, the certificate holder expresses that collision risk from the lower blade tip could increase slightly for these species, but explains that the increase in risk would not likely be biologically significant, and not substantially different from the original impact assessment for these species.

RFA #3 further evaluates whether the change in turbine blade-tip clearance could result in increased risk to migratory bats. Certificate holder explains that bats, if present, may be at increased risk of collision with wind turbines with larger rotor-swept areas; however, because the flight altitude of migratory bats is not well documented, the level of increased risk is difficult to estimate. As explained in RFA #3, migratory tree-roosting bats appear more prone to collisions with wind turbines; and, hoary bats and silver-haired bats, known to occur in the facility vicinity, are species of long-range migrants that have been killed at wind power projects during their migratory periods, suggesting that at least some bats migrate below 150 meters above ground level.

Mitigation and Monitoring

The Department relies significantly upon the knowledge, experience, and input of ODFW when assessing a facility's impact to fish and wildlife habitat under the Fish and Wildlife Habitat standard, including ODFW's knowledge of habitat types, species use of an area, and habitat categorization. Based on the Department's request for agency review of the amendment request, ODFW provided several recommendations which are discussed below.[46]

Based on the facility design and compliance with existing site certificate conditions, the certificate holder asserts that bird and bat collision risk will be minimized by placing turbines in low quality bird habitat (i.e., Category 6 habitat) and implementing a fatality monitoring study to measure avian fatalities. The certificate holder explains that the results of the fatality monitoring study will be used to determine whether additional mitigation is appropriate based on fatality rates for species of concern. The fatality monitoring study is a component of the Wildlife Monitoring and Mitigation Plan required under Condition 91.

In its comment letter, ODFW confirmed that published information describing the mortality effects of larger turbines on avian and bat species was not available. ODFW further recommended that given the lack of available information demonstrating an increased risk to wildlife beyond what was already assumed in the existing facility design and mitigation plan, ODFW assumes the existing avoidance and mitigation strategies remain adequate.

ODFW commented on the fatality monitoring study and requested, consistent with the study duration included in WMMPs for other Council-jurisdictional wind facilities, that the duration of the post-construction study be at least 2-years, versus 1-year as represented by the certificate holder in RFA #3. The Council, therefore, amends Condition 91 to clarify that the certificate holder shall submit and receive approval of a final WMMP from the Department in consultation with ODFW prior to beginning construction, which would more appropriately address ODFW's comment on fatality monitoring study duration and any other changes deemed appropriate based on changes in environmental conditions and final facility design.

> **Condition 91 as amended**: Prior to construction, the certificate holder shall finalize the Wildlife Monitoring and Mitigation Plan (WMMP), based on the WMMP included as Attachment E of the *Final Order on Request for Amendment #3,* as approved by the Department in consultation with ODFW. The certificate holder shall conduct wildlife monitoring as described in the final WMMP, ~~Wildlife Monitoring and Mitigation Plan that is incorporated in the *Final Order on the Application* as Attachment A and~~ as amended from time to time.
> [Amendment #3]

[46] MWPAMD3Doc18 2017-05-31. Reviewing Agency Comment ODFW

To ensure that habitat impacts are appropriately categorized and that the associated mitigation is adequate to meet the Fish and Wildlife Habitat standard, the Council amends Condition 92 and 93 of the site certificate to specify coordination with the Department and ODFW.

> **Condition 92, as amended**: The certificate holder shall restore areas disturbed by facility construction but not occupied by permanent facility structures according to the methods and monitoring procedures described in the final Revegetation Plan, as approved by the Department in consultation with ODFW. The final Revegetation Plan shall be based on the draft plan that is incorporated as Attachment F in the *Final Order on Request for ~~the Application~~ Amendment #3* ~~as and~~ as amended from time to time.
> [Amendment #3]

> **Condition 93, as amended:** The certificate holder shall acquire the legal right to create, enhance, maintain and protect a habitat mitigation area as long as the site certificate is in effect by means of an outright purchase, conservation easement or similar conveyance and shall provide a copy of the documentation to the Department. Within the habitat mitigation area, the certificate holder shall improve the habitat quality as described in the final Habitat Mitigation Plan, as approved by the Department in consultation with ODFW. The final Habitat Mitigation Plan shall be based on the draft plan included as ~~that is incorporated in the *Final Order on Application* as~~ Attachment ~~C~~G to the *Final Order on Request for Amendment #*3 and updated based on Condition 31. The final Habitat Mitigation Plan may be~~ and a~~s amended from time to time.
> [Amendment #3]

The Council previously found that the facility would satisfy the requirements of the Council's Fish and Wildlife Habitat Standard.[47] The Council finds that, with the existing and amended conditions described herein, the reduction in minimum blade clearance by 6 meters would not affect the Council's prior findings regarding the ability of the facility, as amended, to satisfy the requirements of the Fish and Wildlife Habitat standard. Moreover, because use of the differing turbine model option, with a lower minimum aboveground blade tip clearance, would reduce the total number of turbines needed at the site and associated permanent impacts, the Council concludes that impacts under the Fish and Wildlife Habitat standard would be less than previously evaluated.

Conclusions of Law

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

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[47] Final Order on the Request for Contested Case and Amendment #2 for the Montague Wind Power Facility, p. 27 (December 4, 2015).

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

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

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

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

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

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

Findings of Fact

The Threatened and Endangered Species standard requires the Council to find that the design, construction, and operation of the facility is not likely to cause a significant reduction in the likelihood of survival or recovery of a fish, wildlife, or plant species listed as threatened or endangered by ODFW or Oregon Department of Agriculture (ODA). For threatened and endangered plant species, the Council must also find that the facility is consistent with an adopted protection and conservation program from ODA. Threatened and endangered species are those listed under ORS 564.105(2) for plant species and ORS 496.172(2) for fish and wildlife species. For the purposes of this standard, threatened and endangered species are those identified as such by either the Oregon Department of Agriculture or the Oregon Fish and Wildlife Commission.[48]

The analysis area for threatened or endangered plant and wildlife species is the area within and extending five-miles from the site boundary. The Council addressed the Threatened and

[48] Although the Council's standard does not address federally-listed threatened or endangered species, certificate holders must comply with all applicable federal laws, including laws protecting those species, independent of the site certificate.

Endangered Species standard in the *Final Order on the ASC*, *Final Order on Amendment 1*, and *Final Order on Amendment 2*.

As evaluated in the *Final Order on the ASC*, during the application phase, the certificate holder observed one State-listed threatened plant species (Laurent's milk-vetch) and one State candidate plant species (sessile mousetail) within the site boundary during surveys conducted for the Leaning Juniper II facility in 2009 and Pebble Springs facility in 2006.[49,50] Habitat suitable for another Candidate species (dwarf evening primrose) was also identified within the site boundary.[51] Condition 95 would ensure protection of populations of Laurent's milk-vetch as well as the two Candidate species. The Council previously found that the design, construction and operation of the facility were not likely to cause a significant reduction in the likelihood of survival or recovery of Laurent's milk-vetch. In RFA #3, the certificate holder asserts that the differing turbine model option would not result in any new impacts to threatened or endangered plant species.

In RFA #3, the certificate holder addressed potential impacts to bald eagle and Washington ground squirrels (WGS) from the changes associated with the turbine model option. Certificate holder notes, however, that since the state of Oregon has delisted the bald eagle, potential impacts to the species is no longer considered under the Council's Threatened and Endangered Species standard.

Conditions 68 and 57 would reduce cover for raptor prey near turbines and avoid creation of artificial habitat for raptor prey. Condition 88 requires that the certificate holder adhere to Avian Power Line Interaction Committee suggested practices and placement of collector lines underground as feasible, which would minimize potential collision risk to bald eagles and other raptors. The Council previously imposed Condition 94 to require additional WGS surveys, and Condition 95 to require exclusion flagging and avoidance of WGS habitat during construction. The certificate holder asserts, and the Council agrees, that the changes associated with the turbine model option would not impact the certificate holder's ability to comply with Conditions 57, 68, 88, 94, and 95. Moreover, the certificate explains that the amendment would not affect the amended facility's ability to avoid impacts to Category 1 habitat and would not affect the amended facility's ability to avoid and minimize impacts to Category 2 habitat.

Based on the certificate holder's representations and analysis, and subject to compliance with the existing conditions, the Council finds that the design, construction, and operation of the facility, as amended, are not likely to cause a significant reduction in the likelihood of survival or recovery of any Threatened or Endangered Species.

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[49] App, Exhibit Q, p. 1.
[50] Sessile mousetail is also a federal Species of Concern (App, Exhibit Q, p. 11).
[51] Dwarf evening primrose is also a federal Species of Concern and a Washington Sensitive Species (App, Exhibit Q, p. 12).

Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the existing site certificate conditions, the Council finds that the facility, as amended, would comply with the Council's Threatened and Endangered Species standard.

III.J. Scenic Resources: OAR 345-022-0080

> *(1) Except for facilities described in section (2), to issue a site certificate, the Council must find that the design, construction and operation of the facility, taking into account mitigation, are not likely to result in significant adverse impact 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 lands located within the analysis area described in the project order.*

Findings of Fact

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

In RFA #3, the certificate holder confirmed that none of the local, state, or federal management plans have been updated since the *Final Order on the Application* was issued in (2010) and consequently, no new scenic resources were identified. Further, no new local, state, or federal management plans applicable to the analysis area are known to have been prepared since 2010. The certificate holder concludes that, based on the literature review, there are no new scenic resources not previously evaluated within the analysis area.

Based on the scope of the change, the Council finds that the facility modification included in RFA #3 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 compliance with the existing conditions, the Council finds that the design, construction, and operation of the facility, as amended, would not be likely to result in significant adverse impact to any identified scenic resources and values.

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 Council finds that the facility, as amended, continues to satisfy the requirements of the Council's Scenic Resources standard.

III.K. 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:*
>
> > *(a) Historic, cultural or archaeological resources that have been listed on, or would likely be listed on the National Register of Historic Places;*
> >
> > *(b) For a facility on private land, archaeological objects, as defined in ORS 358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c); and*
> >
> > *(c) For a facility on public land, archaeological sites, as defined in ORS 358.905(1)(c).*
>
> *(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

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

RFA #3 seeks approval for use of a new turbine model option that, if approved by the Council and selected by the certificate holder, would lower the aboveground blade tip clearance from 20 to 14 meters. This change in turbine specification would also increase the individual turbine nameplate capacity from 3.0 to 3.6 MW, and would result in turbines with longer blades and a correspondingly larger rotor-swept (diameter) area. As explained in this final order, the increase in individual turbine nameplate capacity would allow for the siting of fewer overall number of turbines to meet the generating capacity of 404 MW. Therefore, the certificate holder explains that the request for use of a differing turbine model option would not result in

increased ground disturbance or place turbines outside of the previously approved site boundary.[52]

In the *Final Order on the ASC*, the Council adopted Conditions 47 through 51 which require construction flagging, siting, and construction restrictions in the vicinity of visible remnants of the Oregon Trail; the requirements of the condition also include field investigations in areas that were not previously surveyed, and training and procedures for construction personnel. The certificate holder would remain subject to the requirements of these conditions.

Conclusions of Law

Based on the foregoing analysis, and in accordance with OAR 345-022-0090(2), the Council relies on the existing site certificate conditions to address the Historic, Cultural and Archaeological Resources standard.

III.L. Recreation: OAR 345-022-0100

> *(1) Except for facilities described in section (2), to issue a site certificate, the Council must find that the design, construction and operation of a facility, taking into account mitigation, are not likely to result in a significant adverse impact to important recreational opportunities in the analysis area as described in the project order. The Council shall consider the following factors in judging the importance of a recreational opportunity:*
>
> > *(a) Any special designation or management of the location;*
> > *(b) The degree of demand;*
> > *(c) Outstanding or unusual qualities;*
> > *(d) Availability or rareness;*
> > *(e) Irreplaceability or irretrievability of the opportunity.*

[52] In a comment letter, the Confederated Tribes of Umatilla Reservation (CTUIR) expressed concern that the facility would be located within a historic property of religious and cultural significance to the CTUIR, which has been determined eligible for the National Register by the Keeper of the National Register. CTUIR further states that mitigation has not been proposed for the potential impacts to this property and requests that an evaluation of impacts and mitigation proposal be completed. This comment does not appear to be related to the proposed amendment, which is specific to a change in turbine model option, and if approved would allow use of a turbine model within a micrositing corridor previously approved by the Council. Comments that are not related to the amendment request are outside the scope of the Council's jurisdiction and evaluation of the amendment request.

Findings of Fact

The Recreation standard requires the Council to find that the design, construction and operation of a facility are not likely to result in significant adverse impacts to 'important' recreational opportunities. Therefore, the Council's Recreation standard applies to only those recreation areas that the Council finds "important" using the factors listed in the sub-paragraphs of section (1) of the standard. The project order identified the analysis area for the Recreation standard as the area within and extending five miles from the site boundary.

In RFA #3, the certificate holder confirmed that there were no new recreational facility development or opportunities along the portion of the Lewis and Clark National Historic Trail segment and that there were no new state parks (or state waysides), not previously evaluated, within the analysis area. In the *Final Order on the ASC,* the Council found that there were recreational opportunities within the analysis area that would be considered "important" under the standard, including the McDonald Crossing of the Oregon National Historic Trail and the Fourmile Canyon interpretive site of the Oregon National Historic Trail.[53]

The certificate holder's previous visual impact assessment identified that the facility would not be visible from the segment of the McDonald Crossing of the Oregon National Historic Trail considered to be "important" under the Council's Recreation standard. While RFA #3 proposes to use a differing turbine model option larger blades, the overall turbine tower height would not change. Therefore, the certificate holder explains, and the Council agrees, that the facility modification included in RFA #3 would not result in different or greater visual impacts than impacts considered in the previous evaluation.

As stated above, the Council previously found that the Fourmile Canyon interpretive site of the Oregon National Historic Trail offers an important recreational opportunity.[54] Analysis provided in the original ASC and Supplement showed that approved turbine towers would be visible in the background of the view from the Fourmile Canyon interpretive site.[55] Therefore, to ensure visual impacts from facility operation were minimized at this important recreational opportunity, the Council imposed Condition 105 establishing a minimum setback distance of 1,000 feet measured from the centerline of each turbine tower or meteorological tower to the centerline of the line-of-sight from the vantage point of the Fourmile Canyon interpretive site looking toward the visible Oregon Trail ruts. Based upon compliance with Condition 105, the Council concluded that the facility would not result in a significant adverse impact to this important recreational resource.

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[53] Final Order, p. 76 (September 10, 2010).
[54] Final Order, p. 77 (September 10, 2010).
[55] Iberdrola Renewables, Montague Wind Power Facility Application for Site Certificate, Exhibit R, Figure R-1 (January 21, 2010).

To support a conclusion that the changes proposed in RFA #3 would not result in a new or increased visual impact at the Fourmile Canyon interpretive site, the certificate holder provided photo-simulations showing the appearance of the previously approved 3.0-MW turbines looking west from the Fourmile Canyon interpretive site, compared to a simulation of the same view showing the appearance of the Vestas V136 turbines. The photo-simulations depict that views of the turbines would be less prominent along the horizon of the hillside and the slimmer profile would reduce the visual effect of the facility, as amended, on the landscape, further minimizing the view of the turbines from the Fourmile Canyon interpretive site. Therefore, the Council concludes that the facility, as amended, would not result in a significant adverse visual impact to this important recreational resource.

Based on the certificate holder's analysis and representations, and compliance with existing site certificate conditions, the Council finds that there are no new important recreational resources to consider and that the facility, as amended, would not result in significant adverse impacts to important recreational resources in the analysis area.

Conclusions of Law

Based on the foregoing, the Council finds that the design, construction and operation of the facility, as amended, would not be likely to result in a significant adverse impact to any important recreational opportunities in the analysis area and therefore the facility, as amended, continues to complies with the Council's Recreation standard.

III.M. 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.*
>
> ** * **

Pursuant to OAR 345-022-0110 (2), the Council may issue a site certificate for a wind energy without making findings regarding the public services standard; however, the Council may impose site certificate conditions based upon the requirements of the standard.

Findings of Fact

The Council's Public Services standard requires the Council to identify likely significant adverse 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.

The Council addressed the Public Services standard in the *Final Order on the ASC*, *Final Order on Amendment 1*, and *Final Order on Amendment 2*. The analysis area for public services is the area within and extending 10-miles from the site boundary.

RFA #3 seeks approval for use of a new turbine model option that, if approved by the Council and selected by the certificate holder, would lower the aboveground blade tip clearance from 20 to 14 meters. This change in turbine specification would also result in turbines with longer blades and a correspondingly larger rotor-swept (diameter) area. The certificate holder asserts, and the Council agrees, that the facility modification included in RFA #3 would not alter the 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.

Potential impacts to traffic safety would be the same if not less than previously analyzed because, as explained in RFA #3, the same type of delivery trucks, and same number if not less of delivery truck trips would be needed during construction to deliver turbines to the site. The Council concludes that the traffic analysis presented in the ASC[56] can be relied upon for evaluating impacts to public roadways and providers of transportation service.

Based upon the foregoing, the Council finds that the construction and operation of the facility, as amended, are not likely to result in significant adverse impact to the ability of public and private providers to provide public services.

Conclusions of Law

Based on the foregoing analysis, and in accordance with OAR 345-022-0110(2), the Council relies on the conditions currently imposed in the existing site certificate to address compliance of the facility, as amended, with the Council's Public Services standard.

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[56] Application for Site Certificate, Exhibit U, p. U-17 and U-18 (January 10, 2010).

III.N. Waste Minimization: OAR 345-022-0120

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

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

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

(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.
*****

Pursuant to OAR 345-022-0020(2), the Council may issue a site certificate for a wind energy facility without making findings regarding the Waste Minimization standard; however, the Council may impose site certificate conditions based upon the requirements of the standard.

Findings of Fact

The Waste Minimization standard requires the Council to find that the certificate holder will minimize the generation of solid waste and wastewater, and that the waste generated will be managed to result in minimal adverse impacts on surrounding and adjacent areas.

To ensure compliance with the requirements of the standard, the Council previously adopted Condition 111 and 112, which summarize the requirements of the certificate holder's solid waste management plan during construction and operation, respectively. The Council also adopted Condition 80 which requires that the certificate holder obtain a NPDES 1200-C permit and its associated Erosion and Sediment Control Plan. The Erosion and Sediment Control Plan describes best management practices for erosion and sediment control, spill prevention and response procedures, regular maintenance for vehicles and equipment, employee training on spill prevention and proper disposal procedures. Condition 110 requires the certificate holder to discharge sanitary wastewater generated at the O&M facilities to licensed on-site septic systems in compliance with State permit requirements.

Based upon the scope of the change, the facility modification included in RFA #3 would not be expected to increase the amount of solid waste and wastewater generated by the facility, as

amended, and would not modify the procedures and practices to be used to handle these materials. Therefore, based upon compliance with existing site certificate conditions, the Council finds that the certificate holder would minimize and manage solid waste and wastewater, resulting in minimal adverse impacts on surrounding and adjacent areas.

Conclusions of Law

Based on the foregoing analysis, and in compliance with OAR 345-022-0120(2), the Council relies upon the existing site certificate conditions to address the Council's Waste Minimization Standard.

III.O. Division 23 Standards

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

III.P. Division 24 Standards

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

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

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

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

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

Findings of Fact

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

The Council addressed the Public Health and Safety standard for Wind Facilities in the *Final Order on the ASC*, *Final Order on Amendment 1*, and *Final Order on Amendment 2*. The Council imposed several conditions in the *Final Order on the Application* and found that the certificate holder could design, construct, and operate the facility to exclude members of the public from close proximity to the turbine blades and electrical equipment. The Council further found that the certificate holder could design, construct, and operate the facility to preclude structural failure of the tower or blades that could endanger public safety, and to have adequate safety devices and testing procedures designed to warn of impending failure and to minimize the consequences of such failure.

The *Final Order on the ASC* explained that Condition 27, specifically the requirements limiting the minimum above-ground blade tip clearance, was imposed to satisfy the requirements of the Public Health and Safety Standards for Wind Energy Facilities (OAR 345-024-0010). Therefore, RFA #3 includes an evaluation of the potential risk of structural failure from turbine blades and evaluates whether the level of risk would be impacted by the facility modification reducing the minimum aboveground blade tip clearance.

In RFA #3, the certificate holder explains that blade failure can occur due to lightning damage, human error, stresses that exceed the design parameters of the blade or its connection to the hub, or manufacturing defects. Lightning damage and human error are unrelated to blade length. The certificate holder expresses that manufacturing defects are no more likely with the longer blade than they are with the previously approved blade length, and the longer blade is designed and tested to withstand the same stresses (caused by wind pressure and operation of the turbine) that the previously approved blade was designed to withstand. Turbine manufacturers and wind farm developers undertake significant measures to ensure blade safety to minimize risk and liability. As explained in RFA #3, blades are inspected during operation to identify and address potential blade defects and minimize the potential for blade failure.

In RFA #3, the certificate holder addresses risks from ice shedding or ice throw and explains that risk is based on the number of icing events per year, wind speed, turbine size, and the number of passersby who could potentially be struck by ice. None of these variables are related to the change in minimum blade tip clearance except for turbine size (i.e., blade length). However, the turbine size variable used in calculating ice throw risk is the hub height plus the blade length, which is equal to the maximum blade tip height. Because the change to minimum blade tip clearance would not result in any increase in maximum blade tip height, the certificate holder asserts that risk from ice shedding would not be impacted by the facility modification included in RFA #3.

In comments received on the proposed order, in response to the certificate holder's evaluation of potential risks from ice shedding or ice throw, Ms. Gilbert requests that Condition 42(b), (d), and (e) be amended establishing a setback distance 1.5 times the height of the hub plus rotor diameter, versus the existing established minimum distance of 110-percent of the maximum

blade tip height, to the nearest edge of any public road right-of-way, to the nearest boundary of the certificate holder's lease area, and to the nearest edge of any railroad right-of-way or electrical substation. Ms. Gilbert cites a paper produced by General Electric Renewable Energy titled, "*Ice Shedding and Ice Throw Risk and Mitigation*" and explains that recommendations by industry experts should be followed. While Ms. Gilbert cites a "paper" by industry experts, the Department identified that the referenced literature is a pamphlet. The pamphlet states that a formula developed as guidance for estimating safe distances from an occupied structure, road or public use area is: "1.5 x (hub height + rotor diameter)." The pamphlet further states that "actual distance is dependent on turbine dimensions, rotational speed and many other potential factors."

The Council agrees that if there are manufacturer specifications, peer reviewed papers, or recognized industry standards that establish variables for evaluating setback distances to ensure protection of public health and safety from wind facility operational risks such as ice throw, which could contribute to mechanical and structural issues, that they be considered in the evaluation of conditions necessary to satisfy the requirements of the Public Health and Safety Standards for Wind Energy Facilities (OAR 345-024-0010). The referenced literature provided by Ms. Gilbert appears to be dated 2006; it is uncertain if this literature represents currently accepted industry standards or whether the analysis conducted to support the formula was peer reviewed and currently considered accurate. It is also uncertain how the formula should be applied to current wind turbine technology or the turbine model option included in RFA #3.

Additionally, Condition 42 includes setback requirements of a minimum distance of 1,320 feet from any residence, and a distance of at least 3,520 feet from the property line of a property zoned residential. Furthermore, there are very few public roads that cross the site boundary, and Ms. Gilbert has not specified how or if the current 110 percent setback does not provide sufficient mitigation of any risk from ice throw by the amended facility.

Based on the certificate holder's assessment of potential risk from ice throw, and assertion that the risk would not be impacted as a result of the proposed differing turbine model option, and uncertainty in the validity and accuracy of the cited literature provided by Ms. Gilbert, the Council concludes that the setbacks imposed in Condition 42 are sufficient and consistent with Gilliam County Zoning ordinance requirements.

The certificate holder addressed the risk of catastrophic blade failure and explained that based on industry design standards and advancements in material testing, blade failure from modern wind turbines is remote. The certificate holder explained that turbine blades are designed to meet International Electrotechnical Commission (IEC) 61400 standards, which specify the minimum design requirements for wind turbines. The IEC 61400 standards outline full-scale structural testing protocols of blades before new types of blades become commercially available. These tests include extreme loading and fatigue testing to simulate a range of field conditions through the design lifetime of the blades.

Condition 42 establishes setback requirements for turbines, including a setback distance of at least 1,320 feet from residences and 110 percent of maximum blade tip height (541 feet for the tallest authorized turbine) from public roads. Based on the certificate holder's representation, the nearest residence would be 1,322 feet and the nearest public road would be 650 feet from a proposed turbine site. The certificate holder asserts, and the Council agrees, that these setbacks would reduce risk to public safety during an ice shedding event or the unlikely event of a blade failure.

Condition 58 requires that the certificate holder install and maintain self-monitoring devices on each turbine, linked to sensors at the operations and maintenance building, to alert operators to potentially dangerous conditions, and the certificate holder shall immediately remedy any dangerous conditions. The certificate holder explains that turbines with lower blade tip clearance, like the Vestas V136, would use the same type of self- monitoring devices, sensors, and control systems as the turbine types previously evaluated. As described in RFA #3, turbine protection systems include sensors that monitor rotor revolutions and trigger safety shutdowns in the event of an over-speed situation. In an over-speed situation or when an operational alarm sends a signal to stop operating, sensors trigger aerodynamic braking to stop the turbine by fully feathering out the three blades. The certificate holder asserts that this system of braking and turbine shutdown works in the same way regardless of blade size. The certificate holder further explains that there is a mechanical disc brake on the high- speed side of the gearbox with a dedicated hydraulic system. The mechanical brake is only used as a parking brake and when activating the emergency stop buttons. RFA #3 identifies that turbines have multiple smoke detectors to detect fires and shut down the turbine. Lightning protection systems are also standard to protect against damage from lightning strikes. If sensors detect abnormal operating conditions that could be dangerous, the turbine control systems are programmed to automatically shut down the equipment. Therefore, Council concludes that Condition 58 is sufficient to ensure that turbines are operated in a safe and consistent manner.

Based upon the differing turbine model option included in RFA #3, the Council amends Condition 27 as follows:

> **Condition 27, as amended:** The certificate holder shall construct the facility substantially as described in the site certificate and may select turbines of any type, subject to the following restrictions and compliance with all 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 269 turbines.
>
> (b) The combined peak generating capacity of the facility must not exceed 404 megawatts and the peak generating capacity of any individual turbine must not exceed ~~3.0~~ 3.6 megawatts. [Amendment #3]
>
> (c) The turbine hub height must not exceed 100 meters and the maximum blade tip height must not exceed 150 meters.

(d) The minimum blade tip clearance must be ~~20~~ 14 meters above ground. [Amendment #3]
(e) The certificate holder shall request an amendment of the site certificate to increase the combined peak generating capacity of the facility beyond 404 megawatts, to increase the number of wind turbines to more than 269 wind turbines or to install wind turbines with a hub height greater than 100 meters, a blade tip height greater than 150 meters or a blade tip clearance less than ~~20~~ 14 meters above ground. [Amendment #3]

The Council finds that the certificate holder continues to have the ability to design, construct, and operate the facility, as amended, to exclude members of the public from close proximity to the turbine blades and electrical equipment. The Council finds that the certificate holder continues to have the ability to design, construct, and operate the facility, as amended, to preclude structural failure of the tower or blades that could endanger public safety, and to have adequate safety devices and testing procedures designed to warn of impending failure and to minimize the consequences of such failure.

Conclusions of Law

Based on the reasoning above, and subject to compliance with the existing and amended Public Health and Safety standard conditions, the Council concludes that the facility, as amended, would continue to comply with the Council's Public Health and Safety standards for wind energy facilities.

III.P.2 Cumulative Effects Standard for Wind Energy Facilities: OAR 345-024-0015

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

(1) Using existing roads to provide access to the facility site, or if new roads are needed, minimizing the amount of land used for new roads and locating them to reduce adverse environmental impacts.

(2) Using underground transmission lines and combining transmission routes.

(3) Connecting the facility to existing substations, or if new substations are needed, minimizing the number of new substations.

(4) Designing the facility to reduce the risk of injury to raptors or other vulnerable wildlife in areas near turbines or electrical equipment.

(5) Designing the components of the facility to minimize adverse visual features.

(6) Using the minimum lighting necessary for safety and security purposes and using techniques to prevent casting glare from the site, except as otherwise required by the Federal Aviation Administration or the Oregon Department of Aviation

Findings of Fact

The Wind Energy Facility Cumulative Effects standard requires the certificate holder to use practicable measures in designing and constructing a facility to reduce the cumulative adverse environmental effects in the vicinity. The standard does not require the Council to find that the facility would have no cumulative environmental impacts.[57] Instead, the Council must find that the applicant (certificate holder) is able to use "practicable measures" in the design and construction of the facility to reduce the cumulative effects.

The Council addressed the Cumulative Effects standard for wind facilities in the *Final Order on the ASC*, *Final Order on Amendment 1*, and *Final Order on Amendment 2* and found that the proposed design, construction, and operation of the facility would minimize cumulative adverse environmental effects in the vicinity through compliance with the requirements of the Council's Siting Standards for Wind Energy Facilities. Specifically, in approving the original ASC, the Council considered and made findings regarding cumulative impacts of the facility related to (1) roads; (2) transmission lines and substations; (3) wildlife protection; (4) visual features; and (5) lighting. The facility modification included in RFA #3 would not impact the cumulative environmental effects of the components authorized for construction or otherwise change the facts upon which the Council relied in making findings for this standard regarding the cumulative environmental effects from this wind facility.

Conclusions of Law

The Council finds that, subject to the existing site certificate conditions, the facility, as amended, continues to comply with the Council's Cumulative Effects Standard for Wind Energy Facilities.

III.P.3. Siting Standards for Transmission Lines: OAR 345-0240-0090

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

[57] In comments received on the proposed order, Ms. Gilbert requests that Condition 107 be amended requiring the certificate holder to address cumulative operational noise impacts from the facility and the Shepherds Flat Wind Farm facility. MWPAMD3Doc29. Ms. Gilbert does not identify any Council standard that requires the requested evaluation. The Council concludes that a cumulative noise impact assessment from the approved facility, and any neighboring facilities, is not required to satisfy an applicable standard or statute and therefore is not be within EFSC's jurisdiction to require such an assessment.

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

Findings of Fact

The siting standard for transmission lines addresses safety hazards associated with electric and magnetic fields generated by high-voltage transmission lines. OAR 345-024-0090(1) sets a limit for electric fields from transmission lines of not more than 9 kV per meter at 1 meter above the ground surface in areas that are accessible to the public. Section (2) requires the certificate holder design, construct and operate the line in a manner that reduces the risk posed by induced current.

In the *Final Order on the ASC*, *Final Order on Amendment 1*, and *Final Order on Amendment 2,* the Council found that the certificate holder could construct and operate the proposed 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. The Council further found that the certificate holder could design, construct, and operate the proposed transmission lines so that induced currents resulting from the transmission lines would be as low as reasonably achievable. Therefore, the Council concluded that the facility complied with the Siting Standards for Transmission Lines.

The facility modification included in RFA #3 does not propose any physical changes to the previously approved transmission line.[58] However, the Department noted in the proposed order that Condition 17 should be amended to reflect the current requirements of Mandatory Condition OAR 345-027-0023(4)(a), which was updated by Council in 2015. Therefore, the Council amends Condition 17 as follows:

Condition 17, as amended: ~~OAR 345-027-0023(4): If the facility includes any transmission line under Council jurisdiction:~~
(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, 2011~~, by the ~~(~~American National Standards Institute, ~~Section C2, 1997 Edition);~~ and

[58] Oregon Public Utility Commission (OPUC) responded to RFA #3, confirming that OPUC had not comments on the amendment request. MWPAMD3Doc15 2017-05-16.

(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.
[Amendment #3]

Based on the change, Council finds that the facility modification included in RFA #3 would not impact the certificate holder's ability to satisfy the requirements of the Siting Standards for Transmission lines.

Based upon compliance with existing and amended site certificate conditions, the Council finds that the certificate holder continues to have the ability to design, construct and operate the transmission and collector lines so that induced currents and nuisance shocks would be as low as reasonably achievable.

Conclusions of Law

Based on the foregoing findings of fact and conclusions, and subject to compliance with the existing and amended site certificate conditions, the Council finds that the facility, as amended, continues to comply with the Council's Siting Standards for Transmission Lines.

III.Q. Other Applicable Regulatory Requirements Under Council Jurisdiction

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

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

(1) Standards and Regulations:
*****
(b) New Noise Sources:

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

turbines of any size and any associated equipment or machinery, subparagraph (1)(b)(B)(iii) applies.
****

Findings of Fact

The Council addressed the noise control regulations in the *Final Order on the ASC*, *Final Order on Amendment 1*, and *Final Order on Amendment 2*. To ensure that the facility as-built would comply with the noise regulations, the Council adopted conditions that require the certificate holder to provide information to the Department about the turbines selected and the final design layout before beginning construction. Condition 107 specifically requires that the certificate holder submit a new noise analysis to the Department prior to construction that demonstrates that the facility would be in compliance with all relevant noise-related requirements.[59] Condition 108 requires that the certificate holder maintain a noise complaint response system and provides the Council authority to require additional monitoring and recording, if determined appropriate, based upon complaints received from owners of noise sensitive properties.

In comments received on the proposed order, Ms. Gilbert requests that the Council amend Condition 108 requiring the certificate holder to monitor and record statistical noise levels at locations identified by individuals (renters, leasers, or general members of the public using the area) that report to the facility's noise compliant system, in addition to owners of noise sensitive properties, to ensure adequate impact monitoring.

Condition 108 provides the Council the authority to require monitoring and recording of statistical noise levels if complaints are received from owners of a noise sensitive property within the facility's analysis area.[60] In the event that a complaint is received from a renter or leaser of a noise sensitive property, versus the owner of the property, the Council still has the authority to evaluate the complaint and necessity of monitoring and recording as if the complaint were received from the owner. Under OAR 345-026-0010 and ORS 469.430, the Council maintains continuing authority over a site and may inspect a site at any time to ensure

[59] In comments received on the proposed order, Ms. Gilbert requests that Condition 107 be amended to require that the final noise assessment be conducted in accordance with the requirements of OAR 340-035-0035(l)(b)(IV), (V), (VI) and OAR 340-035-0035(l)(c). MWPAMD3Doc29 2017-06-16. In ASC Exhibit X, the certificate holder stated that the acoustical test report for the selected turbines would be submitted pursuant to a Council-approved methodology and that the acoustical analysis for the final facility design would be performed with the same methodology as the analysis included in Exhibit X, which was based on OAR 340-035-0035(1)(b)(B)(iii)(IV) and (VI). OAR 340-035-0035(1)(b)(B)(iii)(V) is related to the methodology for conducting noise assessments for wind facilities, and it is implied in OAR 340-035-0035(1)(b)(B)(iii)(IV) and (VI) that the method described at OAR 340-035-0035(1)(b)(B)(iii)(V) would be followed. While OAR 340-035-0035(1)(b)(B)(iii)(V) is not specifically included in Condition 107, the Council concludes that the certificate holder's representations included in ASC Exhibit X are binding, and are required to be followed to satisfy the requirements of Condition 107, and that these representations address Ms. Gilbert's comments related to applicable procedures for consistent noise modeling.
[60] MWPAMD3Doc29 2017-06-16.

that the certificate holder is operating the facility in compliance with the terms and conditions of the site certificate and in compliance with applicable Council standards. Complaints received regarding operational noise levels and impacts to wildlife would be evaluated against existing conditions (Conditions 94, 96, and 97) that establish construction limits and buffers during sensitive seasons. For these reasons, the Council does not consider amending Condition 108 necessary to satisfy the requirements of an applicable rule, standard or statute.

The facility modification included in RFA #3 could affect the Council's previous findings to the extent the change in the blade tip height could alter results of the noise modeling (by altering the noise level generated by the turbines and the distance of the turbines from noise sensitive receptors). As presented in Attachment D of the final order, the certificate holder confirmed whether there were any new noise-sensitive receptors within 2 miles of proposed turbine locations within the previously approved micrositing corridor. Based on the desktop evaluation, no additional locations meeting the definition of a "noise-sensitive receptor" were identified.

As explained in RFA #3, the differing turbine model option, represented by a Vestas V136, has a maximum sound power level of 108.2 dBA and if selected, only 112 turbines would be constructed within the previously approved micrositing corridor.[61] Therefore, the certificate holder asserts and the Council agrees that noise impacts within the analysis area would be less than previously analyzed.[62] Further, based upon compliance with Condition 107, and the verification that there are no new noise sensitive receptors that could be impacted by the differing turbine model option, the Council finds that the facility, as amended, would continue to comply with the Noise Control Regulations in OAR 340-035-0035(1)(b)(B

<u>Conclusions of Law</u>

Based on the foregoing findings, and subject to compliance with the existing site certificate conditions, the Council finds that the facility, as amended, would comply with the Noise Control Regulations in OAR 340-035-0035(1)(b)(B).

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[61] Turbine noise specifications and data for the Vestas V136 were submitted to the Oregon Department of Energy under separate, confidential cover on May 3, 2017.

[62] In a public comment letter, K. Jackson expressed concern that the proposed amendment would result in increased noise levels. The analysis presented in the above section addresses this comment and confirms that the amendment would not result in increased noise levels at noise sensitive receptor locations within the analysis area. MWPAMD3Doc21

III.Q.2. Removal-Fill

The Oregon Removal-Fill Law (ORS 196.795 through 196.990) and Department of State Lands (DSL) regulations (OAR 141-085- 0500 through 141-085-0785) require a removal-fill permit if 50 cubic yards or more of material is removed, filled, or altered within any "waters of the state."[63] The Council, in consultation with DSL, must determine whether a removal-fill permit is needed and if so, whether a removal-fill permit should be issued. The analysis area for wetlands and other waters of the state is the area within the site boundary.

Findings of Fact

The DSL concurred with the certificate holder's wetland delineation study for the facility on June 28, 2010. On May 15, 2017, DSL informed the Department that, a delineation concurrence applies for 5-years from the date of issuance and that the certificate holder would need to submit to DSL a Request for Reissuance of a Jurisdictional Determination within 1-year of the expiration date and receive concurrence from DSL on the wetland and waterway boundaries presented in that request.[64] Condition 83 requires that the certificate holder conduct pre-construction stream and wetland surveys and obtain DSL concurrence of a delineation report. Condition 83 also requires that the certificate holder ensure that there be no impact to jurisdictional waters of the state during construction and operation.

The certificate holder explains that while RFA #3 requests to use a differing turbine model option, turbines would be located in the previously approved micrositing corridor and would be located to avoid impacts to wetlands and waterways. Therefore, the Council finds that the facility modification included in RFA #3 would not alter the conclusion that the facility, as amended, would not require a Removal-Fill Permit.

Conclusions of Law

The Council concludes that the facility, as amended, would not require a state Removal-Fill Permit.

III.Q.3 Water Rights

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

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[63] ORS 196.800(15) defines "Waters of this state." The term includes wetlands and certain other waterbodies.
[64] MWPAMD3Doc14 2017-05-15

Findings of Fact

The Council addressed the Ground Water Act in the *Final Order on the ASC*, *Final Order on Amendment 1*, and *Final Order on Amendment 2* and found that the facility, as approved and as amended, would comply with the Ground Water Act of 1955 and the rules of OWRD.

RFA #3 seeks approval for use of a new turbine model option that, if selected by the certificate holder, would lower the aboveground blade tip clearance from 20 to 14 meters. This change in turbine specification would also result in turbines a higher individual nameplate capacity of 3.6 MW, longer blades and a correspondingly larger rotor-swept (diameter) area.

Based on the scope of the change, the Council finds that the facility's water use or ability to comply with the requirements of the Ground Water Act of 1955 or any OWRD rules would not be impacted by the facility modification included in RFA #3.

Conclusions of Law

For the reasons discussed above, the Council concludes that the facility, as amended, continues to comply with the applicable water rights statutes and regulations.

IV. FINAL CONCLUSIONS AND ORDER OF COUNCIL

The certificate holder submitted a request to amend the site certificate for the Montague Wind Power Facility. The Council finds that, subject to compliance with the existing and amended conditions discussed in this final order, a preponderance of evidence on the records supports the following conclusions:

1. The Third Amended Site Certificate for the Montague Wind Power Facility complies with the requirements of the Oregon Energy Facility Siting Statutes, ORS 469.300 to 469.520.

2. The Third Amended Site Certificate for the Montague Wind Power Facility complies with the standards adopted by the Council pursuant to ORS 469.501.

3. The Third Amended Site Certificate for the Montague Wind Power Facility complies with all other Oregon statutes and administrative rules applicable to the amendment of the certificate that are within the Council's jurisdiction.

Based on the findings of fact, reasoning, existing and amended conditions and conclusions of law in this final order, the Council concludes that the certificate holder has satisfied the requirements for issuance of the Third Amended Site Certificate for the Montague Wind Power Facility. The Council finds, based on a preponderance of the evidence on the record, that the site certificate may be amended.

Final Order

The Council approves RFA #3 and issues an amended site certificate for the Montague Wind Power Facility.

Issued this 11th day of July, 2017

The OREGON ENERGY FACILITY SITING COUNCIL

By: _____
Barry Beyeler, Chair
Oregon Energy Facility Siting Council

Attachments:
Attachment A: Amended Site Certificate
Attachment B: Council Chair Approval of Expedited Review
Attachment C: Index of Comments Received on the Request for Amendment
Attachment D: Certificate Holder Responses to Additional Information Requests
Attachment E: Draft Wildlife Monitoring and Mitigation Plan (dated December 4, 2015)
Attachment F: Draft Revegetation and Weed Control Plan (dated September 10, 2010)
Attachment G: Draft Habitat Mitigation Plan (dated September 10, 2010)

Attachment A: Amended Site Certificate

ENERGY FACILITY SITING COUNCIL

OF THE

STATE OF OREGON

Third Amended Site Certificate

for the

Montague Wind Power Facility

July 2017

The Oregon Energy Facility Siting Council

THIRD AMENDED SITE CERTIFICATE

FOR THE MONTAGUE WIND POWER FACILITY

I. INTRODUCTION

The Oregon Energy Facility Siting Council (Council) issues this site certificate for the Montague Wind Power Facility (the facility) in the manner authorized under ORS Chapter 469. This site certificate is a binding agreement between the State of Oregon (State), acting through the Council, and Montague Wind Power Facility LLC (certificate holder) authorizing the certificate holder to construct and operate the facility in Gilliam County, Oregon. [Amendment #3]

The findings of fact, reasoning and conclusions of law underlying the terms and conditions of this site certificate are set forth in the following documents, incorporated herein by this reference: (a) the *Final Order on the Application for Site Certificate for the Montague Wind Power Facility* issued on September 10, 2010 (hereafter, *Final Order on the Application*), (b) the *Final Order on Amendment #1* issued on June 21, 2013; and, (c) the *Final Order on Amendment #2* issued on December 4, 2015; and (d) the *Final Order on Amendment #3* issued on July 11,2017. In interpreting this site certificate, any ambiguity will be clarified by reference to the following, in order of priority: (1) this *Third Amended Site Certificate*, (2) *the Final Order on Amendment #3*, (3)) the *Final Order on Amendment #2*, (4) the *Final Order on Amendment #1*, (5) the *Final Order on the Application*, and (6) the record of the proceedings that led to the *Final Order on the Application,* the *Final Order on Amendment #1*, and the *Final Order on Amendment #2.* [Amendment #2]

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

II. SITE CERTIFICATION

1. To the extent authorized by state law and subject to the conditions set forth herein, the State authorizes the certificate holder to construct, operate and retire a wind energy facility, together with certain related or supporting facilities, at the site in Gilliam County, Oregon, as described in Section III of this site certificate. ORS 469.401(1).

2. This site certificate is effective until it is terminated under OAR 345-027-0110 or the rules in effect on the date that termination is sought or until the site certificate is revoked under ORS 469.440 and OAR 345-029-0100 or the statutes and rules in effect on the date that revocation is ordered. ORS 469.401(1).

3. This site certificate does not address, and is not binding with respect to, matters that were not addressed in the *Final Order on the Application, Final Order on Amendment #1* and *Final Order on Amendment #2, and Final Order on Amendment #3.* Such matters include, but are not limited to: building code compliance, wage, hour and other labor regulations, local government fees and charges and other design or operational issues that do not relate to siting the facility (ORS 469.401(4)) and permits issued under statutes and rules for which the

decision on compliance has been delegated by the federal government to a state agency other than the Council. 469.503(3). [Amendment #3]

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

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

6. Subject to the conditions herein, this site certificate binds the State and all counties, cities and political subdivisions in Oregon as to the approval of the site and the construction, operation and retirement of the facility as to matters that are addressed in and governed by this site certificate. ORS 469.401(3).

7. Each affected state agency, county, city and political subdivision in Oregon with authority to issue a permit, license or other approval addressed in or governed by this site certificate shall, upon submission of the proper application and payment of the proper fees, but without hearings or other proceedings, issue such permit, license or other approval subject only to conditions set forth in this site certificate. ORS 469.401(3).

8. After issuance of this site certificate, each state agency or local government agency that issues a permit, license or other approval for the facility shall continue to exercise enforcement authority over such permit, license or other approval. ORS 469.401(3).

9. After issuance of this site certificate, the Council shall have continuing authority over the site and may inspect, or direct the Oregon Department of Energy (Department) to inspect, or request another state agency or local government to inspect, the site at any time in order to ensure that the facility is being operated consistently with the terms and conditions of this site certificate. ORS 469.430.

10. Following the completion of surveys required by this site certificate, the Department will present the results of those surveys and required consultations at the next regularly scheduled Council meeting.

III. DESCRIPTION

1. The Facility

(a) The Energy Facility

The energy facility is an electric power generating plant with an average electric generating capacity of up to 134.7 megawatts and a peak generating capacity of not more than 404 megawatts that produces power from wind energy. The facility consists of not more than 269 wind turbines. The maximum peak generating capacity of each turbine is not more than 3.0

megawatts. The energy facility is described further in the *Final Order on the Application, Final Order on Amendment #1*, *Final Order on Amendment #2,* and *Final Order on Amendment #3.*

(b) **Related or Supporting Facilities**

The facility includes the following related or supporting facilities described below and in greater detail in the *Final Order on the Application, Final Order on Amendment #1, Final Order on Amendment #2,* and *Final Order on Amendment #3*:

- Power collection system
- Control system
- Substations and 230-kV transmission lines
- Meteorological towers
- Operations and maintenance facilities
- Access roads
- Public roadway modifications
- Temporary construction areas

Power Collection System

A power collection system operating at 34.5 kilovolts (kV) transports power from each turbine to a collector substation. To the extent practicable, the collection system is installed underground at a depth of at least three fed. Not more than 27 miles of the collector system is installed aboveground.

Control System

A fiber optic communications network links the wind turbines to a central computer at the O&M buildings. A Supervisory, Control and Data Acquisition (SCA DA) system collects operating and performance data from each wind turbine and from the facility as a whole and allows remote operation of the wind turbines.

Substations and 230-kV Transmission Lines

The facility includes two collector substations. An aboveground, single-circuit 230-kV transmission line connects the western substation to the central substation. An aboveground, single-circuit 230-kV transmission line connects the central substation to the 500-kV Slatt-Buckley transmission line owned by the Bonneville Power Administration (BPA) at the Slatt substation.

Meteorological Towers

The facility includes up to eight permanent meteorological towers.

Operations and Maintenance Facilities

The facility includes one or two operations and maintenance (O&M) facilities. An on-site well at each O&M facility supplies water for use during facility operation. Sewage is discharged to an on-site septic system.

Access Roads

The facility includes access roads to provide access to the turbine strings.

Public Roadway Modifications

The certificate holder may construct improvements to existing state and county public roads that are necessary for construction of the facility. These modifications would be confined to the existing road rights-of-way and would be undertaken with the approval of the Gilliam County Road Department or the Oregon Department of Transportation, depending on the location of the improvement.

Temporary Construction Areas

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

2. Location of the Facility

The facility is located south of Arlington, in Gilliam County, Oregon. The facility is located on private land subject to easements or lease agreements with landowners.

IV. CONDITIONS REQUIRED BY COUNCIL RULES

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

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

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

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

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

2 OAR 345-027-0020(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.

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

(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.

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

5 OAR 345-027-0020(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:

(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.

6 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 this chapter, 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 Department and receive Department approval before beginning construction or, as appropriate, operation of the facility.

7 OAR 345-027-0020(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.

8 OAR 345-027-0020(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 32*.)

9 OAR 345-027-0020(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.

10 OAR 345-027-0020(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.

11 OAR 345-027-0020(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.

12 OAR 345-027-0020(12): The certificate holder shall design, engineer and construct the facility to avoid dangers to human safety presented by seismic hazards affecting the site that are expected to result from all maximum probable seismic events. As used in this rule "seismic hazard" includes ground shaking, landslide, liquefaction, lateral spreading, tsunami inundation, fault displacement and subsidence.

13 OAR 345-027-0020(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.

14 OAR 345-027-0020(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.

15 OAR 345-027-0020(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.

16 OAR 345-027-0020(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 Department within a reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the Department to prepare a proposed final retirement plan for the Council's approval. 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.

17 OAR 345-027-0023(4):

(a) The certificate holder shall design, construct and operate the transmission line in accordance with the requirements of the National Electrical Safety Code approved on June 3, 2011, 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.

18 OAR 345-027-0023(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.

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

(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

20 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 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.

21 OAR 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 OAR 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 OAR 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 OAR 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.

(A) ….

(iii) 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.

(iv) 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.

(v) 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.

(vi) 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 OAR 345-027-0050.

(vii) ….

22 <u>OAR 345-026-0105</u>: 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.

23 <u>OAR 345-026-0170</u>: The certificate holder shall notify the Department of Energy within 72 hours of any occurrence involving the facility if:

(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; or

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

V. SPECIFIC FACILITY CONDITIONS

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

1. Certificate Administration Conditions

24 The certificate holder shall begin construction of the facility by September 14, 2017. Under OAR 345-015-0085(9), a site certificate is effective upon execution by the Council Chair and the applicant. 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. [Amendment #2]

25 The certificate holder shall complete construction of the facility by September 14, 2020. 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. [Amendment #2]

26 Before beginning construction of the facility, the certificate holder shall notify the Department whether the turbines identified as H1, H2, H3, H4, L8, L9, L10, L11 and L12 on Figure C-3a of the site certificate application will be built as part of the Montague Wind Power Facility or whether the turbines will be built as part of the Leaning Juniper II Wind Power Facility.

27 The certificate holder shall construct a facility substantially as described in the site certificate and may select turbines of any type, subject to the following restrictions and compliance with all 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 269 turbines.

(b) The combined peak generating capacity of the facility must not exceed 404 megawatts and the peak generating capacity of any individual turbine must not exceed 3.6 megawatts.

(c) The turbine hub height must not exceed 100 meters and the maximum blade tip height must not exceed 150 meters.

(d) The minimum blade tip clearance must be 14 meters above ground. [Amendment #3]

(e) The certificate holder shall request an amendment of the site certificate to increase the combined peak generating capacity of the facility beyond 404 megawatts, to increase the number of wind turbines to more than 269 wind turbines or to install wind turbines with a hub height greater than 100 meters, a blade tip height greater than 150 meters or a blade tip clearance less than 14 meters above ground. [Amendment #3]

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

29 Before beginning construction, the certificate holder shall provide confirmation to the Department that the construction contractor or other third party has obtained all necessary permits or approvals and shall provide to the Department proof of agreements between the certificate holder and the third party regarding access to the resources or services secured by the permits or approvals.

30 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, 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.

31 Before beginning construction but no more than two years before beginning construction and after considering all micrositing factors, the certificate holder shall provide to the Department, to the Oregon Department of Fish and Wildlife (ODFW) and to the Planning Director of Gilliam 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, similar to Table 6 in the *Final Order on the Application.* The detailed maps of the facility site shall indicate the habitat categories of all areas that would be affected during construction (similar to Figures P-8a through P-8d in the site certificate application). In classifying the affected habitat into habitat categories, the certificate holder shall consult with the 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.

32 Before beginning construction, the certificate holder shall submit to the State of Oregon through the Council a bond or letter of credit in the amount described herein naming the

State of Oregon, acting by and through the Council, as beneficiary or payee. The initial bond or letter of credit amount is either $21.511 million (3rd Quarter 2010 dollars), to be adjusted to the date of issuance as described in (b), or the amount determined as described in (a). The certificate holder shall adjust the amount of the bond or letter of credit on an annual basis thereafter as described in (b).

(a) The certificate holder may adjust the amount of the bond or letter of credit based on the final design configuration of the facility and turbine types selected by applying the unit costs and general costs illustrated in Table 2 in the *Final Order on the Application* 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 the 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 mid-2004 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 average of the 2nd Quarter and 3rd Quarter 2004 index values (to represent mid-2004 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 mid-2004 dollars to present value.

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

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

(iv) Add the adjusted Gross Cost (ii) to the sum of the percentages (iii) 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 21.

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

33 If the certificate holder elects to use a bond to meet the requirements of Condition 32, 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.

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

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

36 To ensure compliance with all site certificate conditions during construction, the certificate holder shall have a full-time, on-site assistant construction manager who is qualified in environmental compliance. The certificate holder shall notify the Department of the name, telephone number and e-mail address of this person.

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

2. Land Use Conditions

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

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

40 The certificate holder shall install gates on private access roads in accordance with Gilliam County Zoning Ordinance Section 7.020(T)(4)(d)(6) unless the County has granted a variance to this requirement.

41 Before beginning construction of the facility, the certificate holder shall record in the real property records of Gilliam County a Covenant Not to Sue with regard to generally accepted farming practices on adjacent farmland consistent with GCZO Section 7.020(T)(4)(a)(5).

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

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

(b) Where (a) does not apply, 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.

(c) Where (a) does not apply, 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.

(d) Where (a) does not apply, 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.

(e) The certificate holder shall maintain a minimum distance of 250 feet measured from the center line of each turbine tower to the nearest edge of any railroad right-of-way or electrical substation.

(f) The certificate holder shall maintain a minimum distance of 250 feet measured from the center line of each meteorological tower to the nearest edge of any public road right-of-way or railroad right-of-way, the nearest boundary of the certificate holder's lease area or the nearest electrical substation.

(g) The certificate holder shall maintain a minimum distance of 50 feet measured from any facility O&M building to the nearest edge of any public road right-of-way or railroad right-of-way or the nearest boundary of the certificate holder's lease area.

(h) The certificate holder shall maintain a minimum distance of 50 feet measured from any substation to the nearest edge of any public road right-of-way or railroad right-of-way or the nearest boundary of the certificate holder's electrical substation easement or, if there is no easement, the nearest boundary of the certificate holder's lease area.

(i) Where (a) does not apply, the certificate holder shall maintain a minimum of 110-percent of maximum blade tip height, measured from the centerline of the turbine tower from any overhead utility line. [Amendment #1]

(j) Where (a) does not apply, the certificate holder shall maintain a minimum of 150-percent of maximum turbine height from blade tip height, measured from the centerline of the turbine tower from federal transmission lines, unless the affected parties agree otherwise. [Amendment #1]

43 During construction and operation of the facility, the certificate holder shall implement a weed control plan approved by the Gilliam County Weed Control Officer or other appropriate County officials to control the introduction and spread of noxious weeds.

44 During operation of the facility, the certificate holder shall restore areas that are temporarily disturbed during facility maintenance or repair activities using the same methods and monitoring procedures described in the *Revegetation Plan* referenced in Condition 92.

45 Within 90 days after beginning operation, the certificate holder shall provide to the Department and to the Gilliam County Planning Department the actual latitude and longitude location or Stateplane NAD 83(91) coordinates of each turbine tower, connecting lines and transmission lines and a summary of as-built changes in the facility compared to the original plan.

46 The certificate holder shall deliver a copy of the annual report required under Condition 21 to the Gilliam County Planning Commission on an annual basis unless specifically discontinued by the County.

3. Cultural Resource Conditions

47 Before beginning construction, the certificate holder shall label all identified historic, cultural or archaeological resource sites on construction maps and drawings as "no entry" areas. If construction activities will occur within 200 feet of an identified site, the certificate holder shall flag a 30-meter no-entry buffer around the site. The certificate holder may use existing private roads within the buffer areas but may not widen or improve private roads within the buffer areas. The no-entry restriction does not apply to public road rights-of-way within the buffer areas or to operational farmsteads.

48 In reference to the alignment of the Oregon Trail described in the *Final Order on the Application*, the certificate holder shall comply with the following requirements:

(a) The certificate holder shall not locate facility components on visible remnants of the Oregon Trail and shall avoid any construction disturbance to those remnants.

(b) The certificate holder shall not locate facility components on undeveloped land where the trail alignment is marked by existing Oregon-California Trail Association markers.

(c) Before beginning construction, the certificate holder shall provide to the State Historic Preservation Office (SHPO) and the Department documentation of the presumed Oregon Trail alignments within the site boundary.

(d) The certificate holder shall ensure that construction personnel proceed carefully in the vicinity of the presumed alignments of the Oregon Trail. If any physical evidence of the trail is discovered, the certificate holder shall avoid any disturbance to the intact segments by redesign, re-engineering or restricting the area of construction activity and shall flag a 30-meter no-entry buffer around the intact Trail segments. The certificate holder shall promptly notify the SHPO and the Department of the discovery. The certificate holder shall consult with the SHPO and the Department to determine appropriate mitigation measures.

49 Before beginning construction, the certificate holder shall provide to the Department a map showing the final design locations of all components of the facility, the areas that would be temporarily disturbed during construction and the areas that were surveyed in 2009 as described in the *Final Order on the Application.* The certificate holder shall hire qualified personnel to conduct field investigations of all areas to be disturbed during construction that lie outside the previously-surveyed areas. The certificate holder shall provide a written report of the field investigations to the Department and to the Oregon State Historic Preservation Office (SHPO) for review and approval. If any potentially

significant historic, cultural or archaeological resources are found during the field investigation, the certificate holder shall instruct all construction personnel to avoid the identified sites and shall implement appropriate measures to protect the sites, including the measures described in Condition 47.

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

51 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. The certificate holder shall notify the Department and the Oregon State Historic Preservation Office (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, field documentation and data recovery, in consultation with the Department, SHPO, interested 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 and the SHPO that it has complied with archaeological resource protection regulations

4. Geotechnical Conditions

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

53 The certificate holder shall design and construct the facility in accordance with requirements of the Oregon Structural Specialty Code (OSSC 2007) and the 2006 International Building Code.

54 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.

5. Hazardous Materials, Fire Protection & Public Safety Conditions

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

56 If a spill or release of hazardous material occurs during construction or operation of the facility, the certificate holder shall notify the Department within 72 hours and shall clean up the spill or release and dispose of any contaminated soil or other materials according to applicable regulations. The certificate holder shall make sure that spill kits containing

items such as absorbent pads are located on equipment and at the O&M buildings. The certificate holder shall instruct employees about proper handling, storage and cleanup of hazardous materials

57 The certificate holder shall construct turbines and pad-mounted transformers on concrete foundations and shall cover the ground within a 10-foot radius with non-flammable material. The certificate holder shall maintain the non-flammable pad area covering during operation of the facility.

58 The certificate holder shall install and maintain self-monitoring devices on each turbine, linked to sensors at the operations and maintenance building, to alert operators to potentially dangerous conditions, and the certificate holder shall immediately remedy any dangerous conditions. The certificate holder shall maintain automatic equipment protection features in each turbine that would shut down the turbine and reduce the chance of a mechanical problem causing a fire.

59 During construction and operation of the facility, the certificate holder shall ensure that the O&M buildings and all service vehicles are equipped with shovels and portable fire extinguishers of a 4A5OBC or equivalent rating.

60 During construction and operation of the facility, the certificate holder shall develop and implement fire safety plans in consultation with the North Gilliam County Rural Fire Protection District to minimize the risk of fire and to respond appropriately to any fires that occur on the facility site. In developing the fire safety plans, the certificate holder shall take into account the dry nature of the region and shall address risks on a seasonal basis. The certificate holder shall meet annually with local fire protection agency personnel to discuss emergency planning and shall invite local fire protection agency personnel to observe any emergency drill or tower rescue training conducted at the facility.

61 Upon the beginning of operation of the facility, the certificate holder shall provide a site plan to the North Gilliam County Rural Fire Protection District. The certificate holder shall indicate on the site plan the identification number assigned to each turbine and the actual location of all facility structures. The certificate holder shall provide an updated site plan if additional turbines or other structures are later added to the facility. During operation, the certificate holder shall ensure that appropriate fire protection agency personnel have an up-to-date list of the names and telephone numbers of facility personnel available to respond on a 24-hour basis in case of an emergency on the facility site.

62 During construction, the certificate holder shall ensure that construction personnel are trained in fire prevention and response, 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 dry grass areas.

63 During operation of the facility, the certificate holder shall ensure that all on-site employees receive annual fire prevention and response training by qualified instructors or members of the local fire districts. The certificate holder 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.

64 Before beginning construction, the certificate holder shall submit a Notice of Proposed Construction or Alteration to the Federal Aviation Administration (FAA) and the Oregon Department of Aviation identifying the proposed final locations of turbine towers and meteorological towers. The certificate holder shall promptly notify the Department of the responses from the FAA and the Oregon Department of Aviation.

65 The certificate holder shall follow manufacturers' recommended handling instructions and procedures to prevent damage to turbine or turbine tower components that could lead to failure.

66 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.

67 During operation of the facility, the certificate holder shall have a safety-monitoring program and shall inspect all turbine and turbine tower components on a regular basis. The certificate holder shall maintain or repair turbine and turbine tower components as necessary to protect public safety.

68 For turbine types having pad-mounted step-up transformers, the certificate holder shall install the transformers 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.

69 To protect the public from electrical hazards, the certificate holder shall enclose the facility substations with appropriate fencing and locked gates.

70 Before beginning construction of any new State Highway approaches or utility crossings, the certificate holder shall obtain all required permits from the Oregon Department of Transportation (ODOT) subject to the applicable conditions required by OAR Chapter 734, Divisions 51 and 55. The certificate holder shall submit the necessary application in a form satisfactory to ODOT and the Department for the location, construction and maintenance of a new approach to State Highway 19 for access to the site south of Tree Lane. The certificate holder shall submit the necessary application in a form satisfactory to ODOT and the Department for the location, construction and maintenance of transmission lines crossing Highway 19.

71 The certificate holder shall design and construct new access roads and private road improvements to standards approved by the Gilliam County Road Department or, where applicable, the Morrow County Public Works Department. Where modifications of County roads are necessary, the certificate holder shall construct the modifications entirely within the County road rights-of-way and in conformance with County road design standards subject to the approval of the Gilliam County Road Department or, where applicable, the Morrow County Public Works Department. Where modifications of State roads or highways are necessary, the certificate holder shall construct the modifications entirely

within the public road rights-of-way and in conformance with Oregon Department of Transportation (ODOT) standards subject to the approval of ODOT.

72 The certificate holder shall construct access roads with a finished width of up to 20 feet, designed under the direction of a licensed engineer and compacted to meet equipment load requirements.

73 During construction of the facility, the certificate holder shall implement measures to reduce traffic impacts, including:

(a) Providing notice to adjacent landowners when heavy construction traffic is anticipated.
(b) Providing appropriate traffic safety signage and warnings.
(c) Requiring flaggers to be at appropriate locations at appropriate times during construction to direct traffic.
(d) Using traffic diversion equipment (such as advance signage and pilot cars) when slow or oversize construction loads are anticipated.
(e) Maintaining at least one travel lane at all times to the extent reasonably possible so that roads will not be closed to traffic because of construction vehicles.
(f) Encouraging carpooling for the construction workforce.
(g) Including traffic control procedures in contract specifications for construction of the facility.
(h) Keeping Highway 19 free of gravel that tracks out onto the highway at facility access points.

74 The certificate holder shall ensure that no equipment or machinery is parked or stored on any County road whether inside or outside the site boundary. The certificate holder may temporarily park equipment off the road but within County rights-of-way with the approval of the Gilliam County Road Department or, where applicable, the Morrow County Public Works Department.

75 The certificate holder shall cooperate with the Gilliam County Road Department and with the Morrow County Public Works Department to ensure that any unusual damage or wear to county roads that is caused by construction of the facility is repaired by the certificate holder. Upon completion of construction, the certificate holder shall restore public roads to pre-construction condition or better to the satisfaction of the applicable county departments. If required by Morrow County or Gilliam County, the certificate holder shall post bonds to ensure funds are available to repair and maintain roads affected by the facility.

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

77 During operation of the facility, the certificate holder shall develop and implement a site health and safety plan that informs employees and others on-site about first aid techniques and what to do in case of an emergency and that includes important telephone numbers and the locations of on-site fire extinguishers and nearby hospitals. The certificate holder shall ensure that operations personnel are trained and equipped for tower rescue.

78 During construction and operation of the facility, the certificate holder shall provide for on-site security and shall establish good communications between on-site security personnel and the Gilliam County Sheriff's Office. During operation, the certificate holder shall ensure that appropriate law enforcement agency personnel have an up-to-date list of the names and telephone numbers of facility personnel available to respond on a 24-hour basis in case of an emergency on the facility site.

79 The certificate holder shall notify the Department of Energy and the Gilliam County Planning Department within 72 hours of any accidents including mechanical failures on the site associated with construction or operation of the facility that may result in public health and safety concerns

6. Water, Soils, Streams & Wetlands Conditions

80 The certificate holder shall conduct all construction work in compliance with an Erosion and Sediment Control Plan (ESCP) satisfactory to the Oregon Department of Environmental Quality and as required under the National Pollutant Discharge Elimination System (NPDES) 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.

81 During construction, the certificate holder shall limit truck traffic to improved road surfaces to avoid soil compaction, to the extent practicable.

82 During construction, the certificate holder shall implement best management practices to control any dust generated by construction activities, such as applying water to roads and disturbed soil areas.

83 Before beginning construction, the certificate holder shall provide to the Department a map showing the final design locations of all components of the facility and the areas that would be disturbed during construction and showing the wetlands and stream channels previously surveyed by CH2M HILL as described in the *Final Order on the Application*. For areas to be disturbed during construction that lie outside of the previously-surveyed areas, the certificate holder shall hire qualified personnel to conduct a pre-construction investigation to determine whether any jurisdictional waters of the State exist in those locations. The certificate holder shall provide a written report on the pre-construction investigation to the Department and the Department of State Lands for approval before beginning construction. The certificate holder shall ensure that construction and operation of the facility will have no impact on any jurisdictional water identified in the pre-construction investigation.

84 The certificate holder shall avoid impacts to waters of the state in the following manner:

(a) The certificate holder shall avoid any disturbance to delineated wetlands.

(b) The certificate holder shall construct stream crossings for roads and underground collector lines substantially as described in the *Final Order on the Application*. In particular, the certificate holder shall not remove material from waters of the State or add new fill material to waters of the State such that the total volume of removal and fill exceeds 50 cubic yards for the project as a whole.

(c) The certificate holder shall construct support poles for aboveground lines outside of delineated stream channels and shall avoid in-channel impacts.

85 During facility operation, the certificate holder shall routinely inspect and maintain all roads, pads and trenched areas and, as necessary, maintain or repair erosion and sediment control measures.

86 During facility operation, the certificate holder shall obtain water for on-site uses from on-site wells located near the O&M buildings. The certificate holder shall construct on-site wells subject to compliance with the provisions of ORS 537.765 relating to keeping a well log. The certificate holder shall not use more than 5,000 gallons of water per day from the on-site wells. The certificate holder may use other sources of water for on-site uses subject to prior approval by the Department.

87 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.

7. Transmission Line & EMF Conditions

88 The certificate holder shall install the 34.5-kV collector system underground to the extent practical. The certificate holder shall install underground lines at a minimum depth of three feet. Based on geotechnical conditions or other engineering considerations, the certificate holder may install segments of the collector system aboveground, but the total length of aboveground segments must not exceed 27 miles.

89 The certificate holder shall take reasonable steps to reduce or manage human exposure to electromagnetic fields, including but not limited to:

(a) Constructing all aboveground transmission lines at least 200 feet from any residence or other occupied structure, measured from the centerline of the transmission line.

(b) Providing to landowners a map of underground and overhead transmission lines on their property and advising landowners of possible health risks from electric and magnetic fields

(c) 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.

(d) Designing and maintaining all transmission lines so that induced voltages during operation are as low as reasonably achievable.

90 In advance of, and during, preparation of detailed design drawings and specifications for 230-kV and 34.5-kV transmission lines, the certificate holder shall consult 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.

8. Plants, Wildlife & Habitat Protection Conditions

91 Prior to construction, the certificate holder shall finalize the Wildlife Monitoring and Mitigation Plan (WMMP), based on the WMMP included as Attachment E of the *Final Order on Request for Amendment #3,* as approved by the Department in consultation with ODFW. The certificate holder shall conduct wildlife monitoring as described in the final WMMP, as amended from time to time.
[Amendment #3]

92 The certificate holder shall restore areas disturbed by facility construction but not occupied by permanent facility structures according to the methods and monitoring procedures described in the final Revegetation Plan, as approved by the Department in consultation with ODFW. The final Revegetation Plan shall be based on the draft plan that is incorporated as Attachment F in the *Final Order on -Request for Amendment #3* as amended from time to time.
[Amendment #3]

93 The certificate holder shall acquire the legal right to create, enhance, maintain and protect a habitat mitigation area as long as the site certificate is in effect by means of an outright purchase, conservation easement or similar conveyance and shall provide a copy of the documentation to the Department. Within the habitat mitigation area, the certificate holder shall improve the habitat quality as described in the final Habitat Mitigation Plan, as approved by the Department in consultation with ODFW. The final Habitat Mitigation Plan shall be based on the draft plan included as Attachment ~~C~~ G to the *Final Order on Request for Amendment #*3 and updated based on Condition 31. The final Habitat Mitigation Plan may be–amended from time to time.
[Amendment #3]

94 The certificate holder shall determine the boundaries of Category 1 Washington ground squirrel (WGS) habitat based on the locations where the squirrels were found to be active in the most recent WGS survey prior to the beginning of construction in habitat suitable for WGS foraging or burrow establishment ("suitable habitat"). The certificate holder shall hire a qualified professional biologist who has experience in detection of WGS to conduct surveys using a survey protocol approved by the Oregon Department of Fish and Wildlife (ODFW). The biologist shall survey all areas of suitable habitat where permanent facility

components would be located or where construction disturbance could occur. Except as provided in (a), the biologist shall conduct the protocol surveys in the active squirrel season (March 1 to May 31) in 2010 and in the active squirrel seasons in subsequent years until the beginning of construction in suitable habitat. The certificate holder shall provide written reports of the surveys to the Department and to ODFW and shall identify the boundaries of Category 1 WGS habitat. The certificate holder shall not begin construction within suitable habitat until the identified boundaries of Category 1 WGS habitat have been approved by the Department. Category 1 WGS habitat includes the areas described in (b) and (c).

(a) The certificate holder may omit the WGS survey in any year if the certificate holder avoids all permanent and temporary disturbance within suitable habitat until a WGS survey has been completed in the following year and the boundaries of Category 1 habitat have been determined and approved based on that survey.

(b) Category 1 WGS habitat includes the area within the perimeter of multiple active WGS burrows plus a 785-foot buffer, excluding areas of habitat types not suitable for WGS foraging or burrow establishment. If the multiple-burrow area was active in a prior survey year, then Category 1 habitat includes the largest extent of the active burrow area ever recorded (in the current or any prior-year survey), plus a 785-foot buffer.

(c) Category 1 WGS habitat includes the area containing single active burrow detections plus a 785-foot buffer, excluding areas of habitat types not suitable for WGS foraging or burrow establishment. Category 1 habitat does not include single-burrow areas that were found active in a prior survey year but that are not active in the current survey year.

95 The certificate holder shall implement measures to mitigate impacts to sensitive wildlife habitat during construction including, but not limited to, the following:

(a) The certificate holder shall not construct any facility components within areas of Category 1 habitat and shall avoid temporary disturbance of Category 1 habitat.

(b) Before beginning construction, but no more than two years prior to the beginning of construction, the certificate holder shall hire a qualified professional biologist to conduct a survey of all areas to be disturbed by construction for threatened and endangered species. The certificate holder shall provide a written report of the survey and a copy of the survey to the Department, the Oregon Department of Fish and Wildlife (ODFW), and the Oregon Department of Agriculture (ODA). If the surveys identify the presence of threatened or endangered species within the survey area, 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 ODA and ODFW.

(c) Before beginning construction, the certificate holder's qualified professional biologist shall survey the Category 1 Washington ground squirrel habitat to ensure that the sensitive use area is correctly marked with exclusion flagging and avoided during construction. The certificate holder shall maintain the exclusion markings until construction has been completed.

(d) Before beginning construction, certificate holder's qualified professional biologist shall complete the avian use studies that began in September 2009 at six plots within or near the facility site as described in the *Final Order on the Application.* The certificate holder shall provide a written report on the avian use studies to the Department and to ODFW.

(e) Before beginning construction, certificate holder's qualified professional biologist shall complete raptor nest surveys within the raptor nest survey area as described in the *Final Order on the Application*. The purposes of the survey are to identify any sensitive raptor nests near construction areas and to provide baseline information on raptor nest use for analysis as described in the Wildlife Monitoring and Mitigation Plan referenced in Condition 91. The certificate holder shall provide a written report on the raptor nest surveys and the surveys to the Department and to ODFW. If the surveys identify the presence of raptor nests within the survey area, the certificate holder shall implement appropriate measures to assure that the design, construction and operation of the facility are consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025, as approved by the Department, in consultation with ODFW.

(f) In the final design layout of the facility, the certificate holder shall locate facility components, access roads and construction areas to avoid or minimize temporary and permanent impacts to high quality native habitat and to retain habitat cover in the general landscape where practicable.

96 During construction, the certificate holder shall avoid all construction activities within a 1,300-foot buffer around potentially-active nest sites of the following species during the sensitive period, as provided in this condition:

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

During the year in which construction occurs, the certificate holder shall use a protocol approved by the Oregon Department of Fish and Wildlife (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. The certificate holder shall begin monitoring potential nest sites by March 15 and shall continue monitoring until at least May 31 to determine whether any potentially-active nest sites become active during the sensitive period.

If any nest site is determined to be unoccupied by the early release date (May 31), then unrestricted construction activities may occur within 1,300 feet of the nest site after that date. If a nest is occupied by any of these species after the beginning of the sensitive period, the certificate holder will flag the boundaries of a 1,300-foot buffer area around the nest site and shall instruct construction personnel to avoid disturbance of the buffer area. During the sensitive period, the certificate holder shall not engage in high-impact construction activities (activities that involve blasting, grading or other major ground disturbance) within the buffer area. The certificate holder shall restrict construction traffic within the buffer, except on public roads, to vehicles essential to the limited construction activities allowed within the buffer.

If burrowing owl nests are occupied during the sensitive period, the certificate holder may adjust the 1,300-foot buffer around these nests after consultation with ODFW and subject to the approval of the Department.

The certificate holder shall hire a qualified independent professional biologist to observe the active nest sites during the sensitive period for signs of disturbance and to notify the Department of any non-compliance with this condition. If the biologist 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 construction activities within the buffer area before the ending day of the sensitive period with the approval of ODFW, after the young are fledged. The certificate holder shall use a protocol approved by ODFW to determine when the young are fledged (the young are independent of the core nest site).

97 The certificate holder shall protect the area within 1,300 feet of the BLM Horn Butte Wildlife Area during the long-billed curlew nesting season (March 8 through June 15), as described in this condition. Before beginning construction, the certificate holder shall provide to the Department a map showing the areas of potential construction disturbance in the vicinity of the BLM lands that are part of the Horn Butte Wildlife Area and showing a 1,300-foot buffer from those areas. During the nesting season, 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 the buffer area. The certificate holder shall flag the boundaries of the 1,300-foot buffer area and shall instruct construction personnel to avoid any unnecessary activity within the buffer area. The certificate holder shall restrict construction traffic within the buffer, except on public roads, to vehicles essential to the limited construction activities allowed within the buffer. The certificate holder may engage in construction activities within the buffer area at times other than the nesting season.

98 The certificate holder shall implement measures to avoid or mitigate impacts to sensitive wildlife habitat during construction including, but not limited to, the following:

(a) Preparing maps to show occlusion areas that are off-limits to construction personnel, such as nesting or denning areas for sensitive wildlife species.
(b) Avoiding unnecessary road construction, temporary disturbance and vehicle use.
(c) Limiting construction work to approved and surveyed areas shown on facility constraints maps.
(d) Ensuring that all construction personnel are instructed to avoid driving cross-country or taking short-cuts within the site boundary or otherwise disturbing areas outside of the approved and surveyed construction areas.

99 The certificate holder shall reduce the risk of injuries to avian species by:
(a) Installing turbine towers that are smooth steel structures that lack features that would allow avian perching.
(b) Locating turbine towers to avoid areas of increased risk to avian species, such as cliff edges, narrow ridge saddles and gaps between hilltops.
(c) Installing meteorological towers that are non-guyed structures to eliminate the risk of avian collision with guy-wires.
(d) Designing and installing all aboveground transmission line support structures following the most current suggested practices for avian protection on power lines published by the Avian Power Line Interaction Committee.

100 The certificate holder shall hire a qualified environmental professional to provide environmental training during construction and operation. Environmental training includes information on the sensitive species present onsite, precautions to avoid injuring or destroying wildlife or sensitive wildlife habitat, exclusion areas, permit requirements and other environmental issues. The certificate holder shall instruct construction and operations personnel to report any injured or dead wildlife detected while on the site to the appropriate onsite environmental manager.

101 The certificate holder shall impose and enforce a construction and operation speed limit of 20 miles per hour throughout the facility site and, during the active squirrel season (March 1 to May 31), a speed limit of 10 miles per hour from one hour before sunset to one hour after sunrise on private roads near known Washington ground squirrel (WGS) colonies. The certificate holder shall ensure that all construction and operations personnel are instructed to watch out for and avoid WGS and other wildlife while driving through the facility site.

9. Visual Effects Conditions

102 To reduce the visual impact of the facility, the certificate holder shall:
(a) Mount nacelles on smooth, steel structures, painted uniformly in a low-reflectivity, neutral white color.
(b) Paint the substation structures in a low-reflectivity 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, required by law or otherwise required by this site certificate, except that the certificate holder may erect a sign

near the O&M buildings to identify the facility, may paint turbine numbers on each tower and may allow unobtrusive manufacturers' logos on turbine nacelles.

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

103 The certificate holder shall design and construct the O&M buildings 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 low-reflectivity, neutral color to blend with the surrounding landscape.

104 The certificate holder shall not use exterior nighttime lighting except:

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

(b) Security lighting at the O&M buildings and at the substations, provided that such lighting is shielded or downward-directed to reduce glare.

(c) Minimum lighting necessary for repairs or emergencies.

(d) Minimum lighting necessary for construction directed to illuminate the work area and shielded or downward-directed to reduce glare.

105 The certificate holder shall maintain a minimum distance of 1,000 feet measured from the centerline of each turbine tower or meteorological tower to the centerline of the line-of-sight from the vantage point of the Fourmile Canyon interpretive site looking toward the visible Oregon Trail ruts (bearing S 89-42-34 W from latitude, longitude: 45.622047, -120.044112) as described in the *Final Order on the Application.*

10. Noise Control Conditions

106 To reduce construction noise impacts at nearby residences, the certificate holder shall:

(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

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

107 Before beginning construction, the certificate holder shall provide to the Department:

(a) Information that identifies the final design locations of all turbines to be built at the facility.

(b) The maximum sound power level for the substation transformers and the maximum sound power level and octave band data for the turbines selected for the facility based on manufacturers' warranties or confirmed by other means acceptable to the Department.

(c) The results of noise analysis of the facility to be built according to the final design performed in a manner consistent with the requirements of OAR 340-035-0035(1)(b)(B)(iii) (IV) and (VI) demonstrating to the satisfaction of the

Department that the total noise generated by the facility (including the noise from turbines and substation transformers) would meet the ambient degradation test and maximum allowable test at the appropriate measurement point for all potentially-affected noise sensitive properties.

(d) For each noise-sensitive property where the certificate holder relies on a noise waiver to demonstrate compliance in accordance with OAR 340-035-0035(1)(b)(B)(iii)(III), a copy of the a legally effective easement or real covenant pursuant to which the owner of the property authorizes the certificate holder's operation of the facility to increase ambient statistical noise levels L_{10} and L_{50} by more than 10 dBA at the appropriate measurement point. The legally-effective easement or real covenant must: include a legal description of the burdened property (the noise sensitive property); be recorded in the real property records of the county; expressly benefit the certificate holder; expressly run with the land and bind all future owners, lessees or holders of any interest in the burdened property; and not be subject to revocation without the certificate holder's written approval.

108 During operation of the facility, 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. In response to a complaint from the owner of a noise sensitive property regarding noise levels during operation of the facility, the Council may require the certificate holder to monitor and record the statistical noise levels to verify that the certificate holder is operating the facility in compliance with the noise control regulations

11. Waste Management Conditions

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

110 During operation of the facility, the certificate holder shall discharge sanitary wastewater generated at the O&M buildings to licensed on-site septic systems in compliance with State permit requirements. The certificate holder shall design the septic systems for a discharge capacity of less than 2,500 gallons per day.

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

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

(f) Confining concrete delivery truck rinse-out within the foundation excavation, discharging rinse water into foundation holes and burying other concrete waste as part of backfilling the turbine foundation.

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

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

VI. CONDITIONS ADDED BY AMENDMENT # 1 OF MONTAGUE

~~113 The transfer of the First Amended Site Certificate from the certificate holder to Portland General Electric (PGE), the transferee, shall not be effective until PGE executes in closing the form of site certificate naming PGE the certificate holder, which is attached as Attachment B to the Final Order on Amendment #1. Upon closing, the First Amended Site Certificate naming PGE as the certificate holder shall be in full force and effect and the First Amended Site Certificate naming Montague Wind Power LLC as the certificate holder shall be considered rescinded and void in its entirety.~~ Removed by Amendment #2.

~~114 Should the closing contemplated in Condition 113 not occur within 18 months of the effective date of the First Amended Site Certificate to Montague Wind Power LLC, the Council's transfer approval within the Final Order on Amendment #1 shall be void~~. Removed by Amendment #2.

~~115 PGE must provide the Department a copy of the executed First Amended Site Certificate and documentation of the asset purchase agreement within 7 days of closing.~~ Removed by Amendment #2.

VII. SUCCESSORS AND ASSIGNS

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

VIII. SEVERABILITY AND CONSTRUCTION

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

IX. GOVERNING LAW AND FORUM

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

X. EXECUTION

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

IN WITNESS WHEREOF, this site certificate has been executed by the State of Oregon, acting by and through its Energy Facility Siting Council, and by Montague Wind Power Facility, LLC.

ENERGY FACILITY SITING COUNCIL

By: _____

Barry Beyeler, Chair

Oregon Energy Facility Siting Council

Date: July ~~11~~ 12, 2017

MONTAGUE WIND POWER FACILITY, LLC

BW

By: _____

Jesse Gronner
Authorized Representative

Print: _____

Date: 7/24/17

LEGAL

and

By: _____

Print: Paul Dixon
~~Authorized Representative~~

Date: 7/24/17

Attachment B: EFSC Chair Approval of Expedited Review

Oregon

Kate Brown, Governor

550 Capitol St. NE
Salem, OR 97301-3737
Phone: (503) 378-4040
Toll Free: 1-800-221-8035
FAX: (503) 373-7806
www.Oregon.gov/ENERGY

May 11, 2017

Mr. Brian Walsh
1125 NW Couch Street, Suite 700
Portland, Oregon 97209

Sent via email: brian.walsh@avangrid.com; matthew.hutchinson@avangrid.com; Linnea.Eng@CH2M.com; ElaineAlbrich@dwt.com; carrie.konkol@tetratech.com

Re: Determination from Council Chair on Certificate Holder's Request for Expedited Review of Montague Wind Power Facility Request for Amendment No. 3

Dear Mr. Walsh:

Oregon Department of Energy (ODOE) received Montague Wind Power Facility, LLC's (certificate holder) Request for Amendment (RFA) No. 3 for the Montague Wind Power Facility on May 4, 2017. RFA No. 3 seeks approval to lower the minimum aboveground blade-tip clearance, as specified in Condition 27, to allow for the selection of a more efficient, more economically viable turbine. RFA No. 3 also includes a request to the Chair of the Energy Facility Siting Council for expedited review of RFA No. 3 pursuant to OAR 345-027-0080. If granted, expedited review of the amendment would follow the procedures described in subsections (3) through (10) of that rule. On May 4, 2017, you electronically submitted RFA No. 3 for me to consider the request for expedited amendment.

OAR 345-027-0080 describes the considerations upon which the Council Chair must determine whether to grant expedited review, as follows:

> *"The Chair may grant the request for expedited review if the Chair finds that a delay would unduly harm the certificate holder and if the facility, with the proposed change, would not likely result in a significant new adverse impact."*

After reviewing the request in light of these considerations, I make the following findings:

(1) Based on the certificate holder's representations, I find that a delay in the decision on RFA No. 3 would unduly harm the certificate holder by either impacting the certificate holder's ability to meet the September 2017 construction commencement deadline or limiting the certificate holder from selecting a more productive and viable turbine.

(2) Based on an evaluation of the RFA No. 3 materials to date, I find that the proposed change, a reduction in aboveground blade-tip clearance, would not result in a significant new adverse impact and that the overall impacts of the differing turbine type, based on the increase in individual turbine generating capacity, would decrease due to the reduction in total number of turbines, by half or more, needed at the site to produce the facility's maximum permitted generating capacity of 404 MW.

Based on these findings, I hereby grant expedited review of the Request for Amendment No. 3 of the Site Certificate for the Montague Wind Power Facility. Pursuant to OAR 345-027-0080(3), ODOE will issue a public notice of the amendment request and distribute copies to reviewing agencies no later than seven days from today's date.

Sincerely,

Barry Beyeler
Chair, Energy Facility Siting Council

cc (via e-mail distribution)
Todd Cornett, Oregon Department of Energy
Maxwell Woods, Oregon Department of Energy
Sarah Esterson, Oregon Department of Energy
Jesse Ratcliffe, Oregon Department of Justice

Attachment C: Index of Comments Received on the Request for Amendment

Attachment C: Index of Comments Received on Request for Amendment #3

Montague Wind Power Facility – Request for Amendment #3					
Date Comment Received	**Unique Record ID**	**Commenter Identification**			**Proposed Order Section No.**
		Last Name	**First Name**	**Organization**	
Reviewing Agency Comments					
5/15/17	MWPAMD3Doc14	McAllister	Lynne	Oregon Department of State Lands	Section III.Q.2 Removal-Fill
5/16/17	MWPAMD3Doc15	Birkland	Paul	Public Utility Commission of Oregon	Section III.P.3 Siting Standards for Transmission lines
5/23/17	MWPAMD3Doc16	McLane	Carla	Morrow County Board of Commissioners	Section III.E Land Use
5/30/17	MWPAMD3Doc17	Colby	Michelle	Gilliam County Planning Dept.	Section III.E Land Use
5/30/17	MWPAMD3Doc18	Cherry	Steve	Oregon Department of Fish and Wildlife	Section III.H Fish and Wildlife Habitat
		Reif	Sarah		
5/31/17	MWPAMD3Doc19	Farrow Ferman	Teara	Confederated Tribes of the Umatilla Indian Reservation	Section III.K Historic, Cultural and Archeological Resources
Public Comments					
5/14/17	MWPAMD3Doc20	Severe	Cindy	Citizen	Section II.C Public Comments
5/16/17	MWPAMD3Doc21	Jackson	Kathy	Citizen	Section III.Q.1 Noise Control Regulation

Attachment D: Certificate Holder Responses to Additional Information Requests

ESTERSON Sarah * ODOE

From: Hutchinson, Matthew <matthew.hutchinson@avangrid.com>
Sent: Friday, May 19, 2017 4:07 PM
To: ESTERSON Sarah * ODOE
Cc: WOODS Maxwell * ODOE; CORNETT Todd * ODOE; RATCLIFFE Jesse D; Walsh, Brian; Linnea.Eng@CH2M.com; Albrich, Elaine
Subject: Avangrid/Montague - RFA3 Response to RAIs
Attachments: Montague_Response_to_RfA_3_RAIs_05-19-2017.pdf

Sarah,
Attached are responses to ODOE's request for additional information on Request for Amendment (RFA) No. 3 for the Montague Wind Power Facility.

Have a good weekend.

Thanks,
Matt

AVANGRID RENEWABLES

Matt Hutchinson
Manager, Permitting and Environmental

1125 NW Couch St., Suite 700, Portland, OR, 97209
Telephone 503.478.6317
Cell 503.701.0665
matthew.hutchinson@avangrid.com

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please print only if necessary and recycle.

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possible damages arising from, or in connection with, data interception, software viruses or manipulation by third parties.

==========

Brian Walsh
Senior Developer - West

May 19, 2017

Sarah Esterson
Siting Analyst
Oregon Department of Energy
550 Capital Street NE
Salem, Oregon 97301-3737

Re: Montague Wind Power Facility Request for Amendment No. 3 – Response to Request for Additional Information

Dear Ms. Esterson:

Montague Wind Power Facility, LLC (Montague) respectfully submits responses to the Oregon Department of Energy's May 9, 2017, Request for Additional Information on *Request for Amendment No. 3* (RFA No. 3).

Responses are provided in the attached table and two associated attachments to the table.

We trust that the responses will suffice in addressing questions on RFA No. 3 and allow the Department to complete its evaluation and prepare the proposed order. Please do let us know if any additional requests are forthcoming.

Thank you.

Very truly yours,

Brian O. Walsh

Brian Walsh

Enclosure

cc: ODOE/ODOJ Team
Avangrid/CH2M/DWT Team

Avangrid Renewables, LLC
1125 NW Couch St., Suite 700, Portland, OR 97209
Telephone (503) 796-7000
www.avangridrenewables.us

An equal opportunity employer

Response to Request for Additional Information Dated May 9, 2017
Montague Wind Power Facility Request for Amendment No. 3
May 19, 2017

RAI NUMBER	Request for Additional Information	OAR	Response from Montague Wind Power Facility, LLC
Recreation (OAR 345-022-0100)			
RAI-1	Under OAR 345-022-0100 of RFA No. 3, page 3-14 states, "There are no new important recreational opportunities within the analysis area that were not previously analyzed." Provide an evaluation of whether there are any new recreational opportunities within the analysis area since the Council's previous Final Order on Amendment No. 2 issued in November 2015. If new recreational opportunities are identified, then provide an analysis of whether the certificate holder believes the recreational opportunity should be considered important. Provide a list of references siting the source of information evaluated to determine the presence of new recreational opportunities within the analysis area and to complete the evaluation of importance for any new recreational opportunities.	345-021-0010(1)(t)(A)	Montague first determined whether any new recreational opportunities in the analysis area were not considered in the Council's previous Final Order on Amendment No. 2 (November 2015). Montague reviewed websites established by the entities that manage the recreational resources within the analysis area and compared them to the existing recreational resource list. The results follow. **City Parks, Roosevelt Park, and the Port of Arlington:** • **City of Arlington** The City's website for recreation was reviewed. No new recreation facilities were identified. http://cityofarlingtonoregon.com/recreation/ • **U.S. Army Corps of Engineers (USACE)** The USACE manages Roosevelt Park and other recreation resources on the Columbia River. No new resources in the analysis area were identified. http://www.nwp.usace.army.mil/Locations/Columbia-River/John-Day/ • **Port of Arlington** The Port's website for recreation was reviewed. No new recreation facilities were identified. http://portofarlington.com/ **State Parks:** No new state parks (or state waysides) were found in the analysis area. http://oregonstateparks.org/index.cfm?do=visit.dsp_find http://www.oregonrestareas.com/sitemap.html **Lewis and Clark National Historic Trail (LCNHT):** No new recreational facility development or opportunities along the portion of the LCNHT in the vicinity of the assessment area were uncovered. https://www.nps.gov/lecl/learn/management/upload/Comprehensive-Plan-Orig.pdf

RAI NUMBER	Request for Additional Information	OAR	Response from Montague Wind Power Facility, LLC
			Oregon National Historic Trail, McDonald Crossing, and Fourmile Canyon: The National Park website for the Oregon National Historic Trail (Oregon Trail) was consulted and no new resources within the analysis area were uncovered. Two locations within the analysis area have trail markers that commemorate the Oregon Trail, McDonald Crossing, and Fourmile Crossing. No evidence of changes to those locations or new trail markers were uncovered. https://www.nps.gov/oreg/planyourvisit/maps.htm Based on this evaluation, no new recreational opportunities were identified within the analysis area since the Council's previous Final Order on Amendment No. 2 was issued in November 2015. The Council may conclude that there are no new important recreational resources to consider and may rely on prior findings to conclude that RFA No. 3 will not result in significant adverse impacts to important recreational resources in the Facility's analysis area.
Scenic Resources (OAR 345-022-0080)			
RAI-2	Provide a list of the local land use plans, tribal land management plans and federal land management plans evaluated to determine whether there are any new scenic resources identified as important since the Council's previous Final Order on Amendment No. 2 issued in November 2015. If any new important scenic resources have been identified within the analysis area, provide an analysis of the potential significant adverse impacts including loss of vegetation or alternation of landscape and visual impacts of facility structures or plumes from the facility to the important scenic resource.	345-021-0010(1)(r)(A)	Montague first determined whether there were any new scenic resources within the analysis areas that were not considered in the Council's previous Final Order on Amendment No. 2. Montague reviewed the following applicable local and federal land use and management plans to see if any of the plans had been updated, and if updated, whether new scenic resources were identified in the plans. **Local Plans:** • *Gilliam County Comprehensive Land Use Plan and Zoning Ordinances*, October 25, 2000 (No update) http://www.co.gilliam.or.us/zoning.html • *Morrow County Comprehensive Land Use Plan*, January 1986 (No update) http://www.co.morrow.or.us/planning/page/comprehensive-plan • *Sherman County Comprehensive Land Use Plan*, October 25, 2000 (No update) http://www.co.sherman.or.us/govt_planning.asp • *Klickitat County Comprehensive Plan*, August 1977 (No update) http://www.klickitatcounty.org/DocumentCenter/View/237 • *Roosevelt Community Subarea Plan*, 1995 (No update) http://www.klickitatcounty.org/

RAI NUMBER	Request for Additional Information	OAR	Response from Montague Wind Power Facility, LLC
			• *City of Arlington Comprehensive Plan*, June 2003 (No update or link to latest plan found online) • *City of Ione Comprehensive Plan*, June 1987 (No update or link to latest plan found online) **Oregon Department of Fish and Wildlife:** • John Day River Wildlife Refuge: No specific management plan for the area that identifies scenic resources and values was identified in the Final Order on Amendment No. 2. (No applicable plans have been developed.) • Willow Creek Wildlife Area: This area was managed under the *Columbia Basin Wildlife Areas Management Plan,* July 2008 (No Update**)** http://www.dfw.state.or.us/wildlife/management_plans/wildlife_areas/docs/columbia_basin.pdf **Federal Land Management Plans:** • *Two Rivers Resource Management Plan Record of Decision*, 1986 (No update) *https://www.blm.gov/or/districts/prineville/plans/files/pdo_tworivers_06_1986.pdf* • *Record of Decision John Day River Management Plan, Two Rivers, John Day, and Baker Resource Management Plan Amendments*, February 2001 (No update) *https://www.blm.gov/or/districts/prineville/plans/johndayrmp/files/JDB/JDB_support/14.%20John%20Day%20River%20Management%20Plan%202001.pdf* • Oregon Trail Comprehensive and Management Use Plan, Oregon National Historic Trail, August 1999 (No update) • Oregon Trail Management Plan, BLM Prineville District, 1993 (No update) *https://www.nps.gov/oreg/getinvolved/planning.htm* • Lewis and Clark National Historic Trail, Comprehensive Plan for Management and Use, January 1982 (No update) https://www.nps.gov/lecl/learn/management/upload/Comprehensive-Plan-Orig.pdf*https://www.nps.gov/lecl/learn/management/upload/Comprehensive-Plan-Orig.pdf*

RAI NUMBER	Request for Additional Information	OAR	Response from Montague Wind Power Facility, LLC
			In conducting the review, Montague confirmed that none of the local, state, or federal management plans have been updated since the Final Order on the Application was issued in (2010) and consequently, no new scenic resources were identified. Further, no new local, state, or federal management plans applicable to the analysis area are known to have been prepared since 2010. On this basis, Montague concluded that no new scenic resources were identified within the analysis area. The Council may conclude that there are no new important scenic resources to consider and may rely on prior findings to conclude that RFA No. 3 will not result in significant adverse impacts to important scenic resources in the Facility's analysis area.
Public Health and Safety Standard for Wind Facilities (OAR 345-024-0010)			
RAI-3	Identify and describe the risks from structural failure of turbine blades (e.g. failure, ejections, ice shedding, etc) and describe whether the identified risks would be impacted (increase/decrease) by reducing the minimum aboveground blade-tip clearance from 20 to 14 meters.	345-024-0010(2)	RFA No. 3 proposes a turbine blade that is 6 meters closer to the ground than site certificate Condition 27 allows. Although the blades are longer, they are structurally similar to the blades of the largest turbine previously authorized. Turbine blades are designed to meet International Electrotechnical Commission (IEC) 61400 standards, which specify the minimum design requirements for wind turbines. The IEC 61400 standards outline full-scale structural testing protocols of blades before new types of blades become commercially available. These tests include extreme loading and fatigue testing to simulate a range of field conditions through the design lifetime of the blades. For example, the Vestas V136 blades have undergone robust laboratory testing consistent with IEC 61400 at the Vestas R&D facility in the U.K. and were deployed on prototype turbines at full production conditions before becoming commercially available. Based on industry design standards and advancements in material testing, the probability of catastrophic blade failure from modern wind turbines is remote. Although rare, blade failure can occur due to lightning damage, human error, stresses that exceed the design parameters of the blade or its connection to the hub, or manufacturing defects. Lightning damage and human error are unrelated to blade length. Manufacturing defects are no more likely with the longer blade than they are with the previously approved blade length, and the longer blade is designed and tested to withstand the same stresses (caused by wind pressure and operation of the turbine) that the previously approved blade was designed to withstand. Turbine manufacturers and wind farm developers undertake significant measures to ensure blade safety to minimize risk and liability. During operations, blades are inspected to identify and address potential blade defects and minimize the potential for blade failure. In addition to the design measures above, to further reduce the risk to public safety, in accordance with Condition 42, Montague will locate turbines at least 1,320 feet from

RAI NUMBER	Request for Additional Information	OAR	Response from Montague Wind Power Facility, LLC
			residences and 110 percent of maximum blade tip height (541 feet for the tallest authorized turbine) from public roads. These setbacks reduce risk to public safety during an ice shedding event or the unlikely event of a blade failure. The nearest residence to a proposed turbine is 1,322 feet. The nearest public road is 650 feet from a turbine. Setbacks for public safety are based maximum blade tip height which would not change if using turbines with a lower blade tip clearance. Risks from ice shedding or ice throw depend on several variables including the number of icing events per year, wind speed, turbine size, and the number of passersby who could potentially be struck by ice. None of these variables are related to the proposed change in minimum blade tip clearance except for turbine size (i.e., blade length). However, the turbine size variable used in calculating ice throw risk is the hub height plus the blade length, which is equal to the maximum blade tip height. Because the proposed change to minimum blade tip clearance would not result in any increase in maximum blade tip height, the risk from ice shedding would not change from the previously approved turbine as a result of the proposed change to minimum blade tip clearance. The Council may adopt new findings, relying on the evidence in the record, that the Facility, as modified with the decreased minimum blade clearance, will still comply with OAR 345-024-0010. No new condition is needed to ensure compliance.
RAI-4	Provide an analysis of the sufficiency of Condition 58 in sensing and alerting operators of the risks identified in response to RAI-3.	345-024-0010(2)	Turbines with lower blade tip clearance, like the Vestas V136, still use the same type of self-monitoring devices, sensors, and control systems as the turbine types previously evaluated. These sensors and control systems consist of multiple components. Turbine protection systems include sensors that monitor rotor revolutions and trigger safety shutdowns in the event of an over-speed situation. Sensors are placed within the nacelle and would be effective regardless of blade length. In an over-speed situation or when an operational alarm sends a signal to stop operating, sensors trigger aerodynamic braking to stop the turbine by fully feathering out the three blades. This system of braking and turbine shutdown works in the same way regardless of blade size. In addition, there is a mechanical disc brake on the high-speed side of the gearbox with a dedicated hydraulic system. The mechanical brake is only used as a parking brake and when activating the emergency stop buttons. Turbines also have multiple smoke detectors to detect fires and shut down the turbine. Lightning protection systems are also standard to protect against damage from lightning strikes. If sensors detect abnormal operating conditions that could be dangerous, the turbine control systems are programmed to automatically shut down the equipment. Montague will also monitor all turbines 24 hours per day at its National Control Center, which can remotely shut down

RAI NUMBER	Request for Additional Information	OAR	Response from Montague Wind Power Facility, LLC
			turbines. Because the turbines used at the Facility will all have self-monitoring devices and there are no increased risks of operating a turbine with a lower blade tip clearance, Condition 58 is sufficient to ensure that turbines are operated in a safe and consistent manner.
Noise Control Regulation			
RAI-5	Provide an analysis of compliance with the Noise Control Regulation, specifically whether there are any new noise sensitive receptors located in areas not evaluated since the Council's previous Final Order on Amendment No. 2 issued in November 2015. Specifically, provide a map identifying the location of noise sensitive receptors within the analysis area and identify whether there are any new noise sensitive receptors within the analysis area that were not previously evaluated.	340-035-0035	CH2M conducted a desktop evaluation in March 2017 on behalf of Montague to determine whether any potential new noise-sensitive receptors were present within 2 miles of proposed turbine locations within the previously approved micrositing corridor. The desktop evaluation consisted of a detailed review of aerial photography available on Google Earth to search for structures within the analysis area that could potentially be residences but had not previously been included on Facility mapping. Based on the desktop evaluation, two locations were identified for further assessment. OAR 340-35-0015(38) defines a "noise-sensitive property" as "real property normally used for sleeping, or normally used as schools, churches, hospitals, or public libraries." The two locations flagged for further evaluation were visited by CH2M staff on May 11, 2017, and found not to meet the OAR definition. One location was a barn used for agricultural activities, which does not fall within the definition. The other location was an unused and overgrown mobile home, which is not a "real property normally used for sleeping" and in its current condition, appeared inhabitable. Both locations were near previously identified and evaluated residences. Attachment 1 contains a technical memorandum documenting the residential survey methods and findings of the site visit conducted on May 11, 2017, to assess the two locations identified in the desktop evaluation. Attachment 2 contains Figure X-2 from Application for Site Certificate Exhibit X (January 10, 2010). Figure X-2 shows the mapped noise-sensitive receptors for the noise analysis of 3.0-MW turbines, which are slightly louder than the turbines proposed under this amendment request. Based on the May 11, 2017, site visit and evaluation, and on property information supplied by the Gilliam County Assessor Office (see the Attachment 1 memorandum), no new noise-sensitive receptors are present in the Facility area and no new analysis has been conducted. The proposed change does not impact Montague's ability to comply with conditions regarding noise control. In compliance with Condition 107, before construction Montague will provide an updated noise analysis showing the final design locations of Facility turbines, along with easements for those properties where Montague relies on a noise waiver to demonstrate compliance with the noise rule.

Attachment 1
Technical Memorandum: Residential Survey Methods and Findings

TECHNICAL MEMORANDUM

Response to Request for Additional Information RAI-5: Residential Survey Methods and Findings

PREPARED FOR: Brian Walsh/Avangrid Renewables, LLC

COPY TO: Matt Hutchinson/Avangrid Renewables, LLC

PREPARED BY: Paul Hicks/CH2M
Linnea Eng/CH2M

DATE: May 19, 2017

This technical memorandum (TM) supports Montague Wind Power Facility, LLC's (Montague's) response to the Oregon Department of Energy's (ODOE's) Request for Additional Information 5 (RAI-5) dated May 9, 2017.

RAI-5 requests an analysis of compliance with the Noise Control Regulation in Oregon Administrative Rule (OAR) 340-035-0035, specifically to show whether any new noise-sensitive receptors are located in areas not evaluated since the Energy Facility Siting Council's previous Final Order on Amendment No. 2 issued in November 2015.

This TM provides an overview of survey methods used to identify potential noise-sensitive properties [defined in OAR 340-035-0015(38)] within the analysis area, summarizes findings derived from information supplied by the Gilliam County Assessor's Office demonstrating that no new noise-sensitive properties are located within a 2-mile analysis area of the Montague Wind Power Facility (Facility), and cites photographs collected during a site visit on May 11, 2017.

Residential Survey Methods

CH2M HILL Engineers, Inc. (CH2M), acting on behalf of Montague, first conducted a desktop evaluation in March 2017 to determine whether any potential new noise-sensitive properties are located within 2 miles of proposed turbine locations in the previously approved micrositing corridor. The desktop evaluation consisted of a detailed review of aerial photography available on Google Earth to search for structures within the analysis area that could potentially be residences but had not previously been included on Facility mapping. The desktop review was compared against noise-sensitive receptors shown on Figure X-2 from Application for Site Certificate Exhibit X (January 10, 2010) to determine the presence of any potential new noise-sensitive receptors. Based on the desktop evaluation, two locations (referred to herein as Location 1 and Location 2) were identified for further assessment.

The two locations flagged for further evaluation were then visited by CH2M staff on May 11, 2017. Photographs of Locations 1 and 2 collected during the site visit are provided at the end of this TM text. CH2M also reviewed publicly available assessor data to confirm that a mobile home structure located at Location 2 is not recorded as a dwelling.

Findings

Location 1 is situated south of Upper Rock Creek Road approximately 1.6 miles outside of the previously approved micrositing corridor and within the analysis area. Photograph 1 shows that Location 1 is a barn used for agricultural activities, and does not fall within the OAR 340-035-0015(38) definition of "real property normally used for sleeping."

Location 2 is a cluster of structures located adjacent to Weatherford Road and the previously approved micrositing corridor within the analysis area. A mobile home structure is located west of and adjacent to Weatherford Road within the previously approved micrositing corridor. Photographs 2 and 3 show that structures northeast and east of Weatherford Road at Location 2 are associated with farm use and are not residences. Photograph 4 shows the unused and overgrown mobile home located west of Weatherford Road. The mobile home is not a "real property normally used for sleeping" and in its current condition, appeared inhabitable. The attachment to this TM provides information from the Gilliam County Assessor's Office confirming that no dwellings are located at tax lot 01N21E0000-00805, which is the location of the mobile home structure.

Based on the May 11, 2017, site visit and evaluation, and the information supplied by the Gilliam County Assessor's Office (Attachment 1), no new noise-sensitive properties are present in the analysis area associated with the previously approved micrositing corridor.

Photographs from May 11, 2017, Site Visit

Photographs 1 through 4 are included in this section.

Photograph 1. View of Location 1 facing south from Upper Rock Creek Road

Photograph 2. View of Location 2 facing northeast from Weatherford Road

Photograph 3. View of Location 2 facing east from Weatherford Road

Photograph 4. View of Location 2 facing west from Weatherford Road

Attachment
Gilliam County Assessor’s Office
Property Information

GILLIAM COUNTY PROPERTY INFORMATION

Land and Structures for account # 3629

The Gilliam County Assessor's Office is responsible for the appraisal and assessment of all taxable property within the County. Contact this department if you need additional information or if you have questions.

Account Information

Mailing Name: WEATHERFORD FLORES ANN
Map and Taxlot: 01N21E0000-00805-R03629
Account: 3629
Situs Address: 69180 WEATHERFORD RD ARLINGTON, OR 97812
Tax Status: Taxable

Warning

This account may have potential additional tax liabilities, taxes due, or other special development conditions.

Structures Located on this Property

Description	Stat Class	Year Built	SQFT	
STEELUTL		1971	2400.0	View Improvement Report (PDF)
GRBIN		1931	0.0	View Improvement Report (PDF)
GRBIN		1926	0.0	View Improvement Report (PDF)
GRBIN		1926	0.0	View Improvement Report (PDF)
GRBIN		1991	0.0	View Improvement Report (PDF)

Land Characteristics for this Property

Land Description	Acres	Land Classification
81 - OSDS	0.00	
16 - HSMV	1.00	
26 - RANG	5.00	
31 - TILL	57.70	
31 - TILL	202.56	

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Attachment 2
Figure Showing Predicted Noise Contours for 3.0-MW Turbine Layout

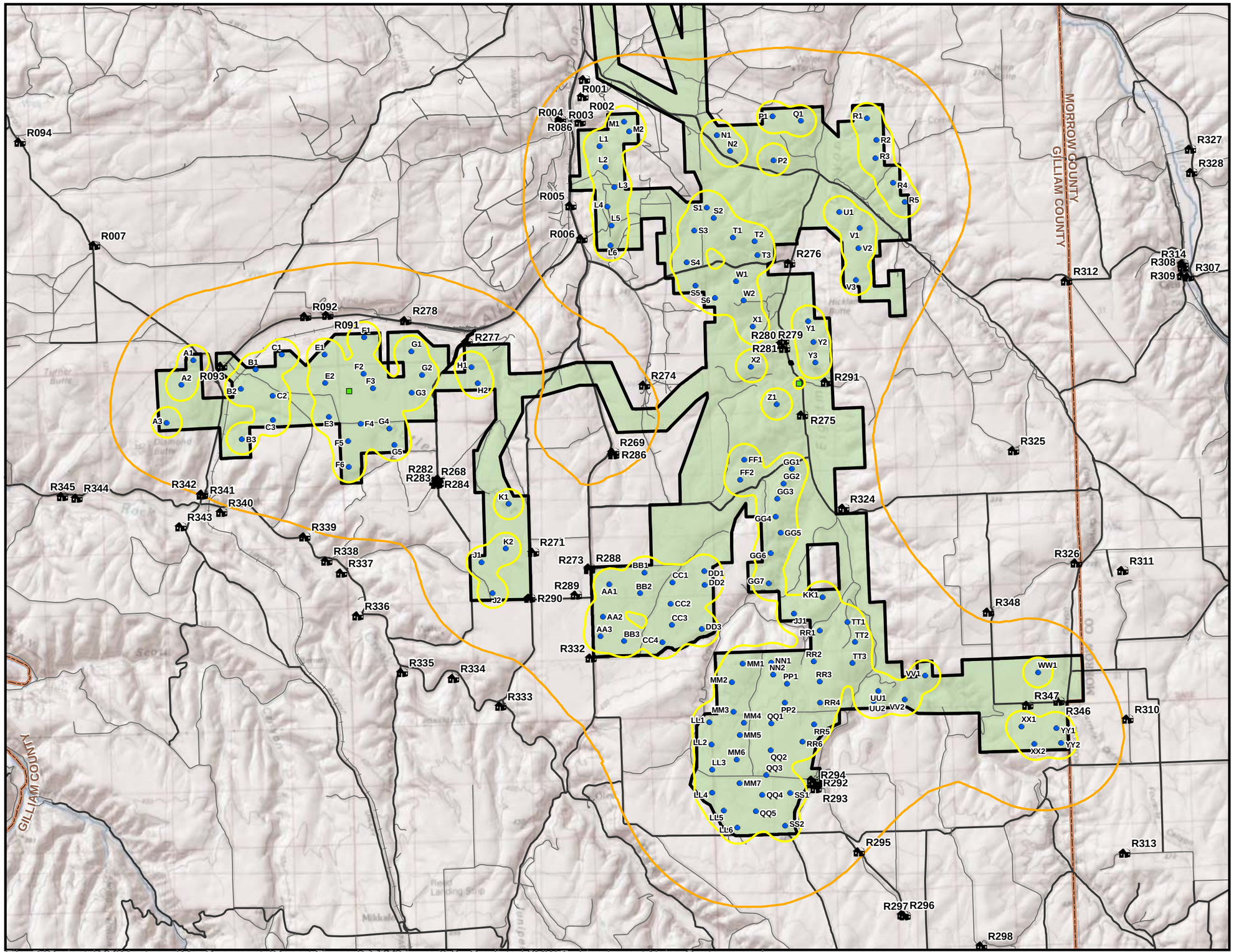

Figure X-2

Predicted Noise Contours (dBA)

3.0-MW Turbine Layout
(Minimum Turbine Layout)

Montague Wind Power Facility

- Site Boundary
- Micrositing Corridor
- House
- 36-dBA Noise Contour
- 50-dBA Noise Contour

Proposed Permanent Facilities

- Proposed Turbine
- Proposed 5-Acre Facility Collector Substation

Existing Facilities

- Public Road
- Private Road
- Major Railroad Line
- County Boundary

N
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Miles

IBERDROLA RENEWABLES

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Modify Date: 1/15/2010

Attachment E: Draft Amended Wildlife Monitoring and Mitigation Plan (December 2015)

Montague Wind Power Facility: Wildlife Monitoring and Mitigation Plan

[DECEMBER 2015]

This plan describes wildlife monitoring that the certificate holder shall conduct during operation of the Montague Wind Power Facility (MWPF).[1] The monitoring objectives are to determine whether the facility causes significant fatalities of birds and bats and to determine whether the facility results in a loss of habitat quality.

The certificate holder shall use experienced and properly trained personnel (the "investigators") to conduct the monitoring required under this plan. The professional qualifications of the investigators are subject to approval by the Oregon Department of Energy (Department). For all components of this plan except the Wildlife Reporting and Handling System, the certificate holder shall hire independent third party investigators (not employees of the certificate holder) to perform monitoring tasks.

The *Wildlife Monitoring and Mitigation Plan* for the MWPF has the following components:

1) Fatality monitoring program including:
    a) Removal trials
    b) Searcher efficiency trials
    c) Fatality search protocol
    d) Statistical analysis
2) Raptor nesting surveys
3) Washington ground squirrel surveys
4) Wildlife Reporting and Handling System

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

1. Fatality Monitoring

(a) Definitions and Methods

Seasons

This plan uses the following dates for defining seasons:

[1] This plan is incorporated by reference in the site certificate for the MWPF 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.

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

Search Plots

The investigators shall conduct fatality monitoring within search plots. The certificate holder, in consultation with the Oregon Department of Fish and Wildlife (ODFW), shall select search plots based on a systematic sampling design that ensures that the selected search plots are representative of the habitat conditions in different parts of the site. Each search plot will contain one turbine. Search plots will be square or circular. Circular search plots will be centered on the turbine location and will have a radius equal to the maximum blade tip height of the turbine contained within the plot. "Maximum blade tip height" is the turbine hub-height plus one-half the rotor diameter. Square search plots will be of sufficient size to contain a circular search plot as described above. The certificate holder shall provide maps of the search plots to the Department before beginning fatality monitoring at the facility. The certificate holder shall use the same search plots for each search conducted during a monitoring year.

Scheduling

Fatality monitoring will begin one month after commencement of commercial operation of the facility. Subsequent monitoring years will follow the same schedule (beginning in the same calendar month in the subsequent monitoring year).

In each monitoring year, the investigators shall conduct fatality monitoring searches at the rates of frequency shown below. Over the course of one monitoring year, the investigators will conduct 16 searches, as follows:

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)

Sample Size

The sample size for fatality monitoring is the number of turbines searched per monitoring year. The investigators shall conduct fatality monitoring during each monitoring year in search plots at one-third of the turbines that are built or 50 turbines, whichever is greater. If fewer than 50 turbines are built, the certificate holder shall search all turbines.

As described in the site certificate, the certificate holder may choose to build the MWPF using turbine types in two size classes:

- Small: turbines having a rotor diameter of 82 meters or less
- Large: turbines having a rotor diameter greater than 82 meters

If the final design of the MWPF includes both small and large turbines, the certificate holder shall consult with an independent expert with experience in statistical analysis of avian

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

Duration of Fatality Monitoring

The investigators shall perform one complete monitoring cycle during the first full year of facility operation (Year 1). At the end of the first year of monitoring, the certificate holder will report the results for joint evaluation by the Department, the certificate holder and ODFW. In the evaluation, the certificate holder shall compare the results for the MWPF with the thresholds of concern described in Section 1(g) of this plan and with comparable data from other wind power facilities in the Columbia Basin, as available. If the fatality rates for the first year of monitoring at the MWPF do not exceed any of the thresholds of concern and are within the range of the fatality rates found at other wind power facilities in the region, then the investigators will perform a second year of monitoring in Year 5 of operations.

If fatality rates for the first year of monitoring at the MWPF exceed any of the thresholds of concern or exceed the range of fatality rates found at other wind power facilities in the region, the certificate holder shall propose additional mitigation for Department and ODFW review within 6 months after reporting the fatality rates to the Department. Alternatively, the certificate holder may opt to conduct a second year of fatality monitoring immediately if the certificate holder believes that the results of Year 1 monitoring were anomalous. If the certificate holder takes this option, the investigators still must perform the monitoring in Year 5 of operations as described above.

(b) Removal Trials

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

The investigators shall conduct carcass removal trials within each of the seasons defined above during the first year of fatality monitoring. For each trial, the investigators shall use 10 to 15 carcasses of small- and large-bodied species. Trial carcasses shall be placed at least 1,000 feet from any search plots and distributed proportionately within habitat categories and subtypes similar to the search plots.

After the first year of fatality monitoring, the investigators may reduce the number of removal trials and the number of removal trial carcasses during any subsequent year of fatality monitoring, subject to the approval of the Department. The investigators must show that the reduction is justified based on a comparison of the first year removal data with published removal data from nearby wind energy facilities.

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

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

An approximate schedule for assessing removal status is once daily for the first 4 days, and on days 7, 10, 14, 21, 28 and 35. This schedule may be adjusted depending on actual carcass removal rates, weather conditions and coordination with the other survey work. The condition of scavenged carcasses will be documented during each assessment, and at the end of the trial all traces of the carcasses will be removed from the site. Scavenger or other activity could result in complete removal of all traces of a carcass in a location or distribution of feathers and carcass parts to several locations. This distribution will not constitute removal if evidence of the carcass remains within an area similar in size to a search plot and if the evidence would be discernable to a searcher during a normal survey.

Before beginning removal trials for any subsequent year of fatality monitoring, the certificate holder shall report the results of the first year removal trials to the Department and ODFW. In the report, the certificate holder shall analyze whether four removal trials per year, as described above, provide sufficient data to accurately estimate adjustment factors for carcass removal. The number of removal trials may be adjusted up or down, subject to the approval of the Department.

(c) Searcher Efficiency Trials

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

The investigators shall conduct searcher efficiency trials within each of the seasons defined above during the years in which the fatality monitoring occurs. Each trial will involve approximately 4 to 15 carcasses. The searchers will not be notified of carcass placement or test dates. The investigators shall vary the number of trials per season and the number of carcasses per trial so that the searchers will not know the total number of trial carcasses being used in any trial. In total, approximately 80 carcasses will be used per year, or approximately 15 to 25 per season.

For each trial, the investigators shall use small- and large-bodied species. The investigators shall use game birds or other legal sources of avian species as test carcasses for the efficiency trials, and the investigators may use carcasses found in fatality monitoring searches.

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The investigators shall select species with the same coloration and size attributes as species found within the site boundary. If suitable test carcasses are available, trials during the fall season will include several small brown birds to simulate bat carcasses. Legally obtained bat carcasses will be used if available. The investigators shall mark the test carcasses to differentiate them from other carcasses that might be found within the search plot and shall use methods similar to those used to mark removal test carcasses as long as the procedure is sufficiently discreet and does not increase carcass visibility.

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

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

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

If new searchers are brought into the search team, additional searcher efficiency trials will be conducted to ensure that detection rates incorporate searcher differences. The certificate holder shall include a discussion of any changes in search personnel and any additional detection trials in the reporting required under Section 5 of this plan.

Before beginning searcher efficiency trials for any subsequent year of fatality monitoring, the certificate holder shall report the results of the first year efficiency trials to the Department and ODFW. In the report, the certificate holder shall analyze whether the efficiency trials as described above provide sufficient data to accurately estimate adjustment factors for searcher efficiency. The number of searcher efficiency trials for any subsequent year of fatality monitoring may be adjusted up or down, subject to the approval of the Department.

(d) Fatality Monitoring Search Protocol

The objective fatality monitoring is to estimate the number of bird and bat fatalities that are attributable to facility operation as an indicator of the impact of the facility on habitat quality. The goal of bird and bat fatality monitoring is to estimate fatality rates and associated variances. The investigators shall perform fatality monitoring using standardized carcass searches according to the schedule described above.

Personnel trained in proper search techniques ("the searchers") will conduct the carcass searches by walking parallel transects approximately 6 meters apart within the search plots. A searcher will walk at a rate of approximately 45 to 60 meters per minute along each transect, searching both sides out to 3 meters for casualties. Search area and speed may be adjusted by habitat type after evaluation of the first searcher efficiency trial.

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Searchers shall flag all avian or bat carcasses discovered. Carcasses are defined as a complete carcass or body part, 10 or more feathers or three or more primary feathers in one location. When parts of carcasses and feathers from the same species are found within a search plot, searchers shall make note of the relative positions and assess whether or not these are from the same fatality.

All carcasses (avian and bat) found during the standardized carcass searches will be photographed, recorded and labeled with a unique number. Searchers shall make note of the nearest two or three structures (turbine, power pole, fence, building or overhead line) and the approximate distance from the carcass to these structures. The species and age of the carcass will be determined when possible. Searchers shall note the extent to which the carcass is intact and estimate time since death. Searchers shall describe all evidence that might assist in determination of cause of death, such as evidence of electrocution, vehicular strike, wire strike, predation or disease. When assessment of the carcass is complete, all traces of it will be removed from the site.

Each carcass will be bagged and frozen for future reference and possible necropsy or (if the carcass is fresh and whole) for use in trials. A copy of the data sheet for each carcass will be kept with the carcass at all times. For each carcass found, searchers will record species, sex and age when possible, date and time collected, location, condition (e.g., intact, scavenged, feather spot) and any comments that may indicate cause of death. Searchers will photograph each carcass as found and will map the find on a detailed map of the search area showing the location of the wind turbines and associated facilities. The certificate holder shall coordinate collection of state endangered, threatened, sensitive or other state protected species with ODFW. The certificate holder shall coordinate collection of federally listed endangered or threatened species and Migratory Bird Treaty Act protected avian species with the U.S. Fish and Wildlife Service (USFWS). The certificate holder shall obtain appropriate collection permits from ODFW and USFWS.

The investigators shall calculate fatality rates using the statistical methods described in Section (f), except that the investigators may use different notation or methods that are mathematically equivalent with prior approval of the Department. In making these calculations, the investigators may exclude carcass data from the first search of each turbine plot (to eliminate possible counting of carcasses that were present before the turbine was operating).

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

On an annual basis, the certificate holder shall report an estimate of fatalities in eight categories: (1) all birds, (2) small birds, (3) large birds, (4) raptors, (5) grassland birds, (6) nocturnal migrants, (7) state and federally listed threatened and endangered species and State Sensitive Species listed under OAR 635-100-0040 and (8) bats. The certificate holder shall report annual fatality rates on both a per-MW and per-turbine basis.

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(e) Incidental Finds and Injured Birds

The searchers might discover carcasses incidental to formal carcass searches (e.g., while driving within the project area). For each incidentally discovered carcass, the searcher shall identify, photograph, record data and collect the carcass as would be done for carcasses within the formal search sample during scheduled searches. If the incidentally discovered carcass is found within a formal search plot, the fatality data will be included in the calculation of fatality rates. If the incidentally discovered carcass is found outside a formal search plot, the data will be reported separately. The certificate holder shall coordinate collection of incidentally discovered state endangered, threatened, sensitive or other state protected species with ODFW. The certificate holder shall coordinate collection of incidentally discovered federally-listed endangered or threatened species and Migratory Bird Treaty Act protected avian species with the USFWS.

The certificate holder shall develop and follow a protocol for handling injured birds. Any injured native birds found on the facility site will be carefully captured by a trained project biologist or technician and transported to a qualified rehabilitation specialist approved by the Department.[2] The certificate holder shall pay costs, if any, charged for time and expenses related to care and rehabilitation of injured native birds found on the site, unless the cause of injury is clearly demonstrated to be unrelated to the facility operations.

(f) Statistical Methods for Fatality Estimates

The estimate of the total number of wind facility-related fatalities is based on:

(1) The observed number of carcasses found during standardized searches during the two monitoring years for which the cause of death is attributed to the facility.[3]
(2) Searcher efficiency expressed as the proportion of planted carcasses found by searchers.
(3) Removal rates expressed as the estimated average probability a carcass is expected to remain in the study area and be available for detection by the searchers during the entire survey period.

<u>Definition of Variables</u>

The following variables are used in the equations below:

c_i the number of carcasses detected at plot *i* for the study period of interest (e.g., one year) for which the cause of death is either unknown or is attributed to the facility

n the number of search plots

k the number of turbines searched (includes the turbines centered within each search plot and a proportion of the number of turbines adjacent to search plots to account for the effect of adjacent turbines on the search plot buffer area)

$\bar{c}$ the average number of carcasses observed per turbine per year

[2] Approved specialists include Lynn Tompkins (wildlife rehabilitator) of Blue Mountain Wildlife, a wildlife rehabilitation center in Pendleton, and the Audubon Bird Care Center in Portland. The certificate holder must obtain Department approval before using other specialists.
[3] If a different cause of death is not apparent, the fatality will be attributed to facility operation.

s	the number of carcasses used in removal trials
s_c	the number of carcasses in removal trials that remain in the study area after 35 days
se	standard error (square of the sample variance of the mean)
t_i	the time (days) a carcass remains in the study area before it is removed
$\bar{t}$	the average time (days) a carcass remains in the study area before it is removed
d	the total number of carcasses placed in searcher efficiency trials
p	the estimated proportion of detectable carcasses found by searchers
I	the average interval between searches in days
$\hat{\pi}$	the estimated probability that a carcass is both available to be found during a search and is found
m_t	the estimated annual average number of fatalities per turbine per year, adjusted for removal and observer detection bias
C	nameplate energy output of turbine in megawatts (MW)

Observed Number of Carcasses

The estimated average number of carcasses ($\bar{c}$) observed per turbine per year is:

$$\bar{c} = \frac{\sum_{i=1}^{n} c_i}{k}. \tag{1}$$

Estimation of Carcass Removal

Estimates of carcass removal are used to adjust carcass counts for removal bias. Mean carcass removal time ($\bar{t}$) is the average length of time a carcass remains at the site before it is removed:

$$\bar{t} = \frac{\sum_{i=1}^{s} t_i}{s - s_c}. \tag{2}$$

This estimator is the maximum likelihood estimator assuming the removal times follow an exponential distribution and there is right-censoring of data. Any trial carcasses still remaining at 35 days are collected, yielding censored observations at 35 days. If all trial carcasses are removed before the end of the trial, then s_c is 0, and $\bar{t}$ is just the arithmetic average of the removal times. Removal rates will be estimated by carcass size (small and large), habitat type and season.

Estimation of Observer Detection Rates

Observer detection rates (i.e., searcher efficiency rates) are expressed as p, the proportion of trial carcasses that are detected by searchers. Observer detection rates will be estimated by carcass size, habitat type and season.

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Estimation of Facility-Related Fatality Rates

The estimated per turbine annual fatality rate (m_t) is calculated by:

$$m_t = \frac{\bar{c}}{\hat{\pi}}, \tag{3}$$

where $\hat{\pi}$ includes adjustments for both carcass removal (from scavenging and other means) and observer detection bias assuming that the carcass removal times t_i follow an exponential distribution. Under these assumptions, this detection probability is estimated by:

$$\hat{\pi} = \frac{\bar{t} \cdot p}{I} \cdot \left[\frac{\exp\left(I / \bar{t} \right) - 1}{\exp\left(I / \bar{t} \right) - 1 + p} \right]. \tag{4}$$

The estimated per MW annual fatality rate (m) is calculated by:

$$m = \frac{m_t}{C}. \tag{5}$$

The final reported estimates of *m*, associated standard errors and 90% confidence intervals will be calculated using bootstrapping (Manly 1997). Bootstrapping is a computer simulation technique that is useful for calculating point estimates, variances and confidence intervals for complicated test statistics. For each iteration of the bootstrap, the plots will be sampled with replacement, trial carcasses will be sampled with replacement, and $\bar{c}$, $\bar{t}$, p, $\hat{\pi}$ and m will be calculated. A total of 5,000 bootstrap iterations will be used. The reported estimates will be the means of the 5,000 bootstrap estimates. The standard deviation of the bootstrap estimates is the estimated standard error. The lower 5th and upper 95th percentiles of the 5000 bootstrap estimates are estimates of the lower limit and upper limit of 90% confidence intervals.

Nocturnal Migrant and Bat Fatalities

Differences in observed nocturnal migrant and bat fatality rates for lit turbines, unlit turbines that are adjacent to lit turbines and unlit turbines that are not adjacent to lit turbines will be compared graphically and statistically.

(g) Mitigation

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

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Mitigation may be appropriate if fatality rates exceed a "threshold of concern."[4] For the purpose of determining whether a threshold has been exceeded, the certificate holder shall calculate the average annual fatality rates for species groups after each year of monitoring. Based on current knowledge of the species that are likely to use the habitat in the area of the facility, the following thresholds apply to the MWPF:

Species Group	**Threshold of Concern** (fatalities per MW)
Raptors (All eagles, hawks, falcons and owls, including burrowing owls.)	0.09
Raptor species of special concern (Swainson's hawk, ferruginous hawk, peregrine falcon, golden eagle, bald eagle, burrowing owl and any federal threatened or endangered raptor species.)	0.06
Grassland species (All native bird species that rely on grassland habitat and are either resident species occurring year round or species that nest in the area, excluding horned lark, burrowing owl and northern harrier.)	0.59
State sensitive avian species listed under OAR 635-100-0040 (Excluding raptors listed above.)	0.2
Bat species as a group	2.5

If the data show that a threshold of concern for a species group has been exceeded, the certificate holder shall implement additional mitigation if the Department determines that mitigation is appropriate based on analysis of the data, consultation with ODFW and consideration of any other significant information available at the time. In addition, the Department may determine that mitigation is appropriate if fatality rates for individual avian or bat species (especially State Sensitive Species) are higher than expected and at a level of biological concern. If the Department determines that mitigation is appropriate, the certificate holder, in consultation with the Department and ODFW, shall propose mitigation measures designed to benefit the affected species. This may take into consideration whether the mitigation required or provided in conjunction with raptor nest monitoring, habitat mitigation, or other components of the *Wildlife Monitoring and Mitigation Plan* or *Habitat Mitigation Plan*, would also benefit the affected species.

The certificate holder shall implement mitigation as approved by the Department, subject to review by the Council. The Department may recommend additional, targeted data collection if the need for mitigation is unclear based on the information available at the time. The certificate holder shall implement such data collection as approved by the Council.

[4] The Council adopted "thresholds of concern" for raptors, grassland species, and state sensitive avian species in the Final Order on the Application for the Klondike III Wind Project (June 30, 2006) and for bats in the Final Order on the Application for the Biglow Canyon Wind Farm (June 30, 2006). As explained in the Klondike III order: "Although the threshold numbers provide a rough measure for deciding whether the Council should be concerned about observed fatality rates, the thresholds have a very limited scientific basis. The exceeding of a threshold, by itself, would not be a scientific indicator that operation of the facility would result in range-wide population level declines of any of the species affected. The thresholds are provided in the Wildlife Monitoring and Mitigation Plan to guide consideration of additional mitigation based on two years of monitoring data."

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The certificate holder shall design mitigation to benefit the affected species group. Mitigation may include, but is not limited to, protection of nesting habitat for the affected group of native species through a conservation easement or similar agreement. Tracts of land that are intact and functional for wildlife are preferable to degraded habitat areas. Preference should be given to protection of land that would otherwise be subject to development or use that would diminish the wildlife value of the land. In addition, mitigation measures might include: enhancement of the protected tract by weed removal and control; increasing the diversity of native grasses and forbs; planting sagebrush or other shrubs; constructing and maintaining artificial nest structures for raptors; improving wildfire response; and conducting or making a contribution to research that will aid in understanding more about the affected species and its conservation needs in the region.

If the data show that the threshold of concern for bat species as a group has been exceeded, the certificate holder shall implement additional mitigation if the Department determines that mitigation is appropriate based on analysis of the data, consultation with ODFW and consideration of any other significant information available at the time. For example, if the threshold for bat species as a group is exceeded, the certificate holder may contribute to Bat Conservation International or to a Pacific Northwest bat conservation group to fund new or ongoing research in the Pacific Northwest to better understand wind facility impacts to bat species and to develop possible ways to reduce impacts to the affected species.

2. Raptor Nest Surveys

The objectives of raptor nest surveys are: (1) to estimate the size of the local breeding populations of raptor species that nest on the ground or aboveground in trees or other aboveground nest locations in the vicinity of the facility; and (2) to determine whether operation of the facility results in a reduction of nesting activity or nesting success in the local populations of the following raptor species: Swainson's hawk, golden eagle, ferruginous hawk and burrowing owl.

The certificate holder shall conduct short-term and long-term monitoring. The investigators will use aerial and ground surveys to evaluate nest success by gathering data on active nests, on nests with young and on young fledged. The investigators will analyze the data as described in Section 3(c) and will share the data with state and federal biologists.

(a) Short-Term Monitoring

Short-term monitoring will be done in two monitoring seasons. The first monitoring season will be in the first raptor nesting season after completion of construction of the facility. The second monitoring season will be in the fourth year after construction is completed. The certificate holder shall provide a summary of the first-year results in the monitoring report described in Section 5. After the second monitoring season, the investigators will analyze two years of data compared to the baseline data.

For Raptor Species that Nest Aboveground

During each monitoring season, the investigators will conduct a minimum of one aerial and one ground survey for raptor nests in late May or early June and additional surveys as described in this section. The survey area is the area within the facility site and a 2-mile buffer zone around the site. For the ground surveys while checking for nesting *success* (conducted

within the facility site and up to a maximum of ½ mile from the facility site), nests outside the leased project boundary will be checked from an appropriate distance where feasible, depending on permission from the landowner for access.

All nests discovered during pre-construction surveys and any nests discovered during post-construction surveys, whether active or inactive, will be given identification numbers. Nest locations will be recorded on U.S. Geological Survey 7.5-minute quadrangle maps. Global positioning system (GPS) coordinates will be recorded for each nest. Locations of inactive nests will be recorded because they could become occupied during future years.

Determining nest *occupancy* may require one or two visits to each nest. Aerial surveys for nest occupancy will be conducted within the facility site and a 2-mile buffer. For occupied nests, the certificate holder will determine nesting *success* by a minimum of one ground visit to determine the species, number of young and young fledged within the facility site and up to ½ mile from the facility site. "Nesting success" means that the young have successfully fledged (the young are independent of the core nest site).

For Burrowing Owls

If burrowing owl nest sites are discovered, the investigators will monitor them according to the following protocol. This species is not easily detected during aerial raptor nest surveys. The investigators shall record active burrowing owl nest sites in the vicinity of the facility as they are discovered during other wildlife monitoring tasks. Any nests discovered during post-construction surveys, whether active or showing signs of intermittent use by the species, will be given identification numbers. Nest locations will be recorded on U.S. Geological Survey 7.5-minute quadrangle maps. Global positioning system coordinates will be recorded for each nest site. Coordinates for ancillary burrows used by one nesting pair or a group of nesting pairs will also be recorded. Locations of inactive nests will be recorded because they could become occupied during future years.

The investigators shall conduct burrowing owl monitoring in the same years as the raptor nest surveys described above. For occupied nests, the investigators shall determine nesting *success* by a minimum of one ground visit to determine species, number of young and young fledged. "Nesting success" means that the young have successfully fledged (the young may or may not be independent of the core nest site). Three visits to the nest sites may be necessary to determine outcome. Nests that cannot be monitored due to the landowner denying access will be checked from a distance where feasible.

If burrowing owl nests are discovered during the first year of post-construction raptor nest surveys (the first raptor nesting season after construction is completed), the investigators shall monitor those nest locations during the second year of surveys in the fourth year after construction is completed. Thereafter, the investigators shall monitor all known burrowing owl nest locations as a part of the long-term raptor nest monitoring program described in Section 2(b) below.

(b) Long-Term Monitoring

In addition to the two years of post-construction raptor nest surveys described in Section 2(a), the investigators shall conduct long-term raptor nest surveys at 5-year intervals for the life

of the facility.[5] Investigators will conduct the first long-term raptor nest survey in the first raptor nesting season that is at least 5 years after the completion of construction and is in a year that is divisible by five (i.e. 2020, 2025, 2030); and will repeat the survey at 5-year intervals thereafter. In conducting long-term surveys, the investigators will follow the same survey protocols as described above in Section 2(a) unless the investigators propose alternative protocols that are approved by the Department. In developing an alternative protocol, the investigators will consult with ODFW and will take into consideration other monitoring conducted in adjacent areas. The investigators will analyze the data and report after each year of long-term raptor nest surveys.

(c) Analysis

The investigators will analyze the raptor nesting data to determine whether a reduction in either nesting success or nest use has occurred in the survey area. If the analysis indicates a reduction in nesting success or nest use by Swainson's hawks, ferruginous hawks or burrowing owls, then the certificate holder will propose appropriate mitigation for the affected species as described in Section 2(d) and will implement mitigation as approved by the Department, subject to review by the Council.

Reductions in nesting success or nest use could be due to operation of the MWPF, operation of another wind facility in the vicinity or some other cause. The investigators shall attribute the reduction to operation of the MWPF if the wind turbine closest to the affected nest site is an MWPF turbine, unless the certificate holder demonstrates, and the Department agrees, that the reduction was due to a different cause. At a minimum, if the analysis shows that a Swainson's hawk, ferruginous hawk or burrowing owl has abandoned a nest territory within the facility site or within ½ mile of the facility site or has not fledged any young over two successive surveys within that same area, the investigators will assume the abandonment or unsuccessful fledging is due to operation of the facility unless another cause can be demonstrated convincingly.

Given the low raptor nesting densities in the area and the presence of other wind energy facilities nearby, statistical power to detect a relationship between distance from an MWPF wind turbine and nesting parameters (e.g., number of fledglings per reproductive pair) will be very low. Therefore, impacts may have to be judged based on trends in the data, results from other wind energy facility monitoring studies and literature on what is known regarding the populations in the region.

(d) Mitigation

If the analysis shows a reduction in nesting success or nest use, the certificate holder shall implement mitigation if the Department determines that mitigation is appropriate. The certificate holder shall propose mitigation for the affected species in consultation with the Department and ODFW and shall implement mitigation as approved by the Council. In proposing appropriate mitigation, the certificate holder shall advise the Department if any other wind project in the area is obligated to provide mitigation for a reduction in raptor nesting success at the same nest site. Mitigation should be designed to benefit the affected species or contribute to overall scientific knowledge and understanding of what causes nest abandonment or nest failure. Mitigation may be designed to proceed in phases over several years. It may include, but is not limited to,

[5] As used in this plan, "life of the facility" means continuously until the facility site is restored and the site certificate is terminated in accordance with OAR 345-027-0110.

additional raptor nest monitoring, protection of natural nest sites from human disturbance or cattle activity (preferably within the general area of the facility) or participation in research projects designed to improve scientific understanding of the needs of the affected species. Mitigation may take into consideration whether the mitigation required or provided in conjunction with other components of the *Wildlife Monitoring and Mitigation Plan* or *Habitat Mitigation Plan* would also benefit the raptor species whose nesting success was adversely affected.

3. Washington ground squirrel surveys

The certificate holder shall conduct long-term post-construction surveys to collect data on Washington ground squirrel (WGS) activity within the site boundary. Qualified professional biologists will monitor the locations within the facility site where WGS were detected in pre-construction surveys (beginning in 2008). The survey area includes the identified burrow areas and the buffer areas within 785 feet in suitable habitat. The investigators will walk standard protocol-level transects twice between late March and late May and record level of use, notes on natal sites, physical extent of the sites and any noticeable land use or habitat changes that may have occurred since the preconstruction survey in 2010. The investigators shall report any new WGS detections.

The certificate holder shall conduct surveys during the year following construction and every three years thereafter for the life of the facility. After each survey, the certificate holder shall report the results to ODFW and to the Department and shall include maps of the areas surveyed and detection locations.

4. Wildlife Reporting and Handling System

The Wildlife Reporting and Handling System (WRHS) is a monitoring program to search for and handle avian and bat casualties found by maintenance personnel during operation of the facility. Maintenance personnel will be trained in the methods needed to carry out this program. This monitoring program includes the initial response, handling and reporting of bird and bat carcasses discovered incidental to maintenance operations ("incidental finds").

All avian and bat carcasses discovered by maintenance personnel will be photographed and data will be recorded as would be done for carcasses within the formal search sample during scheduled searches. If maintenance personnel discover incidental finds, the maintenance personnel will notify a project biologist. The project biologist (or the project biologist's experienced wildlife technician) will collect the carcass or will instruct maintenance personnel to have an on-site carcass handling permittee collect the carcass. The certificate holder's on-site carcass handling permittee must be a person who is listed on state and federal scientific or salvage collection permits and who is available to process (collect) the find on the day it is discovered. The find must be processed on the same day as it is discovered.

During the years in which fatality monitoring occurs, if maintenance personnel discover incidental finds outside the search plots for the fatality monitoring searches, the data will be reported separately from fatality monitoring data. If maintenance personnel discover carcasses within search plots, the data will be included in the calculation of fatality rates. The maintenance personnel will notify a project biologist. The project biologist will collect the carcass or will instruct maintenance personnel to have an on-site carcass handling permittee collect the carcass. As stated above, the on-site permittee must be available to process the find on the day it is

discovered. The certificate holder shall coordinate collection of state endangered, threatened, sensitive or other state protected species with ODFW. The certificate holder shall coordinate collection of federally-listed endangered or threatened species and Migratory Bird Treaty Act protected avian species with the USFWS.

5. Data Reporting

The certificate holder will report wildlife monitoring data and analysis to the Department for each calendar year in which wildlife monitoring occurs. Monitoring data include fatality monitoring program data, raptor nest survey data, WGS survey data, WGS incidental observation and assessment reports, and WRHS data. The certificate holder may include the reporting of wildlife monitoring data and analysis in the annual report required under OAR 345-026-0080 or submit this information as a separate document at the same time the annual report is submitted. In addition, the certificate holder shall provide to the Department any data or record generated in carrying out this monitoring plan upon request by the Department.

The certificate holder shall notify USFWS and ODFW immediately if any federal or state endangered or threatened species are killed or injured on the facility site.

Within 30 days after receiving the final versions of reports that are required under this plan, the Department will make the reports available to the public on its website and will specify a time in which the public may submit comments to the Department.[6]

6. Amendment of the Plan

This *Wildlife Monitoring and Mitigation Plan* may be amended from time to time by agreement of the certificate holder and the Council. Such amendments may be made without amendment of the site certificate. The Council authorizes the Department to agree to amendments to this plan and to mitigation actions that may be required under this plan. The Department shall notify the Council of all amendments and mitigation actions, and the Council retains the authority to approve, reject or modify any amendment of this plan or mitigation action agreed to by the Department.

[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: Draft Revegetation Plan (September 2010)

Montague Wind Power Facility: Revegetation Plan

[SEPTEMBER 10, 2010]

I. Introduction

This plan describes methods and standards for restoration of areas disturbed during the construction of the Montague Wind Power Facility (MWPF), excluding areas occupied by permanent facility components (the "footprint").[1] The objective of revegetation is to restore the disturbed areas to pre-disturbance condition or better. The site certificate for the facility requires restoration of these areas. This plan has been developed in consultation with the Oregon Department of Fish and Wildlife (ODFW).

The site certificate describes the area of disturbance anticipated during construction of the MWPF. The affected area includes cultivated or otherwise developed agricultural land (cropland) as well as areas of grassland, shrub-steppe habitat and other habitat subtypes (wildlife habitat areas). The intensity of the construction impact will vary. In some areas, the impact will be relatively light, but in other areas, heavy construction activity will remove all vegetation, remove topsoil and compact the remaining subsoil. Where vegetation has been damaged or removed during construction, the certificate holder must restore suitable vegetation. In addition, the certificate holder shall maintain erosion and sediment control measures put in place during construction until the affected areas are restored as described in this plan and the risk of erosion has been eliminated. The plan specifies monitoring procedures to evaluate revegetation success of disturbed wildlife habitat areas. Remedial action may be necessary for wildlife habitat areas that do not show revegetation progress. Additional mitigation may be necessary if revegetation is unsuccessful.

II. Description of the Facility Site

The facility is located in Gilliam County, Oregon. The facility site is on private agricultural land used primarily for wheat and hay farming and livestock grazing. The majority of the facility components are located on four primary soil types: the Olex Unit, the Ritzville Unit, the Warden Unit and the Willis Unit. Soils are typically well-drained, moderately permeable, fertile silt loams formed in loess deposits. The area receives between approximately 9 and 14 inches of precipitation annually, most of which occurs between October 1 and March 31.

The site is within the Columbia Plateau physiographic province. The facility is located on an upland plateau at elevations ranging from approximately 530 feet to 1,520 feet. Most of the native vegetation within the site boundary has been modified by historic and ongoing livestock grazing and past wildfires.

The general land cover types are Developed, Exposed Rock, Grassland, Shrub-steppe and Woodland. Specifically, functional, mature sagebrush (big sage) shrub-steppe and juniper woodland habitat is patchy, occurring in specific locations within the site boundary. Sagebrush (big sage) shrub-steppe is found on deep soils in patches throughout the site and higher quality habitat is usually found on slopes or in draws that have been avoided for agricultural development. Juniper woodland habitat is present in portions of the site, but individual juniper

[1] This plan is incorporated by reference in the site certificate for the Montague Wind Power Facility 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.

trees are scattered sparsely in other habitats. Recent wildfires have removed some juniper trees in the Eightmile Canyon area. Riparian woodland habitat within the site is limited to one narrow intermittent linear course in Eightmile canyon. Rabbitbrush/Snakeweed shrub-steppe habitat is the most prevalent native habitat type within the site. Rabbitbrush/Snakeweed shrub-steppe is more prevalent in the north, west and middle portions of the site, with smaller patches distributed throughout much of the site. Native perennial grassland is also present throughout much of the north, middle and south portions of the site.

III. Revegetation Methods

The certificate holder shall begin restoration of disturbed areas as soon as possible after completion of facility construction activity in the area to be restored. The certificate holder shall restore areas of disturbance by preparing the soil and seeding using common application methods. The certificate holder shall use mulching and other appropriate practices to control erosion and sediment during facility construction and during revegetation work. The certificate holder shall restore topsoil to pre-construction condition. The certificate holder shall select the seed mix to apply based on the pre-construction land use, as described below. For affected juniper woodland areas, planting young juniper trees may be preferred over seeds. The certificate holder shall consult with ODFW as described in Section V below regarding appropriate seeding or planting according to site-specific restoration needs.

1. Seed Planting Methods

Planting should be done at the appropriate time of year to facilitate seed germination, based on weather conditions and the time of year when construction-related ground disturbance occurs. The certificate holder shall choose planting methods based on site-specific factors such as slope, erosion potential and the size of the area in need of revegetation. Disturbed ground may require chemical or mechanical weed control before weeds have a chance to go to seed. Two common application methods are described as follows.

(a) Broadcasting

Broadcast the seed mix at the specified application rate. Where feasible, apply half of the total mix in one direction and the second half of mix in the direction perpendicular to first half. Apply weed-free straw from a certified field or sterile straw at a rate of two tons per acre immediately after applying seed. Crimp straw into the ground to a depth of two inches using a crimping disc or similar device. As an alternative to crimping, a tackifier may be applied using hydroseed equipment at a rate of 100 pounds per acre. Prior to mixing the tackifer, visually inspect the tank for cleanliness. If remnants from previous hydroseed applications exist, wash tank to remove remnants. Include a tracking dye with the tackifier to aid uniform application. Broadcasting should not be used if winds exceed five miles per hour.

(b) Drilling

Using an agricultural or range seed drill, drill seed at 70 percent of the recommended application rate to a depth of ¼ inch or as recommended by the seed supplier. Where feasible, apply half of the total mix in one direction and the second half of mix in the direction perpendicular to first half. If mulch has been previously applied, seed may be drilled through the mulch provided the drill is capable of penetrating the straw resulting in seed-to-soil contact conducive for germination.

IV. Restoration of Cropland

The certificate holder shall seed disturbed cropland areas with wheat or other crop seed. The certificate holder shall consult with the landowner and farm operator to determine 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. The certificate holder shall consult with the landowner or farmer to determine whether these areas have been successfully revegetated and shall report to the Oregon Department of Energy (Department) on the success of revegetation in these areas.

V. Restoration of Wildlife Habitat Areas

The certificate holder shall seed all disturbed grassland, shrub-steppe, juniper woodland and other wildlife habitat subtype areas that are not cropland or other developed lands. The certificate holder shall consult with ODFW and the landowner to determine the appropriate seed mix and application rate for these areas, including a combination of grasses, forbs, shrubs and juniper trees based on the characteristics of the affected area. The mix should contain native species selected based on relative availability and compatibility with local growing conditions. Seed mix selection should consider soil erosion potential, soil type, seed availability and the need for using native or native-like species. The certificate holder shall obtain approval of the composition of the seed mix from the Department. The certificate holder shall use seed provided by a reputable supplier and complying with the Oregon Seed Law. The certificate holder shall determine the number and size of the juniper tree plants based on the professional judgment of a qualified biologist after a ground survey of actual conditions. The certificate holder shall obtain young native species trees from a qualified nursery or suitable transplants from MWPF construction zones.

VI. Monitoring

1. Revegetation Record

The certificate holder shall maintain a record of revegetation work for both cropland and wildlife habitat areas. 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), the date that revegetation work began and a description of the work done within the affected area. The certificate shall update the revegetation records from time to time, as revegetation work occurs. The certificate holder shall provide copies of these records to the Department at the time of submitting the annual report required under the site certificate.

2. Monitoring Procedures

The certificate holder shall monitor the revegetation of wildlife habitat areas as described in this section, unless the landowner has converted the area to a use inconsistent with the success criteria. The certificate holder shall employ a qualified investigator (an independent botanist or revegetation specialist) to examine all non-cropland revegetation areas to assess vegetation cover (species, structural stage, etc.) and progress toward meeting the success criteria described below.

Weed Control

A qualified investigator shall inspect each revegetation area on an annual basis during the first five years following initial seeding to assess weed growth and to recommend weed control measures. The investigator shall report to the certificate holder, the Department and ODFW following each inspection, describing weed growth and the success of control measures. Based on the Year 5 report (described below), the certificate holder shall confer with the Department and ODFW to develop a weed control plan for subsequent years.

Wildlife Habitat Recovery

After the first growing season following initial seeding and juniper planting (Year 1), a qualified investigator shall inspect each revegetation area to assess revegetation success based on the success criteria and to recommend remedial actions, if needed. The qualified investigator shall reinspect these areas at two years and at four years after the first inspection (Year 3 and Year 5). The investigator shall report to the certificate holder, the Department and ODFW following each inspection. The report shall include the investigator's assessment of whether the revegetated areas are trending toward meeting the success criteria and any remedial actions recommended.

Based on the Year 5 report, the certificate holder shall confer with the Department and ODFW to develop an action plan for subsequent years. 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 remedial action and additional monitoring based on an evaluation of site capability. As an alternative, the certificate holder may conclude that revegetation of the area was unsuccessful and propose appropriate mitigation for the loss of habitat quality and quantity. The certificate holder shall implement the action plan, subject to the approval of the Department.

The certificate holder's qualified investigator shall evaluate whether a wildlife habitat area is trending toward meeting the success criteria by comparing the revegetation area to a reference area. In consultation with ODFW, the investigator shall choose reference sites near the revegetation area to represent the target conditions for the revegetation effort. The investigator shall select one or more reference sites that closely resemble the pre-disturbance characteristics of the revegetation area 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 investigator shall consider land use patterns, soil type, local terrain and noxious weed densities in selecting reference sites. It is likely that different reference sites will be needed to represent different pre-disturbance habitat conditions of the disturbed areas.

During the monitoring visits in Year 1, Year 3 and Year 5, the certificate holder's qualified investigator shall compare the revegetation area 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 the pre-disturbance conditions of the revegetation area. If such events have eliminated all suitable reference sites for a revegetation area, the investigator, in consultation with ODFW, shall select one or more new reference sites.

Within each revegetation area, the investigator shall evaluate the progress of wildlife habitat recovery in comparison to the reference sites. The investigator shall evaluate the following site conditions (both within the revegetation area 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.
- Number of surviving juniper trees and overall vigor, height of tree and the extent of branching.
- Species diversity of desirable vegetation.

The certificate holder shall report the investigator's findings and recommendations regarding wildlife habitat recovery and revegetation success on an annual basis to the Department (as part of the annual report on the facility) and to ODFW.

3. 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. A wildlife habitat area is successfully revegetated when its habitat quality is equal to, or better than, the habitat quality of the reference site as measured by the site conditions listed above. Juniper planting will be considered successful when, in the investigator's judgment, one in five has survived.

When the Department finds that the condition of a wildlife habitat area satisfies the criteria for revegetation success, the Department shall conclude that the certificate holder has met its restoration obligations for that area. If the Department finds that the landowner has converted a wildlife habitat area to a use that is inconsistent with these success criteria, the Department shall conclude that the certificate holder has no further obligation to restore the area for wildlife habitat uses.

4. Remedial Action

After each monitoring visit, the certificate holder's qualified investigator shall report to the certificate holder regarding the revegetation progress of each wildlife habitat area. The investigator shall make recommendations to the certificate holder for reseeding or other remedial measures for areas that are not showing progress toward achieving revegetation success. The certificate holder shall take appropriate action to meet the objectives of this revegetation plan. On an annual basis as part of the annual report on the facility, the certificate holder shall report to the Department the investigator's recommendations and the remedial actions taken. The Department may require reseeding or other remedial measures in those areas that do not meet the success criteria.

If a wildlife habitat area is damaged by wildfire during the first five years following initial seeding, the certificate holder shall work with the landowner to restore the damaged area. The certificate holder shall continue to report on revegetation progress during the remainder of

the five-year period. The certificate holder shall report the damage caused by wildfire and the cause of the fire, if known.

VII. Amendment of the Plan

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

Attachment G: Draft Habitat Mitigation Plan (September 2010)

Montague Wind Power Facility: Habitat Mitigation Plan

[SEPTEMBER 10, 2010]

I. Introduction

This plan describes methods and standards for preservation and enhancement of an area of land near the Montague Wind Power Facility (MWPF) to mitigate for the impacts of the facility on wildlife habitat.[1] This plan addresses mitigation for both the permanent impacts of facility components and the temporal impacts of facility construction. The certificate holder shall protect and enhance the mitigation area as described in this plan. This plan specifies habitat enhancement actions and monitoring procedures to evaluate the success of those actions. Remedial action may be necessary if progress toward habitat enhancement success is not demonstrated in the mitigation area.

II. Description of the Impacts Addressed by the Plan

The estimated land area that could be occupied by permanent facility components (the "footprint") is approximately 256 acres, based on the expected configuration for the MWPF. In addition to the footprint impacts, construction of the facility could disturb approximately 1,778 acres. Although much of the area is cropland, habitat that could be affected by construction disturbance includes areas of perennial bunchgrass, desirable shrubs and juniper trees. After disturbance, the recovery of perennial bunchgrass species to a mature stage might take five to seven years; recovery of juniper trees and desirable shrubs such as bitterbrush and sagebrush might take ten to 30 years to reach maximum height and vertical branching. Even where recovery of these habitat subtypes is successful, there is a loss of habitat quality during the period of time needed to achieve recovery (temporal impact).

III. Calculation of the Size of the Mitigation Area

The actual footprint and construction disturbance areas cannot be determined until the final design layout of the facility is known. Before beginning construction of the facility, the certificate holder shall provide to the Oregon Department of Energy (Department) a map showing the final design configuration of the facility and a table showing the estimated areas of permanent impacts and construction area impacts on habitat (by category, habitat types and habitat subtypes). The certificate holder shall calculate the size of the mitigation area, as illustrated below, based on the final design configuration of the facility. The certificate holder shall implement the habitat enhancement actions described in this plan, after the Department has approved the size of the mitigation area. This plan does not address additional mitigation that might be required under the Montague Wind Power Facility Wildlife Monitoring and Mitigation Plan.

The mitigation area must be large enough to meet the habitat mitigation goals and standards of the Oregon Department of Fish and Wildlife (ODFW) described in OAR 635-415-0025. The ODFW goals require mitigation to achieve "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 MWPF would not have any impacts on Category 1 or Category 5 habitats.

[1] This plan is incorporated by reference in the site certificate for the Montague Wind Power Facility 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.

For the footprint impacts, the mitigation area includes two acres for every one acre of Category 2 habitat affected (a 2:1 ratio) and one acre for every acre of footprint impacts to Category 3 and 4 habitat (a 1:1 ratio). The 2:1 ratio for Category 2 is intended to meet the ODFW goals of "no net loss" and "net benefit" of habitat quantity for impacts to Category 2 habitat. The 1:1 ratio for the footprint impacts to Category 3 and 4 habitat is intended to meet the ODFW goal of "no net loss" of habitat in these categories.

To mitigate for construction impacts outside the footprint, the mitigation area includes ½ acre for every acre of Category 2 or 3 SSA (shrub-steppe-sagebrush) and WJ (juniper woodland) habitat affected (a 0.5:1 ratio). This portion of the mitigation area is intended to address the temporal loss of habitat quality during the recovery of SSA and WJ habitat disturbed during construction. The size of this portion of the mitigation area is based on the assumption that restoration of disturbed SSA and WJ habitat is successful, as determined under the Montague Wind Power Facility Revegetation Plan. If the revegetation success criteria are not met in the affected areas, then the Council may require the certificate holder to provide additional mitigation.

Areas of potential impact within each affected habitat category and the corresponding mitigation area for each category are calculated as follows, based on maximum habitat impact estimates:[2]

<u>Category 2</u>

Footprint impacts: 52.74 acres

Temporary impacts to SSA and WJ: 112.64 acres

Mitigation area requirement: (52.74 acres x 2) + (112.64 acres x 0.5) = 161.79 acres

<u>Category 3</u>

Footprint impacts: 88.11 acres

Temporary impacts to SSA and WJ: 3.62 acres

Mitigation area: 88.11 acres + (3.62 acres x 0.5) = 89.93 acres

<u>Category 4</u>

Footprint impacts: 8.53 acres

Mitigation area requirement: 8.53 acres

<u>Total mitigation area for MWPF (rounded to nearest whole acre): 260 acres</u>

[2] The maximum impact estimates are shown in Table 7 of the *Final Order on the Application*.

IV. Description of the Mitigation Area

The certificate holder shall select a mitigation area in proximity to the facility where habitat protection and enhancement are feasible consistent with this plan.[3] The applicant identified a 440-acre parcel in a relatively remote setting where habitat protection and enhancement are feasible.[4] Conservation easements for other wind energy facilities have been established within the 440-acre parcel, and the applicant has an option for establishing a conservation easement for the MWPF on the remaining acres.[5] If sufficient land for the MWPF mitigation area is not acquired within the 440-acre parcel, the certificate holder shall select other land that is suitable for meeting the mitigation area requirement consistent with this plan. Before beginning construction of the facility, the certificate holder shall determine the final size of the mitigation area needed for the facility. The certificate holder shall determine the location and boundaries of the mitigation area in consultation with ODFW and the affected landowners and subject to the approval of the Department. The final mitigation area must contain suitable habitat to achieve 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 Category 2 habitat through appropriate enhancement actions. Before beginning construction of the facility, the certificate holder shall acquire the legal right to create, maintain and protect the habitat mitigation area for the life of the facility by means of an outright purchase, conservation easement or similar conveyance and shall provide a copy of the documentation to the Department.[6]

V. Habitat Enhancement Actions

The objectives of habitat enhancement are to protect habitat within the mitigation area from degradation and to improve the habitat quality of the mitigation area. By achieving these goals, the certificate holder can address the permanent and temporal habitat impacts of the MWPF and 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 Category 2 habitat. The certificate holder shall initiate the habitat enhancement actions for the facility as soon as the final design configuration is known and the size of the mitigation area has been determined and approved by the Department. The certificate holder shall implement the following enhancement actions:

1) <u>Modification of Livestock Grazing Practices</u>. The certificate holder shall restrict grazing within the habitat mitigation area. Eliminating livestock grazing within the mitigation area during most of the year will enable recovery of native bunchgrass and sagebrush in areas where past grazing or recent (2008) wildfires have occurred, resulting in better vegetative structure and complexity for a variety of wildlife. Reduced livestock grazing may be used as a vegetation management tool, limited to the period from February 1 through April 15.

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[3] OAR 635-415-0005 defines "in-proximity habitat mitigation" as follows: "habitat mitigation measures undertaken within or in proximity to areas affected by a development action. For the purposes of this policy, 'in proximity to' means within the same home range, or watershed (depending on the species or population being considered) whichever will have the highest likelihood of benefiting fish and wildlife populations directly affected by the development."

[4] The 440-acre parcel is described in Section IV.4.(b)(F) of the *Final Order on the Application for the Leaning Juniper II Wind Power Facility*, September 21, 2007, pp. 97-100.

[5] The 440-acre parcel is shown in Figures P-10 and P-11 of the MWPF site certificate application.

[6] As used in this plan, "life of the facility" means continuously until the facility site is restored and the site certificate is terminated in accordance with OAR 345-027-0110.

2) Shrub Planting. The certificate holder shall plant sagebrush shrubs in locations where existing sagebrush is stressed or where recent (2008) wildfires have occurred. The certificate holder shall determine the size of the shrub-planting areas based on the professional judgment of a qualified biologist after a ground survey of actual conditions. The size of the shrub-planting areas will depend on the available mitigation area and opportunity for survival of planted shrubs. The shrub survival rate at four years after planting is an indicator of successful enhancement of habitat quality to Category 2. The certificate holder shall plant sagebrush on a total of at least 10 acres. Although a minimum 10-acre area of shrub planting is anticipated, the certificate holder may choose to plant a larger area. The certificate holder shall complete the initial sagebrush planting within one year after the beginning of construction of the MWPF. Supplementing existing but disturbed sagebrush areas with sagebrush seedlings would assist the recovery of this valuable shrub-steppe component. The certificate holder shall obtain shrubs from a qualified nursery or grow shrubs from native seeds gathered from the mitigation area. The certificate holder shall identify the area to be planted with sagebrush shrubs after consultation with ODFW and subject to final approval by the Department. The certificate holder shall mark the planted sagebrush clusters at the time of planting for later monitoring purposes and shall keep a record of the number of shrubs planted.

3) Tree Planting. If areas of juniper woodland are disturbed during construction, the certificate holder shall plant juniper trees in the mitigation area in locations of deeper soils near canyon bottoms. The certificate holder shall assess specific locations and provide a map of possible planting locations to ODFW and the Department before planting begins. The certificate holder shall determine the number and size of the juniper tree plants based on the professional judgment of a qualified biologist after a ground survey of actual conditions. The size of the tree-planting area will depend on the available mitigation area and opportunity for survival of planted trees. The tree survival rate at four years after planting is an indicator of successful enhancement of habitat quality to Category 2. The certificate holder shall obtain trees from a qualified nursery or suitable transplants from MWPF construction zones. The certificate holder shall identify the area to be planted with juniper trees after consultation with ODFW and subject to final approval by the Department. The certificate holder shall mark the planted trees at the time of planting for later monitoring purposes and shall keep a record of the number of trees planted.

4) Weed Control. The certificate holder shall implement a weed control program. Under the weed control program, the certificate holder shall monitor the mitigation area to locate weed infestations. The certificate holder shall continue weed control monitoring, as needed, for the life of the facility. As needed, the certificate holder shall use appropriate methods to control weeds. Weed control on the mitigation site will reduce the spread of noxious weeds within the habitat mitigation area and on any nearby grassland, CRP or cultivated agricultural land. Weed control will promote the growth of desirable native vegetation and planted sagebrush. The certificate holder may consider weeds to be successfully controlled when weed clusters have been eradicated or reduced to a non-competing level. Weeds may be controlled with herbicides or hand-pulling. The certificate holder shall notify the landowner of the specific chemicals to be used on the site and when spraying will occur. To protect locations where young desirable forbs may be growing, spot-spraying may be used instead of total area spraying.

5) 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. If any part of the mitigation area is damaged by wildfire, the certificate holder shall assess the extent of the damage and implement appropriate actions to restore habitat quality in the damaged area.

6) Nest platforms. The certificate holder shall construct at least one artificial raptor nest platform in the mitigation area tailored to the opportunities of the site, using best professional judgment of raptor use in the general area. The certificate holder may construct more than one nest platform based on the availability of suitable locations. The certificate holder shall maintain the nest platforms for the life of the facility.

7) Habitat Protection. The certificate holder shall restrict uses of the mitigation area that are inconsistent with the goals of no net loss of habitat in Categories 2, 3 and 4 and a net benefit in Categories 2 habitat quantity or quality.

VI. Monitoring

1. Monitoring Procedures

The certificate holder shall hire a qualified investigator (an independent botanist, wildlife biologist or revegetation specialist) to conduct a comprehensive monitoring program for the mitigation area. The purpose of this monitoring is to evaluate on an ongoing basis the protection of habitat quality, the results of enhancement actions and the use of the area by avian and mammal species, especially during the wildlife breeding season.

The investigator shall monitor the habitat mitigation area for the life of the facility beginning in the year following the initial sagebrush planting. The investigator shall visit the site as necessary to carry out the following monitoring procedures:

1) Annually assess vegetation cover (species, structural stage, etc.) and progress toward meeting the success criteria.

2) Annually record environmental factors (such as precipitation at the time of surveys and precipitation levels for the year).

3) Annually record any wildfire that occurs within the mitigation area and any remedial actions taken to restore habitat quality in the damaged area.

4) Annually assess the success of the weed control program and recommend remedial action, if needed.

5) Assess the recovery of native bunchgrass and natural recruitment of sagebrush resulting from removal of livestock grazing pressure and recovery post-fire by comparing the quality of bunchgrass and sagebrush cover at the time of each monitoring visit with the quality observed in previous monitoring visits and as observed when the mitigation area was first established. The investigator shall establish photo plots of naturally recovering sagebrush and native bunchgrass during the first year following the beginning of construction of the MWPF. The investigator shall take comparison photos in the first year and in every other year thereafter until

the subject vegetation has achieved mature stature. The investigator shall determine the extent of successful recovery of native bunchgrass based on measurable indicators (such as signs of more abundant seed production) and shall report on the progress of recovery within in the monitoring plots. The investigator shall report on the timing and extent of any livestock grazing that has occurred within the mitigation area since the previous monitoring visit.

6) Assess the survival rate and growth of planted sagebrush. At the time of planting, sagebrush clusters will be marked for the purpose of monitoring. The investigator shall select several planted clusters for photo monitoring and shall take close-up and long-distance digital images of each selected cluster during monitoring visits. The certificate holder shall determine the number of clusters to be photo-monitored at the time of planting in consultation with the Department and ODFW, based on the number of clusters planted. The investigator shall take comparison photos in the first year following the initial sagebrush planting and in every other year thereafter until the surviving planted sagebrush has achieved mature stature. In each monitoring year, the investigator shall determine and report the survival rate of planted sagebrush. Based on past experience of restoration specialists for other sagebrush planting projects, a survival rate as high as 50 percent can be achieved if there are years of high soil moisture, but a more typical survival rate is 2 surviving shrubs per 10 planted (20 percent) after four years. Shrub planting will be considered successful if a 20-percent survival rate is achieved after four years. The investigator shall recommend remedial action when, in the investigator's judgment, the survival rate of planted sagebrush is inadequate to demonstrate a trend toward an improvement in habitat quality.

7) Assess the survival rate and growth of planted juniper trees. At the time of planting, juniper trees will be marked for the purpose of monitoring. The investigator shall select several planted trees for photo monitoring and shall take close-up and long-distance digital images of each selected tree during monitoring visits. The certificate holder shall determine the number of trees to be photo-monitored at the time of planting in consultation with the Department and ODFW, based on the number of trees planted. The investigator shall take comparison photos in the first year following planting and in every other year thereafter until the surviving planted trees have achieved mature stature. In each monitoring year, the investigator shall determine and report the survival rate of planted trees and shall note overall vigor, height of tree and the extent of branching. Based on past experience of restoration specialists, one in five planted juniper trees may typically survive. Juniper planting will be considered successful when, in the investigator's judgment, one in five has survived. The investigator shall recommend remedial action when, in the investigator's judgment, the survival rate is inadequate to demonstrate a trend toward an improvement in habitat quality.

8) Between April 21 and May 21 beginning in the first spring season after the beginning of construction of the MWPF, conduct an area search survey of avian species. An "area search" survey consists of recording all birds seen or heard in specific areas (for example, square or circular plots that are 5 to 10 acres in size). Area searches will be conducted during morning hours on days with low or no wind. The investigator shall

determine the number searches and the number of search areas in consultation with ODFW. The investigator shall repeat the area search survey every five years during the life of the facility.

9) Beginning in the first year after the beginning of construction of the MWPF and repeating every five years during the life of the facility, the investigator shall record observations of special status plant or wildlife species (federal or state threatened or endangered species and state sensitive species) during appropriate seasons for detection of these species.

The certificate holder shall report the investigator's findings and recommendations regarding the monitoring of the mitigation area to the Department and to ODFW on an annual basis. In the annual mitigation area report, the certificate holder shall describe all habitat mitigation actions carried out during the reporting year. The mitigation area report may be included as part of the annual report on the MWPF that is required by the site certificate.

2. 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 Categories 2 habitat. The certificate holder must protect the quantity and quality of habitat within the mitigation area for the life of the facility. ODFW has advised the Department that protection of habitat alone (without enhancement activity) will not meet the intent of the "net benefit" goal.

The certificate holder must protect a sufficient quantity of habitat in each category to meet the mitigation area requirements calculated under Section III based on the final design configuration of the facility. The certificate holder shall determine the actual mitigation area requirements for the facility, 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, survival of planted shrubs and juniper trees, 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 four years after the initial sagebrush planting, the certificate holder shall propose remedial action. The Department may require supplemental planting or other corrective measures.

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

VII. Amendment of the Plan

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