BEFORE THE
ENERGY FACILITY SITING COUNCIL
OF THE STATE OF OREGON

In the Matter of the Request for Amendment #2 of the Site Certificate for the Stateline Wind Project

FINAL ORDER ON AMENDMENT #2

June 6, 2003
# STATELINE WIND PROJECT: FINAL ORDER ON AMENDMENT #2

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LIST OF ABBREVIATIONS

ADT  average daily traffic
Council  Energy Facility Siting Council
CTUIR  Confederated Tribes of the Umatilla Indian Reservation
CRP  Conservation Reserve Program
DEQ  Oregon Department of Environmental Quality
EFU  land zoned for "exclusive farm use"
EQC  Environmental Quality Commission
FPL  FPL Energy Vansycle LLC
FPL Energy  FPL Energy LLC, parent company of FPL
kW  kilowatt or kilowatts
kV  kilovolt or kilovolts
LCDC  Land Conservation and Development Commission
met  meteorological
MW  megawatt or megawatts
ODFW  Oregon Department of Fish and Wildlife
Office  Oregon Office of Energy
Stateline  Stateline Wind Project
Stateline 1  The Stateline facility approved by the original site certificate issued September 14, 2001
Stateline 2  The expansion of Stateline approved by Amendment #1
Stateline 3  The proposed expansion of Stateline that is the subject of this Amendment #2
WGS  Washington ground squirrel(s)
I. INTRODUCTION

The Energy Facility Siting Council (Council) issues this proposed order in accordance with ORS 469.405 and OAR 345-027-0070. This order addresses a request by the certificate holder for amendment of the site certificate for the Stateline Wind Project (Stateline). The certificate holder is FPL Energy Vansycle, LLC (FPL).

On September 14, 2001, the Council issued a site certificate for an 83.8-megawatt (MW) wind energy facility in Umatilla County, Oregon (referred to in this order as “Stateline 1”\(^1\)). The Council’s Final Order in the Matter of the Application for a Site Certificate for the Stateline Wind Project (“Final Order on the Application”) describes the facility in more detail. FPL began construction of Stateline 1 on September 17, 2001, and completed construction on December 20, 2001. The facility began commercial operation on December 21, 2001.

On May 17, 2002, the Council issued its Final Order in the Matter of the Request for Amendment #1 of the Site Certificate for the Stateline Wind Project (“Final Order on Amendment #1”). Amendment #1 authorized FPL to expand the Stateline 1 facility by the construction of 60 additional turbines and related or supporting facilities (referred to in this order as “Stateline 2”). As of January 3, 2003, FPL had completed construction of 55 of the Stateline 2 turbines. Currently, the Stateline wind facility includes 181\(^2\) operating turbines in Oregon with a combined electrical generating capacity of approximately 119.5 MW.

FPL now requests Amendment #2 that would allow a further expansion of Stateline by adding 279 turbines and increasing the electric generation capacity of the facility by 184 MW. Condition (26) of the site certificate requires an amendment “if the proposed change would increase the electrical generation capacity of the facility and would increase the number of wind turbines or the dimensions of existing wind turbines.” Accordingly, FPL cannot expand the facility to add turbines unless the Council approves an amendment of the site certificate. In addition, the proposed Amendment #2 would extend the construction completion date for the remaining five Stateline 2 turbines and related or supporting facilities from March 1, 2003, to March 1, 2005.

The definitions in ORS 469.300 and OAR 345-001-0010 apply to terms used in this order.

II. PROCEDURAL HISTORY AND AMENDMENT PROCESS

FPL submitted a request to amend the site certificate to the Oregon Office of Energy (Office) on July 1, 2002. As required under OAR 345-027-0070, the Office sent copies of the request to the appropriate officers, agencies and tribes listed in OAR 345-020-0040 within 15 days after receiving the request. The Office requested comments by August 8. Also as required under the rule, the Office sent notice of the amendment request to all persons on the

\(\text{\textsuperscript{1}}\) As described in the Final Order on the Application, pages 9-13.
\(\text{\textsuperscript{2}}\) The site certificate authorized FPL to construct 127 Stateline 1 turbines. However, FPL elected to build 126 due to site conditions.
Council's mailing list and to persons on a list of property owners supplied by FPL. Within the
time allowed by Council rule, the Office notified FPL that the amendment would require
extended review and that the proposed order would be issued by November 12, 2002.

In August 2002, FPL notified the Office that it wanted to request a further amendment
of the site certificate for additional expansion of generation capacity. To consolidate the
expansion requests into a single amendment proceeding, FPL agreed to revise the pending
amendment request. The Office suspended review while FPL prepared its revised amendment
request.

On November 15, 2002, FPL submitted its revised request for Amendment #2
(referred to herein as “Request for Amendment #2”). On November 19, 2002, the Office sent
a request for comments to the appropriate officers, agencies and tribes, asking them to submit
comments by December 20. The Office asked FPL to send them copies of the revised
amendment request, in accordance with OAR 345-027-0070. On the same date, the Office
sent notice of the amendment request to all persons on the Council’s mailing list and to
persons on a list of property owners supplied by FPL, asking them to submit comments by
December 20. Within the time allowed by Council rule, the Office notified FPL that the
amendment would require extended review and that the proposed order would be issued by

On February 11, 2003, FPL submitted a “Request for Addendum to Pending Request
for Amendment #2.” On the same day, the Office sent a copy of the addendum request to the
appropriate officers, agencies and tribes, asking them to submit comments by February 25.
The Office also sent notice of the addendum request to all persons on the Council’s mailing
list and to persons on a list of property owners supplied by FPL, asking them to submit
comments by February 25.

On March 5, in accordance with OAR 345-027-0070(4), the Office notified FPL that
additional time was needed to prepare the proposed order, explaining the reasons for the
delay. The Office set a new deadline of April 4 for issuing the proposed order.

After issuing the proposed order on March 25, 2003, the Office sent the notice
required under OAR 345-027-0070(4). The deadline for public comment or requests for
contested case was April 25, 2003.

On April 25, 2003, the Office of Energy received a letter (via fax) from James E.
Benedict, an attorney representing Eurus Wind Power Development LLC. The Office
received no other comments or contested case requests.

In his letter, Benedict objected to the Office of Energy’s proposed order and requested
a contested case. The issue presented was whether certain Stateline 3 turbine locations
proposed by FPL (specifically seven proposed turbines, BG-E12 through BG-E17 and WAY-
B1) would interfere with the operation of four turbines proposed for construction by Eurus.
The letter asserted that Council adoption of the proposed order, as drafted, would violate
Council standards based on various legal theories.

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1 Because the request to extend the construction deadline for Stateline 2 came at a time when there was already
an amendment process underway, the Office of Energy concluded that adding the extension request to the
pending amendment as an “addendum” would be a more efficient process than initiating a separate amendment
proceeding.
Under OAR 345-027-0070(7), the Council must decide whether any issue identified in a contested case request justifies a contested case proceeding. In a memorandum dated May 27, 2003, the Office analyzed the legal theories presented in the Eurus request and recommended that the Council deny the request for a contested case proceeding. On June 5, 2003, Eurus and FPL notified the Office that a settlement had been made between the two companies, and Eurus withdrew its contested case request.

III. PUBLIC COMMENTS

During the initial public comment period (November 19 through December 20, 2002), the Office received only one public comment that stated an objection to the proposed amendment. In a letter dated December 19, 2002, the Pacific Northwest Regional Council of Carpenters (PNRCC) urged rejection of the amendment request. In summary, the basis of the objection was that the amendment request was “deficient with respect to complying with the Oregon Statewide Planning Program goals.” The PNRCC asserted that the natural resources protected under Statewide Planning Goal 5 include “Human Resources.” The PNRCC urged that “Human Resources” should be given “equal treatment with Wildlife Resources,” including “a better inventory, more accurate Projections and post construction monitoring of the construction workforce.”

We discuss Goal 5 at page 53 and find that the requirements of Goal 5 are outside of the scope of the Council’s Land Use Standard. Therefore, the Council concludes that the objection stated by the PNRCC does not support rejection of the amendment request.

During the public comment period on the addendum (February 11 through 25), the Office received one comment. In an e-mail message dated February 25, Mike Denny stated that, while he was not opposed to extending the construction deadline for Stateline 2, he was concerned about the cumulative effect of continued expansion of Stateline in Oregon on birds and bats. He suggested there should be some limit on the number of turbines built on the site.

The Office responded that the Council, through the site certificate, would continue to require mitigation of impacts to wildlife and wildlife habitat and post-construction monitoring of impacts to avian species. Further, the Office responded that there is no basis in law currently to arbitrarily limit the number of wind turbines in a given area but that the wind resource, economic feasibility, site topography, other land uses and landowner willingness to accommodate further wind energy development would limit future sites for additional turbines.

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4 We note that Goal 5 does not contain any standards applicable to the site certificate decision. Further, Goal 5 lists the resources that local governments must inventory. However, “human resources” are not included. The administrative rules implementing Goal 5 do not define or address “human resources.” See OAR Chapter 660, Divisions 16 and 23.

5 We note that the Council has adopted both a Fish and Wildlife Habitat Standard and a Threatened and Endangered Species Standard. These standards address the impacts of a proposed facility on wildlife. However, the Council has not adopted any standard that addresses the impact of a proposed facility on the construction workforce. The Council’s authority in this area is limited by ORS 469.401(4), which provides that the energy facility siting statutes do not “preempt the jurisdiction of any state agency or local government over matters that are not included in and governed by the site certificate or amended site certificate” including “wage and hour or other labor regulations.”
IV. DESCRIPTION OF THE PROPOSED AMENDMENT

Amendment #2 would allow FPL to expand the Stateline facility (including Stateline 1 and Stateline 2) by the construction of 279 additional turbines and related or supporting facilities in Oregon (referred to in this order as “Stateline 3”). The new turbines would increase the electrical generation capacity of the facility by approximately 184 megawatts. Construction would begin within two years after the effective date of the amendment. The certificate holder would complete construction by December 31, 2005. In addition, the proposed amendment would extend the construction completion date for Stateline 2 from March 1, 2003, to March 1, 2005.

After the proposed expansion and completion of the Stateline 2 facilities, the Stateline wind facility would have up to 466 turbines in Oregon with a combined electrical generation capacity of approximately 307.6 megawatts. In addition, Amendment #2 would allow the construction of underground and aboveground 34.5-kilovolt (kV) electrical collector lines, a new substation and an aboveground 115-kV or 230-kV transmission line approximately 8.5 miles in length. The proposed Stateline 3 expansion would include construction of approximately 21.5 miles of new access roads and improvement of approximately 9 miles of existing farm roads.

The proposed Stateline 3 turbines would be Vestas V-47 660-kilowatt (kW) turbines, the same as the turbines for Stateline 1 and 2. The new turbines would be located in three clusters of turbine strings. The north cluster would consist of 15 turbines in two strings near existing Stateline turbines along Dorran Road near the Oregon/Washington border. The center cluster would consist of 85 turbines in two strings southeast, and five strings northwest, of Butler Grade Road. The south cluster would consist of 179 turbines in 14 strings generally east of the existing Vansycle Ridge Wind Project. The proposed expansion would include 13 permanent meteorological (met) towers located within the center and south clusters.

Underground 34.5-kV collector cables would transmit the energy from the north cluster of turbine strings to a substation in Washington. A combination of underground and aboveground collector cables would transmit the energy from the center and south clusters to a proposed new substation in Oregon. Altogether, Stateline 3 would include about 30.5 miles of new underground collector cables and 17 miles of aboveground collector cables. The substation would be located on a 2-acre site near the Vansycle project in Township 6N, Range 33E, Section 1. An aboveground 115-kV or 230-kV transmission line would connect the

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5 Notwithstanding the definition in ORS 469.300, for the purpose of this amendment and as used in this order, "construction" means any work performed on the site regardless of cost but excluding surveying, exploration or other activities to define or characterize the site.

6 The totals shown assume construction of all turbines authorized under the amended site certificate. To date, FPL has constructed 126 of the authorized 127 Stateline 1 turbines and 55 of the authorized 60 Stateline 2 turbines.

7 To allow for flexibility in the construction of Stateline 3, the proposed collector system includes both northerly and southerly aboveground 34.5-kV segments from proposed strings BG-A, BG-B and BG-C. This would allow transmission of the output from those strings either to the existing Nine Mile substation in Washington or to the proposed new North Star substation to the south. In a phased construction of Stateline 3, for example, the certificate holder could build the northern strings first, using the Nine Mile substation, without the immediate need to construct the proposed North Star substation and higher-voltage transmission line.
substation to transmission facilities in Washington. The length of the segment of the 115-kV or 230-kV line within Oregon would be about 8.5 miles.\(^9\)

All of the Stateline 3 expansion would be located on privately-owned land. The permanent structures\(^{10}\) would occupy approximately 75 acres. An additional area of approximately 345 acres would be temporarily disturbed during construction.\(^{11}\)

The new turbines would be approximately 165 feet tall at the turbine hub. With the nacelle and blades mounted, the total height of the wind turbine would be approximately 242 feet including the turbine blades.\(^{12}\) The turbine towers west of Butler Grade Road would be painted a uniform neutral light gray color, the same color as the existing Stateline 1 turbines; the turbine towers east of Butler Grade Road would be painted a uniform neutral white color, the same color as the nearby Vansycle Ridge Wind Project turbines.

In addition, the proposed amendment would extend the construction completion date for the remaining five Stateline 2 turbines and related or supporting facilities from March 1, 2003, to March 1, 2005. FPL had intended to complete construction of Stateline 2 by March 1, 2003, which is the construction completion deadline specified in the site certificate. However, due in part to delays in finalizing a power purchase agreement and in fabrication and delivery of the turbines and turbine tower sections, FPL determined that construction could not be completed before that deadline.

Under OAR 345-027-0030, a certificate holder may request an extension of the deadline for completing construction. The Council may grant an extension of no more than two years from the current deadline. Scheduling of construction activities at the Stateline 2 site is subject to restrictions imposed due to the proximity of a nesting site for a sensitive wildlife species (Condition (101)). Construction activity must be curtailed during a five-month nesting season each year (March 20 through August 15). In its request for an extension, FPL has asked the Council for a construction deadline of March 1, 2005, to allow maximum flexibility in scheduling and completing construction of the remaining Stateline 2 facilities. The Council has not previously granted an extension of the deadline.

FPL proposes no change to the design or location of the turbines, and no other circumstances have changed that would affect the Council’s previous decision. The Council has already fully considered the potential impacts from construction and operation of the 60 Stateline 2 wind turbines and has concluded that construction and operation of the turbines would comply with all Council standards.\(^{13}\)

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\(^9\) In the Request for Amendment as submitted on November 15, 2002, FPL proposed only the 115-kV transmission line option. In response to the Office of Energy’s request (30) for additional information (February 20, 2003), FPL asked for the option of constructing a 230-kV transmission line instead. There are several alternatives available to the certificate holder for interconnection to the regional power grid. Allowing either a 115-kV or a 230-kV transmission line from the proposed North Star substation would give the certificate holder a stronger market position and greater flexibility in choosing the ultimate point of interconnection, without being limited by voltage. Both options are analyzed herein.

\(^{10}\) Permanent structures include the turbine pads, met tower pads, transmission poles, substation, new and expanded access and turbine string roads and turn-around areas.

\(^{11}\) Details of the areas permanently occupied and temporarily disturbed are shown in the Request to Amend Site Certificate, pages 8-13, Tables 2 and 3, incorporated herein by this reference.

\(^{12}\) Turbine tower height for the Stateline 3 turbines is identical to the existing Stateline turbines.

\(^{13}\) Final Order on Amendment #1.
1. **Changes to the Site Certificate as Proposed by FPL**

In the revised request for Amendment #2, FPL proposed the following amendments to the site certificate. Additions are double-underlined and deletions have a strikethrough.

At page 1, lines 7-16:

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 Council’s Final Order in the Matter of the Application for a Site Certificate for the Stateline Wind Project ("final order") ("Final Order on the Application"), issued on September 14, 2001; and (b) the Council’s Final Order in the Matter of the Request for Amendment #1 of the Site Certificate for the Stateline Wind Project ("Final Order on Amendment #1") [Amendment #4]; and (c) the Council’s Final Order in the Matter of the Request for Amendment #2 of the Site Certificate for the Stateline Wind Project ("Final Order on Amendment #2"). [Amendment #1 and #2]

In interpreting this site certificate, any ambiguity will be clarified by reference to the following, in order of priority: this **Second First Amended Site Certificate**, the Final Order on Amendment #1, the final order issued on September 14, 2001, the Final Order on Amendment #1, the final order on the application, and the record of the proceedings that led to the final orders on Amendment #1 and #2. [Amendment #1 and #2]

At page 1, lines 28-34:

3. This site certificate does not address, and is not binding with respect to, matters that were not addressed in the Council’s final order, or the Final Order on Amendment #1, Final Order on the Application and Amendments #1 and #2. These 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 (like where our contractors get their water for construction) 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 #1]

At page 2, lines 25-40:

1. **The Facility**

   (a) Major Structures

   The Stateline Wind Project ("facility") consists of:

   - Stateline 1: 127 Vestas V47-660-kilowatt (kW) wind turbines authorized for construction, of which 126 were built, having a total a nominal electric generating capacity of 83.2 MW (126 turbines, each with a capacity of 0.66 MW) as described further in the final order.

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14 Where it applies, the proposed language from the Request for Addendum to Pending Request for Amendment #2 is shown instead of language from the Request for Amendment #2.
- Stateline 2: 60 Vestas V47-660-kilowatt (kW) wind turbines with a total a nominal electric generating capacity of 39.6 MW (60 turbines, each with a capacity of 0.66 MW) as described further in the Final Order on Amendment #1.

- Stateline 3: 279 Vestas V47-660-kilowatt (kW) wind turbines with a total a nominal electric generating capacity of 184 MW (279 turbines, each with a capacity of 0.66 MW), a substation (called North Star), and an 8.5 mile 115-kV transmission line as described further in the Final Order on Revised Amendment #2.

Each wind turbine is connected to the next by a 34.5-kilovolt (kV) collector system. The wind turbines are grouped in “strings” of 4 to 37 turbines, each turbine spaced approximately 250 feet from the next, generally slightly downwind of the crest of ridges. Underground 34.5 kV cables connected to a substation in Washington connect the electrical output of each Oregon turbine string. Major facility structures are further as described in the final order, and in the Final Order on Amendment #1. In the Final Order on Revised Amendment #2. [Amendment #2]

At page 3, lines 1-7:

(b) Related or Supporting Facilities

The facility includes the following related or supporting facilities:

- Access roads to reach each turbine for construction and maintenance
- Underground **and overhead** collector cables linking each turbine to the others in its string and ultimately to the substations in Washington and Oregon
- Meteorological towers
- A satellite operations and maintenance building

At page 3, lines 8-15:

Access Roads

County roads that extend south from Highway 12 in Washington (e.g., Hatch Grade Road and Butler Grade Road) and north from Oregon Highway 11 (e.g., Vansycle Canyon Road and Butler Grade Road) are the primary routes of access to the facility site. From the county roads, a web of private farm roads provides access to most of the ridges upon which the facility is located. Additional access roads are located along the length of each turbine string and connecting each turbine string to the next. Access roads are further as described in the final order, and in the Final Order on [Amendment #1]. In the Final Order on Amendment #2. [Amendment #2]

At page 3, lines 16-26:

Collector System

The proposed wind turbines generate power at 690 volts. A transformer adjacent to each tower transform the power to 34.5-kV. From there, power is transmitted via underground 34.5-kV cables connected to a substation in Washington collect the
electrical output of each Oregon turbine string from Stateline 1 and 2 and from the 
northern strings in Stateline 3. Electrical output from the central and southern strings 
in Stateline 3 is collected by primarily underground and some aboveground 34.5-kV 
cables connected to a substation in Oregon. The underground 34.5-kV electric cables 
are buried directly in the soil approximately 3 to 4 feet below the ground surface. 
Power is transmitted via underground 34.5-kV electric cables buried directly in the soil 
approximately 3 to 4 feet below the ground surface. In some cases, trenches run from 
the end of one turbine string to the end of an adjacent turbine string to link the turbines 
via the underground network. There are no aboveground 34.5-kV transmission lines 
in Oregon. The underground collector system links the facility’s turbines to a 
substation located in Washington. Overhead transmission lines, located entirely 
within Washington, connect the Stateline 1, 2 and 3 electrical output between the 
Washington substation and the BPA transmission network. 115-kV transmission 
lines north of the Walla Walla River and to a PacifiCorp substation just north of 
Highway 12. The electrical output flowing through the Oregon substation is 
transmitted over a 8.5 mile 115-kV line running from the Oregon substation to the 
BPA transmission network in Washington. The 115-kV line is attached to H-frame 
wooden pole structures. The collector system is further as described in the final order, 
and in the Final Order on Amendment #1—[Amendment #1], and in the Final Order on 
Amendment #2. [Amendment #2]

At page 3, lines 27-30:

Meteorological Towers

The facility includes six nineteen permanent meteorological (met) towers to measure 
wind conditions. The met towers may be guyed or unguyed towers. The met towers 
are otherwise as described in the final order, and in the Final Order on Amendment #1, 
[Amendment #1], and in the Final Order on Amendment #2. [Amendment #2]

At page 3, lines 31-35:

Satellite O&M Building

The facility includes an operation and maintenance (O&M) facility, which is a satellite 
to the primary O&M facility located in Washington. The satellite O&M facility is 
located along Butler Grade Road south of Gardenia and just south of the state line in 
Oregon. It is further as described in the final order. [Amendment #2]

At page 3, lines 36-39 and page 4, lines 1-2:

2. Location of the Proposed Facility

The facility is located in Umatilla County, north and east of Helix, Oregon. The 
towns closest to the facility are Helix, Oregon, and Touchet, Washington. The 
wind turbines would be located on ridges east of the Columbia River and south of the 
Walla Walla River. The location of the facility is further as described in the final 
order, and in the Order on Amendment #1—[Amendment #1], and in the Order on 
Amendment #2. [Amendment #2]

At page 11, lines 27-38:

(37) To reduce the visual impact of the facility, the certificate holder shall:
(a) Design, construct and operate a facility consisting of:
   (i) Stateline 1: Not more than 127 Vestas V47-660-kilowatt (kW) wind
       turbines (App B-2, Table B-3)
   (ii) Stateline 2: 60 Vestas V47-660-kW wind turbines [Amendment #1]
   (iii) Stateline 3: Not more than 279 Vestas V47-660-kW wind turbines
       [Amendment #2]

(e) Paint all towers, except those close to the Vansycle Project, uniformly in
    a neutral light gray color (App B-5). Towers close to the Vansycle Project shall be
    painted in a neutral white color to blend in with the color of the towers in the Vansycle
    Project. [Amendment #2]

At page 12, lines 10-18:

   (41) If the certificate holder elects to use a bond to meet the requirements of
   Conditions (43), (80), or (102), or (107), the certificate holder shall assure 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 assure 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. [Amendment
   #1][Amendment #2]

At page 22, lines 11-19

1. General Conditions

   (97) The certificate holder shall begin construction of Stateline 2 within six
   months after the effective date of the First Amended Site Certificate. The certificate
   holder shall complete construction of Stateline 2 before March 1, 2005 March 1, 2003.
   Under OAR 345-027-0070, an amended site certificate is effective upon execution by
   the Council Chair and the applicant. Completion of construction occurs upon the date
   commercial operation of the facility begins. The Council may grant an extension of
   the construction beginning or completion deadlines in accordance with OAR 345-027-
   0030 or any successor rule in effect at the time the request for extension is submitted.
   [Amendment #2]

At page 23, lines 3-14

2. Conditions That Must Be Met Before Construction Begins

   (101) The Certificate holder shall not engage in construction activities,
   including the movement of heavy trucks and equipment within a ¼ - mile buffer
   around an identified ferruginous hawk nest tree during the nesting season from (March
   20March 1 to August 15), except as provided in this condition. The certificate holder
   shall use a protocol approved by the Oregon Department of Fish and Wildlife
   (ODFW) to determine whether the nest is occupied. The certificate holder may begin
   construction activities before August 15, 2002, if the nest is not occupied. If the nest is
   occupied, the certificate holder shall use a protocol approved by ODFW to determine
when the young are fledged (independent of the core nest site). With the approval of ODFW, the certificate holder may begin construction before August 15, 2002, if the young are fledged. During the specified nesting season, the certificate holder may use the road into the site with vehicles that are one ton in capacity or smaller; conduct turbine, turbine tower, blade or met tower construction activities that are not visible above the horizon from the vantage point of the ferruginous hawk nest; and use the road one time to transport heavy equipment off the site.” [Amendment #2]

At page 24, following line 12:

VII. SPECIFIC FACILITY CONDITIONS FOR STATELINE 3 [This section added by Amendment #2]

The conditions listed in this section include conditions based on representations in the request for Amendment #2 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). These conditions apply to Stateline 3.

In addition to the conditions listed in this section, all conditions in sections IV, V and VI also apply to Stateline 3, except Conditions (11), (15), (19), (24), (27), (39), (42), (43), (53), (54), (55), (56), (60), (80), (97), (101), (102), (104) and (105).

1. General Conditions

(106) The certificate holder shall begin construction of Stateline 3 within twenty-four months after the effective date of the Second Amended Site Certificate. The certificate holder shall complete construction of Stateline 3 before December 31, 2005. Under OAR 345-027-0070, an amended site certificate is effective upon execution by the Council Chair and the applicant. Completion of construction occurs upon the date commercial operation of the facility begins. The Council may grant an extension of the construction beginning or completion deadlines in accordance with OAR 345-027-0030 or any successor rule in effect at the time the request for extension is submitted.

2. Conditions That Must Be Met Before Construction Begins

(107) In addition to the requirements of Conditions (80) and (102), the certificate holder shall submit to the State of Oregon through the Council a bond or letter of credit in the amount of $3,033,347 (in 2002 dollars) naming the State of Oregon, acting by and through the Council, as beneficiary or payee. However, the Council authorizes the Office of Energy staff to proportionately reduce the amount in the event less than 279 turbines are constructed using the same methodology and formulas per turbine approved in the Amended Final Order #2. In lieu of submitting a separate bond or letter of credit in the amount required under this condition, the certificate holder may submit a bond or letter of credit that includes the amount required under this condition and the amount required under Conditions (80) and (102).

(a) The calculation of 2002 dollars shall be made using the U.S. Gross Domestic Product Implicit Price Deflator as published by the U. S. Department of Commerce, Bureau of Economic Analysis, or any successor agency (the “Index”).
The amount of the bond or letter of credit account shall increase annually by the percentage increase in the Index and shall be pro-rated within the year to the date of retirement. If at any time the Index is no longer published, the Council shall select a comparable calculation of 2002 dollars.

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

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

(d) The certificate holder shall describe the status of the bond or letter of credit in the annual report submitted to the Council, as required by Condition (8).

(e) After restoration of the temporary laydown and staging areas, as required by Conditions (20) and (68), the certificate holder may reduce the amount of the bond or letter of credit required under this condition to $2,537,927 (in 2002 dollars), or to a lesser proportionate amount as determined by the Office of Energy staff in the event less than 279 turbines are built as discussed above.

(f) After construction is complete, the bond or letter of credit shall not be subject to revocation or reduction before retirement of the Stateline 3 site.

3. Conditions That Apply During Construction

(108) To mitigate for the permanent elimination of approximately 24.7 acres of Category 2, 3 and 5 habitat, the certificate holder shall enlarge the habitat enhancement area described in Condition (67) by 25 acres (increasing the total acreage from 50 to 75 acres)

At page 24, line 13:

VIII. SUCCESSORS AND ASSIGNS

At page 24, line 16:

VIII. IX. 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. In the event of a conflict between the conditions contained in the site certificate and the Council's final order, or the Final Order on Amendment #1, or the Final Order on Amendment #2, the conditions contained in this site certificate shall control. [Amendment #1](Amendment #2)

At page 24, line 24:

IX. X. GOVERNING LAW AND FORUM

At page 25, line 1:

X. XI. EXECUTION

2. Changes to the Site Certificate Approved Under This Order

The the Council approves the amendment request in principle. However, the changes to the site certificate as proposed by FPL do not address all site certificate modifications made
necessary by the proposed expansion of the Stateline facility. In addition, the Council adopts
editorial changes that conform to the style of the site certificate, as recommended by the
Office. The Council approves amendment of the site certificate as described in this section.

At page 1, lines 7-16:

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 Council’s Final Order in the Matter of the Application
for a Site Certificate for the Stateline Wind Project (“Final Order on the
Application”), issued on September 14, 2001; and, (b) the Council’s Final Order in the
Matter of the Request for Amendment #1 of the Site Certificate for the Stateline Wind
Project (“Final Order on Amendment #1”) and (c) the Council’s Final Order in the
Matter of the Request for Amendment #2 of the Site Certificate for the Stateline Wind
Project (“Final Order on Amendment #2”). [Amendments #1 and #2]

In interpreting this site certificate, any ambiguity will be clarified by reference to the
following, in order of priority: this Second Amended Site Certificate, the Final Order
on Amendment #2, this First Amended Site Certificate, the Final Order on
Amendment #1, the final order issued on September 14, 2004 Final Order on the
Application, and the record of the proceedings that led to the final order and the Final
Orders on the Application and Amendments #1 and #2. [Amendments #1 and #2]

At page 1, lines 26-34:

3. This site certificate does not address, and is not binding with respect to, matters that
were not addressed in the Council’s final order or the Final Orders on the
Application and Amendments #1 and #2. These 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). [Amendments #1 and
#2]

At page 2, lines 25-40:

1. The Facility

(a) Major Structures

The Stateline Wind Project (“facility”) consists of:

- **Stateline 1:** No more than 127 Vestas V47-660-kilowatt (kW/kW) wind
turbines authorized for construction, of which 126 were built, having a total
a nominal electric generating capacity of 83.2 megawatts (MW) (126
turbines, each with a capacity of 0.66 MW) as described further in the final
order Final Order on the Application.

- **Stateline 2:** No more than 60 Vestas V47-660-kilowatt (kW/kW) wind
turbines with a total a nominal electric generating capacity of 39.6 MW (60
turbines, each with a capacity of 0.66 MW) as described further in the Final
Order on Amendment #1.
- **Stateline 3**: No more than 279 Vestas V47-660-kW wind turbines with a total nominal electric generating capacity of 184.1 MW (279 turbines, each with a capacity of 0.66 MW) as described further in the Final Order on Amendment #2

Each wind turbine is connected to the next by a 34.5-kilovolt (kV) collector system. The wind turbines are grouped in “strings” of turbines, each turbine spaced approximately 250 feet from the next, generally slightly downwind of the crest of ridges. Underground 34.5-kV cables connected to a substation in Washington collect the electrical output of each Oregon turbine string. Major facility structures are further as described in the final order and in the Final Orders on the Application and Amendments #1 and #2. [Amendments #1 and #2]

At page 3, lines 1-7:

(b) Related or Supporting Facilities

The facility includes the following related or supporting facilities:

- Access roads to reach each turbine for construction and maintenance
- Underground and aboveground collector cables linking each turbine to the others in its string and ultimately that transmit the electrical output of the wind turbines to the substations in Oregon and Washington. [Amendment #2]
- A substation [Amendment #2]
- A 115-kV or 230-kV transmission line [Amendment #2]
- Meteorological towers
- A satellite operations and maintenance building

At page 3, lines 8-15:

**Access Roads**

County roads that extend south from Highway 12 in Washington (e.g., Hatch Grade Road and Butler Grade Road) and north from Oregon Highway 11 (e.g., Vansycle Canyon Road and Butler Grade Road) are the primary routes of access to the facility site. From the county roads, a web of private farm roads provides access to most of the ridges upon which the facility is located. Additional access roads are located along the length of each turbine string and connecting each turbine string to the next. Access roads are further as described in the final order and in the Final Orders on the Application and Amendments #1 and #2. [Amendments #1 and #2]

At page 3, lines 16-26:

**Collector System, Substation and Transmission Line**

The proposed wind turbines generate power at 690 volts. A transformer adjacent to each tower transforms the power to 34.5 kV. From there, the turbines in Range 32 E, power is transmitted via underground 34.5-kV electric cables buried directly in the soil approximately 3 to 4 feet below the ground surface to a substation in Washington. In some cases, trenches run from the end of one turbine string to the end of an adjacent turbine string to link the turbines via the underground network. There are noFrom most of the turbines in Range 33 E, aboveground 34.5-kV transmission lines in Oregon transmit power to a substation in Township 6 N, Range 33 E, Section 1.
(tentatively called "North Star Substation"). The underground collector system links the facility's turbines to a substation located in Washington. Overhead transmission lines, located entirely within Washington, connect the Washington substation to a BPA 115-kV transmission line north of the Walla Walla River and to a PacifiCorp substation just north of Highway 12. An 8.5-mile aboveground 115-kV or 230-kV transmission line connects the North Star Substation to existing major transmission lines in Washington. The collector system is further as described in the Final Orders on the Application and Amendments #1 and #2. [Amendments #1 and #2]

At page 3, lines 27-30:

Meteorological Towers

The facility includes sixteen permanent meteorological (met) towers to measure wind conditions. The met towers may be guyed or unguyed towers. The met towers are otherwise as described in the final order and in the Final Orders on the Application and Amendments #1 and #2. [Amendments #1 and #2]

At page 3, lines 36-39, and page 4, lines 1-2:

2. Location of the Proposed Facility

The facility is located in Umatilla County, north and east of Helix, Oregon. The towns closest to the facility are Helix, Oregon, and Touchet, Washington. The wind turbines would be located on ridges east of the Columbia River and south of the Walla Walla River. The location of the facility is further as described in the final order and in the Final Orders on the Application and Amendments #1 and #2. [Amendments #1 and #2]

At page 5, lines 1-2:

The conditions that the Council deems to be binding commitments made by FPI are included in section V of this site certificate.

At page 11, lines 27-44:

(37) To reduce the visual impact of the facility, the certificate holder shall:

(a) Design, construct and operate a facility consisting of:

(i) Stateline 1: Not more than 127 Vestas V47-660-kilowatt (kW) wind turbines (App B-2, Table B-3) [Amendment #1 and #2]

(ii) Stateline 2: No more than 60 Vestas V47-660-kW wind turbines [Amendments #1 and #2]

(iii) Stateline 3: No more than 279 Vestas V47-660-kW wind turbines [Amendment #2]

(b) Group the turbines in strings of 42 to 37 turbines, each spaced approximately 250 feet from the next [Amendments #1 and #2]

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(c) Paint all towers west of Butler Grade Road uniformly in a neutral light gray color. Paint towers east of Butler Grade Road a neutral white color to blend in with the color of the towers in the Vansycle Ridge Wind Project. [Amendment #2]

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(g) Use only the minimum lighting on its turbine strings required by the Federal Aviation Administration, except:
(i) that the satellite operations and maintenance building may have a small amount of low-impact exterior lighting for security purposes (App BB-2); (ii) Low-impact lighting may be used for occasional nighttime repairs, operations or maintenance at the substation (at other times this lighting would be turned off). [Amendment #2]

At page 12, lines 10-18:

(41) If the certificate holder elects to use a bond to meet the requirements of Conditions (43), (80)-or-(102), or (109), 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 assure 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. [Amendments #1 and #2]

At page 12, line 25-33:

(43) The certificate holder shall submit to the State of Oregon through the Council a bond or letter of credit in the amount of $1,459,000 (in 2001 dollars) naming the State of Oregon, acting by and through the Council, as beneficiary or payee. (a) The calculation of 2001 dollars shall be made using the U.S. Gross Domestic Product Implicit Price Deflator, Chain-Weight, as published by the U.S. Department of Commerce, Bureau of Economic Analysis; in the Oregon Department of Administrative Services’ “Oregon Economic and Revenue Forecast” or by any successor agency (the “Index”). The amount of the bond or letter of credit account shall increase annually by the percentage increase in the Index and shall be pro-rated within the year to the date of retirement. If at any time the Index is no longer published, the Council shall select a comparable calculation of 2001 dollars. [Amendment #2]

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At page 14, lines 20-25:

(52) The certificate holder shall design the facility to avoid or minimize adverse impacts to wildlife by measures including but not limited to the following (App P-41):

(a) Siting the turbines on ridges outside of migration flyways
(b) Siting turbines to avoid placing turbines in saddle locations along ridges (where bird use is typically higher)
(c) Avoiding the use of overhead collector lines, except in Stateline 3 areas where limitations in carrying capacity of underground lines make the use of overhead collector lines unavoidable [Amendment #2]

At page 14, lines 26-38:

(53) The certificate holder shall survey the status of known Swainson’s and ferruginous-hawk nests within the vicinity of proposed construction before the
projected date for construction to begin. If active nests are found, and construction is scheduled to begin before the end of the sensitive nesting and breeding season (mid-April to mid-August [June 1 to August 31]), the certificate holder shall develop a no-construction buffer in consultation with ODFW and shall not engage in construction activities within the buffer until the sensitive season has ended. If construction continues into the sensitive nesting and breeding season for the following year, the certificate holder shall not engage in construction activities within the buffer around active nests until the sensitive season has ended.

[Amendment #2]

(54) The certificate holder shall conduct appropriate pre-construction nest surveys for burrowing owls, grasshopper sparrows and other ground-nesting birds (March to July) if construction is scheduled to occur during the sensitive period (March 15 to August 30). The certificate holder shall leave a no-construction buffer, developed in consultation with ODFW, around any active nests during the sensitive period. (App P-42) [Amendment #2]

At page 15, lines 1-6:

(56) The certificate holder shall conduct appropriate pre-construction surveys for the presence of Washington ground squirrels in construction zones that have suitable habitat. Construction zones include the areas of permanent and temporary disturbance and a 175-foot surrounding buffer in which there may be incidental construction impacts in the facility area and shall identify locations of active burrows. If potentially active burrows are observed, the certificate holder shall notify the Office of Energy and develop an appropriate no-construction buffer and other appropriate mitigation measures in consultation with the Office and ODFW. If active burrows are discovered that may be within proposed ground disturbing activities, the certificate holder shall develop an appropriate mitigation plan in consultation with ODFW. (App Q-9, 12) In addition, the certificate holder shall map and stake sensitive areas to be avoided during construction as required by Condition (63). [Amendment #2]

At page 18, lines 1-3:

(69) The certificate holder shall not place any part of the facility within any Washington ground squirrel colony or on potential Washington ground squirrel burrows, except as allowed for Stateline 3 facilities under the Resource Impact Avoidance and Mitigation Plan, included in the final order as Attachment C and as revised from time to time. The certificate holder shall limit permanent road widening and other improvements and shall locate temporary roads and laydown areas to minimize impacts to potential Washington ground squirrel habitat. (App Q-8, 10). [Amendment #2]

At page 22, lines 12-19:

(97) The certificate holder shall begin construction of Stateline 2 within six months after the effective date of the First Amended Site Certificate. The certificate holder shall complete construction of Stateline 2 before March 1, 2003. Under OAR 345-027-0070, an amended site certificate is effective upon execution by the Council Chair and the applicant. Completion of construction
occurs upon the date commercial operation of the facility begins. The Council
may grant an extension of the construction beginning or completion deadlines in
accordance with OAR 345-027-0030 or any successor rule in effect at the time the
request for extension is submitted. [Amendment #2]

At page 23, lines 4-13:

(101) The certificate holder shall not engage in construction activities for Stateline 2
facilities, including the movement of heavy trucks and equipment, within a ¼-
mile buffer around an identified ferruginous hawk nest tree during the sensitive
period of the nesting season (March 1 to August 15), except as provided in this
condition. The certificate holder shall use a protocol approved by the Oregon
Department of Fish and Wildlife (ODFW) to determine whether the nest is
occupied. The certificate holder may begin construction activities before August
15, 2002, if the nest is not occupied. If the nest is occupied, the certificate holder
shall use a protocol approved by ODFW to determine when the young are fledged
(independent of the core nest site). With the approval of ODFW, the certificate
holder may begin construction before August 15, 2002, if the young are fledged.
During the specified nesting season, the certificate holder may use the road into
the site with vehicles that are one ton in capacity or smaller; conduct turbine,
turbine tower, blade or met tower construction activities that are not visible above
the horizon from the vantage point of the ferruginous hawk nest; and use the road
one time to transport heavy equipment off the site. [Amendment #2]

At page 23, lines 14-26:

(102) In addition to the requirements of Condition (80), the certificate holder shall
submit to the State of Oregon through the Council a bond or letter of credit in the
amount of $899,200 (in 2002 dollars) naming the State of Oregon, acting by and
through the Council, as beneficiary or payee. In lieu of submitting a separate bond
or letter of credit in the amount required under this condition, the certificate
holder may submit a bond or letter of credit that includes the amount required
under this condition and the amount required under Condition (80).

(a) The calculation of 2002 dollars shall be made using the U.S. Gross
Domestic Product Implicit Price Deflator, Chain-Weight, as published by the
U.S. Department of Commerce, Bureau of Economic Analysis, in the Oregon
Department of Administrative Services' “Oregon Economic and Revenue
Forecast,” or by any successor agency (the “Index”). The amount of the bond or
letter of credit account shall increase annually by the percentage increase in the
Index and shall be pro-rated within the year to the date of retirement. If at any
time the Index is no longer published, the Council shall select a comparable
calculation of 2002 dollars. [Amendment #2]

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At page 24, following line 12:

VII. SPECIFIC FACILITY CONDITIONS FOR STATELINE 3 [This section added
by Amendment #2]

The conditions listed in this section include conditions based on representations in the
request for Amendment #2 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). These conditions apply to Stateline 3.

In addition to the conditions listed in this section, all conditions in sections IV, V and
VI also apply to Stateline 3, except Conditions (11), (15), (19), (24), (42), (43), (66),
(67), (79), (80), (97), (101), (102), (104) and (105).

1. General Conditions

(106) The certificate holder shall begin construction of Stateline 3 within twenty-four
months after the effective date of the Second Amended Site Certificate. The
certificate holder shall complete construction of Stateline 3 before December 31,
2005. Under OAR 345-027-0070, an amended site certificate is effective upon
execution by the Council Chair and the applicant. Completion of construction
occurs upon the date commercial operation of the facility begins. The Council
may grant an extension of the construction beginning or completion deadlines in
accordance with OAR 345-027-0030 or any successor rule in effect at the time
the request for extension is submitted.

(107) To reduce and mitigate the impacts to Category 1 habitat, the certificate holder
shall implement the measures described in the Resource Impact Avoidance and
Mitigation Plan, included in the final order as Attachment C and as revised from
time to time.

(108) The certificate holder shall take reasonable steps to reduce or manage human
exposure to electromagnetic fields, including but not limited to:
   (a) Designing and operating the transmission lines so that maximum current
       (amps per conductor) would not exceed the following levels: For 34.5-kV
       underground lines, 343 amps; for 34.5-kV aboveground lines, 1,200 amps; for
       115-kV transmission lines, 1,064 amps; and for 230-kV transmission lines, 535
       amps.
       (b) Providing to landowners a map of underground and overhead transmission
           lines on their property and advising landowners of possible health risks.

2. Conditions That Must Be Met Before Construction Begins

(109) In addition to the requirements of Conditions (80) and (102), the certificate
holder shall submit to the State of Oregon through the Council a bond or letter of
credit in the amount of $3,322,900 (in 2002 dollars) naming the State of Oregon,
acting by and through the Council, as beneficiary or payee. However, the Council
authorizes the Office of Energy staff to adjust the amount if the certificate holder
constructs fewer than 279 turbines. For calculating any such adjustments, the
Office shall use the methodology and cost estimates approved in the Final Order
on Amendment #2. In lieu of submitting a separate bond or letter of credit in the
amount required under this condition, the certificate holder may submit a bond or
letter of credit that includes the amount required under this condition and the
amount required under Conditions (80) and (102).
   (a) The calculation of 2002 dollars shall be made 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”). The amount of the
bond or letter of credit account shall increase annually by the percentage increase
in the Index and shall be pro-rated within the year to the date of retirement. If at
any time the Index is no longer published, the Council shall select a comparable
calculation of 2002 dollars.

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

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

(d) The certificate holder shall describe the status of the bond or letter of credit
in the annual report submitted to the Council, as required by Condition (8).

(e) After restoration of the temporary laydown and staging areas, as required
by Conditions (20) and (68), the certificate holder shall increase the amount of
the bond or letter of credit required under this condition to $3,392,900 (in 2002
dollars), or to a lesser proportionate amount as determined by the Office of
Energy staff in the event less than 279 turbines are built as discussed above.

(f) After construction is complete, the bond or letter of credit shall not be
subject to revocation or reduction before retirement of the Stateline 3 site.

(110) At least 30 days before beginning preparation of detailed design and
specifications for the electrical transmission lines, the certificate holder shall
consult with the Oregon Public Utility Commission staff to ensure that its
designs and specifications are consistent with applicable codes and standards.

(111) The certificate holder shall perform field surveys for rare plant species during
the appropriate season in 2003 in those Stateline 3 areas that were not previously
surveyed. The certificate holder shall report the results of these surveys to the
Office of Energy.

3. Conditions That Apply During Construction

(112) To mitigate for the Stateline 3 impacts to Category 2, 3, and 5 habitat, the
certificate holder shall control weeds and enhance habitat on 35 contiguous acres
of weed-infested land in the project vicinity. The certificate holder shall carry out
enhancement activities as described for habitat improvement areas in the
Revegetation Plan included in the final order as Attachment B and as revised
from time to time. The certificate holder shall acquire the legal right to create and
maintain the enhancement 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 Office of Energy. The certificate holder shall
determine the location of this habitat enhancement area in consultation with
ODFW and landowners.

(113) To protect the public from electrical hazards including electric and magnetic
field exposure, the certificate holder shall:

(a) Enclose the substation with a seven-foot-tall chain link fence with barbed
wire at the top pointing out at a 45-degree angle.

(b) Attach the 34.5-kV aboveground collector lines to single-pole wood
structures that are typically 42 feet high and with minimum design ground
clearance of 25 feet to the lowest conductor as described in the Request for Amendment #2.

(c) Attach the 115-kV or 230-kV aboveground transmission lines to H-frame structures that consist of two wooden poles connected by cross-members with a typical overall height of 70 feet and a minimum design ground clearance of 30 feet to the lowest conductor as described in the Request for Amendment #2.

(d) Design and construct the transmission lines so that:

(i) Alternating current electric fields during operation do not exceed 9 kV per meter at one meter above the ground surface in areas accessible to the public, and

(ii) Induced voltages during operation are as low as reasonably achievable.

(114) To deter raptors from perching on transmission support structures near the wind turbines, the certificate holder shall install anti-perching devices on all proposed single-pole and double pole structures within one mile of any turbine. Wherever feasible, the certificate holder shall use “spike-type” devices instead of “triangle-type” devices.

(115) To protect raptors, the certificate holder shall design structures for aboveground 34.5-kV, 115-kV and 230-kV transmission lines so that electrical conductors are spaced far enough apart to reduce the risk of bird electrocution.

(116) Except as required for known burrowing owl nest sites under Condition (54), the certificate holder may engage in construction activities within construction zones during the sensitive grasshopper sparrow and other ground-nesting wildlife season (April 15 to June 30) subject to the requirements of this condition. Construction zones include the areas of permanent and temporary disturbance and a 175-foot surrounding buffer in which there may be incidental construction impacts. Construction is allowed during the sensitive period only if the certificate holder has removed vegetation in the construction zone (excluding the 175-foot surrounding buffer) before April 15 of the year in which the construction occurs.

(117) The certificate holder shall not engage in construction activities for Stateline 3 facilities, including the movement of heavy trucks and equipment, within a ½-mile buffer around known ferruginous hawk nests during the sensitive period of the nesting season from (March 20 to August 15), except as provided in this condition. The certificate holder shall use a protocol approved by the Oregon Department of Fish and Wildlife (ODFW) to determine whether the nest is occupied. The certificate holder may begin construction activities before August 15, if the nest is not occupied. If the nest is occupied, the certificate holder shall use a protocol approved by ODFW to determine whether the young are fledged (independent of the core nest site). With the approval of ODFW, the certificate holder may begin construction before August 15, if the young are fledged.

(118) The certificate holder shall construct stream crossings substantially as described in the Request for Amendment #2, Exhibit 21. In particular, the certificate holder shall not use more than 50 cubic yards of new fill material in total for all stream crossings combined.

4. Conditions That Must Be Met During Operation
The certificate holder shall perform frequent maintenance to keep the substation transformer in good repair and in reliable operating condition.

The certificate holder shall verify that the actual sound power level output of the Vestas V47-660-kW wind turbines meets the manufacturer's warranty. This verification may consist of field measurement or other means of verification satisfactory to the Office of Energy. The certificate holder shall include the verification in the first annual report following construction of any Stateline 3 turbines.

At page 24, line 13:

VIII. SUCCESSORS AND ASSIGNS

At page 24, line 16:

IX. SEVERABILITY AND CONSTRUCTION

At page 24, line 24:

IX. XII. GOVERNING LAW AND FORUM

At page 25, line 1:

X. XI. EXECUTION

V. THE COUNCIL'S SITING STANDARDS: FINDINGS AND CONCLUSIONS

Because the proposed amendment would enlarge the site of the facility, the Council considers, within the area added to the site by the amendment, whether the facility complies with all Council standards (OAR 345-027-0070(9)). The Council applies the applicable substantive land use criteria in effect on the date the certificate holder submitted the request for amendment and applies all other state statutes, administrative rules and local government ordinances in effect on the date the Council makes its decision.

For the requested extension of the construction completion deadline for Stateline 2, OAR 345-027-0070(9) requires the Council to 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. The Council may not extend the construction completion deadline for Stateline 2 more than two years from the deadline in effect before the amendment (OAR 345-027-0030(4)).

Further, the Council must impose conditions for the protection of the public health and safety, for the time of commencement and completion of construction, and to ensure compliance with the standards, statutes and rules addressed in this order (ORS 469.401(2)). The Council is not authorized to determine compliance with regulatory programs that the federal government has delegated to another state agency (ORS 469.503(3)). The Council has no jurisdiction over design or operational issues that do not relate to siting, such as matters

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15 OAR 345-027-0070(9) provides an exception to the requirement of considering compliance with all Council standards. However, as discussed herein, the Stateline 2 facility would comply with all Council standards and there is no need to consider the exception criteria.
relating to employee health and safety, building code compliance, wage or hour or other labor regulations, or local government fees and charges (ORS 469.401(4)). Some of these nonsiting regulations are listed in section VI.2(b). The Council may consider these programs in the context of its own standards to ensure public health and safety, resource efficiency and protection of the environment as discussed below.

1. 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.

(2) The Council may issue or amend a site certificate for a facility that does not meet the standards adopted under ORS 469.501 if the Council determines that the overall public benefits of the facility at the proposed site outweigh the damage to the resource that is protected by the standard the facility does not meet, considering the following:

(a) To issue or amend a site certificate for a facility that does not meet a standard, the Council must find that the damage to the resource is acceptable or inconsequential in ultimate effect. The Council shall consider factors including, but not limited to, the following in making this finding:

(A) The uniqueness and significance of the resource that would be affected;

(B) The degree to which the resource is already affected by development;

(C) Whether there are reasonable alternatives to allowing the damage to occur; and

(D) The magnitude of the anticipated damage to the resource.

(b) As used in this rule "overall public benefits" means the public benefits that the Council finds are likely to result from construction and operation of the
proposed facility at the proposed site. The Council shall consider factors
including, but not limited to, the following in making this finding:

(A) The contribution of the proposed facility toward maintaining reliable
energy delivery to an area in the state;

(B) The expected effect of the proposed facility on total resource cost, as
defined in OAR 345-001-0010, and average delivered price of energy to end users;

(C) The overall environmental effects of the facility, considering resources
other than the resource protected by the standard the facility does not meet and
effects other than those considered under paragraph (B);

(D) Consistency of the proposed facility with Oregon energy policy as
described in ORS 469.010; and

(E) Recommendations from any special advisory group designated by the
Council under ORS 469.480;

***

We address the requirements of OAR 345-022-0000 in the findings of fact, reasoning
and conclusions of law discussed in the sections that follow. Upon consideration of all of the
evidence in the record, we state our general conclusion regarding the certificate holder’s
request for amendment in Section VIII at page 113.

2. Standards about the Applicant

(a) 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 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

Applicant's Expertise (Sections 1 and 2)

In the Final Order on the Application, the Council found that FPL had the organizational, managerial and technical expertise to construct and operate the Stateline 1 facilities. FPL has built Stateline 1 as described in that order and in compliance with the terms and conditions of the site certificate. In the Final Order on Amendment #1, the Council found that FPL had the organizational expertise to construct, operate and retire the proposed Stateline 2 facilities in compliance with Council standards and conditions of the site certificate.

As February 7, 2003, FPL had completed construction of 55 of the 60 additional wind turbines and the related or supporting facilities authorized by Amendment #1 in compliance with the terms and conditions of the First Amended Site Certificate.

In the request for Amendment #2, FPL states that neither FPL nor FPL Energy has had any regulatory citations to report. In constructing and operating the proposed Stateline 3 expansion, FPL would continue to have access to the resources, expertise and personnel of FPL Energy (Condition (28)). FPL proposes to use the same prime contractors for Stateline 3 as it used for construction of Stateline 1 and 2 (Condition (46)).

FPL has no ISO programs, and therefore OAR 345-022-0010(2) does not apply.

Third-Party Permits (Sections 3 and 4)

In the request for Amendment #2, FPL estimates that up to 17 million gallons of water would be required during construction of Stateline 3. The City of Helix will be able to provide a maximum of 10 million gallons under its water right permit (G-5150). Because this water is available and may be used for industrial use under an existing water right, no further action or approval from the Department of Water Resources is required. However, FPL will need up to 7 million gallons of water in addition to the water available from the City of Helix.

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16 OAR 345-021-0010(1)(d) requires reporting of any regulatory citations in constructing or operating a facility, type of equipment or process similar to the proposed facility.
17 Request for Amendment #2, page 23.
18 Request for Amendment #2, Exhibit 3.
FPL applied to the Washington Department of Ecology and received authorization for short-term water use.\(^{19}\) Under the authorization, FPL may use groundwater from a well on private property in Washington, subject to conditions, for construction activities and dust-suppression in Oregon. The authorization expires December 31, 2003. FPL would apply for a new short-term authorization if construction were not completed by that date. The maximum daily use must not exceed 120,000 gallons and total volume used must not exceed 10.2 million gallons. This water source would be secondary to the water available from the City of Helix.

FPL implies that the need for water during construction is “a construction contractor supply issue, no different than gravel, concrete, gasoline and paint.”\(^{20}\) However, unlike other construction-related permits that are not under Council jurisdiction according to ORS 469.401(4), the water requirements of a proposed energy facility may have an impact on availability of water for other purposes in the area. The Council’s Public Services Standard specifically addresses the potential impact of an energy facility on water supply within the analysis area (see ORS 469.501(1)(k)). Thus, a proposed facility’s access to water is a siting issue.

**Stateline 2**

In the Final Order on Amendment #1, the Council concluded that the certificate holder complied with the Organizational Expertise Standard, subject to the conditions stated in that order. There has been no change of circumstances that affects the Council’s findings under this standard as stated in the Final Order on Amendment #1.

**Conclusions of Law**

The Council finds that the certificate holder, subject to the conditions stated in this order, has demonstrated that it has the organizational expertise to construct, operate and retire the proposed Stateline 3 facilities in compliance with Council standards and conditions of the site certificate. The Council further finds that the certificate holder has a reasonable likelihood of entering into a contractual or other arrangement with the City of Helix for access to 10 million gallons of water under the city’s water right (a third-party permit). The Council finds that, in addition, up to 7 million gallons of water is available from a source in Washington and that FPL has a reasonable likelihood of entering into a contractual or other arrangement for access to this source of water.\(^{21}\) Conditions (28) and (46) relate to these findings. Based on these findings, the Council concludes that the certificate holder meets the Organizational Expertise Standard.

The Council finds that there has been no change of circumstances that would affect the Council’s conclusions regarding Stateline 2. The Council concludes that the certificate holder would continue to meet this standard if the requested extension of the construction completion deadline were allowed.

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\(^{20}\) Request for Amendment #2, page 22, footnote 11.

\(^{21}\) Because the source of additional water is in Washington, the temporary use permit issued by the Washington Department of Ecology is not “a state or local government permit or approval for which the Council would ordinarily determine compliance.” It is therefore not a third-party permit under OAR 345-022-0010(3). Nevertheless, access to an adequate supply of water is necessary for construction of the proposed facility.
(b) 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.

Findings of Fact

Retirement

Section (1) of the standard ensures that the facility site can be restored to a useful, non-hazardous condition. For the purpose of the standard, a “useful, non-hazardous condition” is a condition consistent with the applicable local comprehensive land use plan and land use regulations. The proposed Stateline 3 facilities are located on privately-owned land zoned for Exclusive Farm Use in Umatilla County. To satisfy the standard, it must be feasible and possible to restore the site to a non-hazardous condition suitable for farm use.

Before restoring the site, the certificate holder would be required to submit a final retirement plan for Council approval. The retirement plan would describe the activities necessary to retire the site (Condition (98)). After Council approval of the plan, the certificate holder would obtain the necessary authorization from the appropriate regulatory agencies to proceed with restoration of the site.

In general, restoring the site to a useful, non-hazardous condition upon retirement would require removing the roads and structures and restoring the soil to a condition compatible with farm use or consistent with other resource uses such as wildlife habitat or land conservation. The proposed Stateline 3 does not include underground storage tanks, long-term storage or on-site disposal of hazardous wastes. However, lubricants, vehicle fuel and herbicides might be transported over and across the site, and leaks, spills and improper handling of these materials could occur. Given the small amounts of such materials used on the site, soil contamination is unlikely.22

Retirement of the Stateline 3 would require dismantling the turbines, towers, pad-mounted transformers, meteorological towers and related aboveground equipment. Turbine towers, turbines, nacelles, blade assemblies and pad-mounted transformers would have salvage value for re-use or for scrap. The certificate holder would remove all unsalvageable material and transport it to authorized disposal locations off-site.

All concrete turbine pads would be removed to a depth of at least three feet below the soil surface to avoid interfering with agricultural uses of the land after retirement of the facility. The certificate holder would not have to remove the underground collection and communication cables because they would be at a depth of three feet or greater (Condition

22 Because of the low probability of soil contamination, we have not included an additional cost for site remediation in the estimate of site restoration costs below.
(62)). These cables could be abandoned in place without causing a hazard to agricultural uses or other allowed uses of the land (Condition (4)). Gravel would be removed from areas surrounding turbine pads. After removal of the structures, soils would be restored and the area would be graded as close as reasonably possible to its original contours. Revegetation would include reseeding with native plant seed mixes or agricultural crops, as appropriate, and would be consistent with a weed control plan approved by the county.

Retirement of access roads would involve removing gravel and restoring the surface grade and soil to a condition useful for either agriculture or wildlife habitat. Revegetation would include reseeding with native plant seed mixes or agricultural crops, as appropriate, and would be consistent with a weed control plan approved by the county. Roads could be left in place based on landowner preference, without violating the standard of leaving the site in a useful, non-hazardous condition.

Retirement of the 115-kV or 230-kV transmission line and the aboveground 34.5-kV collector lines would include removal of the conductors and poles. Pole holes would be backfilled with topsoil and leveled to the surrounding contour.

Retirement of the substation would include removal of substation transformers, control house and other equipment for salvage sale or disposal at an appropriate waste facility. Steel supports would be reduced to scrap steel. The concrete foundation would be removed to at least a depth of three feet below the surface. Gravel surrounding the concrete pad would be removed, and the site would be graded and reseeded.

As described above, the actions required to restore the site are both feasible and possible. Restoration of the facility site to a useful, non-hazardous condition could be accomplished, assuming availability of sufficient funds to complete the work.

**Estimated Cost of Site Restoration**

OAR 345-022-0050(2) addresses the possibility that the certificate holder is unable or unwilling to restore the site if the certificate holder permanently ceases construction or operation of the facility at any time. 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 under any circumstances. To provide a fund that is adequate for the State of Oregon to pay site restoration costs if the certificate holder fails to perform its obligation, the Council assumes circumstances under which the restoration cost would be greatest.

In the Final Order on the Application, the Council found that $1,459,000 (2001 dollars) was a reasonable estimate of the cost to restore the Stateline 1 site to a useful, non-hazardous condition. Condition (43) of the site certificate required the certificate holder to submit to the State of Oregon a bond or letter of credit in that amount before beginning construction. Condition (80) allowed the certificate holder to reduce the bond or letter of credit to $1,161,120 (2001 dollars) after completing restoration of areas temporarily disturbed during construction. The Council based the financial assurance amounts for Stateline 1 on the following estimated costs, which the Council found to be reasonable for restoring the areas of permanent disturbance:\(^\text{23}\): $5,800 per turbine for turbine demolition, foundation removal, and

\(^{23}\) Areas occupied by turbines, turbine pads, met towers and access roads.
grading and reseeding; $3,200 per acre for access road removal and regrading (but not
including reseeding); and $500 per acre for reseeding areas disturbed by equipment operation
in the course of the turbine pad demolition and road removal.24

In the Final Order on Amendment #1, the Council found it reasonable to assume that
the cost estimates for Stateline 1 continued to be valid for Stateline 2 because the request for
Amendment #1 was submitted less than six months after issuance of the site certificate. The
Council found that $899,200 (2002 dollars) was a reasonable estimate of the cost to restore
the Stateline 2 site to a useful, non-hazardous condition. Site certificate Condition (102)
allowed the certificate holder to reduce the bond or letter of credit to $559,920 (2002 dollars)
after completing restoration of areas temporarily disturbed during construction.

The Office of Energy requested updated verification of estimated restoration costs for
the proposed Stateline 3. In the revised request for Amendment #2, FPL included new cost
estimates from D.H. Blattner & Sons.25 All cost estimates are in 2002 dollars, based on the
date of the Blattner estimate included in the amendment request. Except as discussed
specifically below, the Council finds the cost estimates to be reasonable.

Blattner estimated that the cost of dismantling the turbines and turbine towers and
removing the pad-mounted transformers would cost $15,150 per turbine. However, Blattner
assumed a $15,300 resale value for the transformers, turbine towers, turbines and blades, or a
net return of $150 per turbine. In the Final Order on the Application, the Council found that it
was reasonable to assume that the scrap or salvage value of the turbines, towers and
transformers would be equal to, but not more than, the cost of dismantling and removing the
equipment. This finding was based on letters FPL provided from three contractors
experienced in wind farm demolition. The Council reaffirms its previous finding in this order.
That is, we assume no net return from the resale of the transformers, turbine towers, turbines
and blades.

Blattner estimated that removal of the concrete foundations and underground conduits
to a depth of three feet below grade, removal of transformer pads, grading of the turbine pad
areas and removal of gravel from the areas around the turbine pads would cost $5,260 per
turbine. The estimate specified off-site disposal of gravel but did not address the possible need
to bring supplemental topsoil to the site. The estimate included regrading and reseeding of the
turbine areas. This estimate is $540 less per turbine than the cost the Council found
reasonable for Stateline 1 and 2. The Council reaffirms its previous finding and assumes,
conservatively, that the cost of this work would be $5,800 per turbine.

Blattner estimated the cost of removal of met towers to be $5,000 per tower, including
removing the tower structure and foundation down to a depth of three feet below grade,
backfilling with topsoil, grading and reseeding.

Blattner estimated that dismantling the substation would cost $117,000. However,
Blattner assumed a salvage value for the substation equipment $100,000, for a net cost of
$17,000. In response to the Office of Energy’s request for further information, FPL presented

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24 All costs are in 2001 dollars.
25 Request for Amendment #2, Exhibit 4. On January 30, 2003, FPL provided a revised estimate from Blattner,
in response to the Office of Energy’s request for additional information. FPL provided a further revised estimate
on March 17, 2003.
evidence from its transformer specialist, Joe Chau, that the current price of substation
transformers is $850,000 for a 115-kV transformer and $950,000 for a 230-kV transformer.26
Chau noted FPL practice to maintain transformers on a more frequent basis than is the
practice in other industries. Chau estimated a salvage value of 30 percent of initial cost after
20 years of service. FPL also presented further evidence from Blattner.27 Blattner assumed the
initial cost of the transformer (voltage unspecified) to be $1,000,000. Blattner estimated the
resale value would be 12 percent (years of service unspecified) or $120,000, although Blattner
noted: “the future market is very unpredictable.” Blattner further assumed a cost of $20,000
for reconditioning and relocation, and thus the net salvage value would be $100,000.

Although a more conservative approach would be to disallow any credit for assumed
salvage value, the Council finds that, with diligent maintenance, the substation transformer
would retain some salvage value. This finding is consistent with the Council’s finding that
pad-mounted transformers, turbine towers, turbines and blades would retain salvage value.
We assume, conservatively, that the certificate holder would install a 115-kV substation
transformer and that its initial cost would be $850,000. The certificate holder would be
required to perform frequent maintenance to keep the transformer in good repair and in
reliable operating condition (Condition (119)). Considering the uncertainty of the future
market for a used transformer, the inability to predict the years of service on the transformer
at the time of resale and the costs of reconditioning and relocation, we assume a net resale
value of no more than 10 percent, or $85,000.

FPL included an estimate from Triaxis, Inc., for removal of the conductors and poles
that make up the 115-kV or 230-kV transmission line and the aboveground 34.5-kV collector
lines.28 Triaxis estimated that removal the transmission lines would cost $10,000 per mile,
assuming salvage value of the aluminum/steel conductors. The estimate assumed backfill of
the pole holes, without reseeding.

Blattner estimated $6.05 per linear foot for removal of roads. This estimate included
removing and hauling off the aggregate road base and blending the subgrade with adjacent
soils to approximate existing topography. Blattner estimated $118.05 per acre for spreading
available, surrounding topsoil and $600 per acre for reseeding. We have applied these
estimates to proposed new access and turbine string roads (44.2 acres). Turn-around areas are
discussed separately below. It is reasonable to assume that landowners would not want the
certificate holder to remove widened and improved portions of farm roads that existed before
construction of the Stateline 3 facility.

Blattner estimated that the cost of removing gravel from turn-around areas, disposing
the gravel off-site and re-grading would be $2,750 per turn-around area. Reseeding these
areas was estimated at $600 per acre.

As in its consideration of Stateline 1 and 2, the Council finds that it is reasonable to
assume that equipment operation during turbine pad demolition and road removal would
disturb an additional area equal in size to the affected area. The affected area would total
approximately 61.9 acres.29 This additional disturbed area would need to be graded and

26 Anne Walsh, e-mail dated March 17, 2003.
28 Provided on January 30, 2003, in response to the Office of Energy’s request for additional information
29 Area of permanent disturbance, excluding expansions of existing roads.
reseeded. It is reasonable to assume that regrading and reseeding these areas would have
similar per-acre cost as regrading and reseeding removed road areas ($718 pre acre).

If site restoration were needed at the end of the facility’s useful life (assumed to be at
least 30 years), there would be no temporarily disturbed areas to restore. However, to protect
the state from uncertainties in the estimate as well as unforeseen additional costs over the
course of the assumed 30-year life of the facility, it is reasonable to add a 20-percent
contingency to the cost of restoring the areas permanently affected by the proposed
expansion. The additional estimated cost for the contingency would be $565,491, and the total
estimated long-term restoration cost would be $3,392,948.

Cost Estimate for Restoring Areas of Permanent Disturbance

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dismantle turbines, turbine towers, transformers (no net return)</td>
<td>279 turbines</td>
<td>0</td>
</tr>
<tr>
<td>Foundation and transformer pad removal, restoration and reseeding</td>
<td>279 turbines</td>
<td>1,618,200</td>
</tr>
<tr>
<td>@ $5,800 per turbine</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dismantle and dispose of met towers @ $5,000 per tower</td>
<td>13 towers</td>
<td>65,000</td>
</tr>
<tr>
<td>Dismantle and dispose of substation</td>
<td></td>
<td>117,000</td>
</tr>
<tr>
<td>Estimated resale value of the substation transformer</td>
<td></td>
<td>-85,000</td>
</tr>
<tr>
<td>Removal of transmission lines, backfill of pole holes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>@ $10,000 per mile</td>
<td>25.6 miles</td>
<td>256,000</td>
</tr>
<tr>
<td>Access and turbine string road removal and hauling of aggregate</td>
<td>113,383 feet</td>
<td>685,967</td>
</tr>
<tr>
<td>@ $6.05 per linear foot</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regrading and reseeding road areas @ $718 per acre</td>
<td>44.2 acres</td>
<td>31,736</td>
</tr>
<tr>
<td>Remove and dispose of gravel from turn-around areas, regrade</td>
<td>33 areas</td>
<td>90,750</td>
</tr>
<tr>
<td>@ $2,750 per turn-around area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reseeding turn-around areas @ $600 per acre</td>
<td>6.1 acres</td>
<td>3,360</td>
</tr>
<tr>
<td>Regrading and reseeding area disturbed during restoration work</td>
<td>61.9 acres</td>
<td>44,444</td>
</tr>
<tr>
<td>@ $718 per acre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subtotal</td>
<td>$2,827,457</td>
<td></td>
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<tr>
<td>20-percent contingency</td>
<td></td>
<td>$565,491</td>
</tr>
<tr>
<td>Total long-term cost</td>
<td></td>
<td>$3,392,948</td>
</tr>
</tbody>
</table>

However, if site restoration were needed when construction was substantially
complete but before the certificate holder had restored temporary laydown and staging areas,
the cost of site restoration would include the cost of restoring 345 acres of temporarily
disturbed area. The cost of regrading and reseeding temporarily disturbed areas would be
similar to the cost of road regrading and reseeding ($718 per acre). Assuming equipment
operation would disturb an area equal to the area being restored, an additional 345 acres
would need restoration.

Cost Estimate for Restoring Laydown and Staging Areas

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temporary area regrading and reseeding @ $718 per acre</td>
<td>345 acres</td>
<td>247,710</td>
</tr>
<tr>
<td>Regrading and reseeding area disturbed during restoration work @ $718 per acre</td>
<td>345 acres</td>
<td>247,710</td>
</tr>
<tr>
<td>Subtotal temporary area restoration</td>
<td></td>
<td>$495,420</td>
</tr>
<tr>
<td>Total short-term cost</td>
<td></td>
<td>$3,322,877</td>
</tr>
</tbody>
</table>

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30 Condition (20) requires restoration of temporarily disturbed areas before operation begins.
31 All amounts are expressed in 2002 dollars.
32 Request for Amendment #2, Table 2.1.
In sum, the cost for restoring temporarily disturbed areas would be $495,420, and the
total "short-term" estimated restoration cost for Stateline 3 would be $3,322,877. Consistent
with the short-term estimates for Stateline 1 and 2, we have added no contingency, based on
the assumptions that the estimated costs are reasonable as of the date of issuance of an
amended site certificate and that restoration would occur within approximately two years.
Unlike the short-term estimates for Stateline 1 and 2, in this case the cost of restoring
temporarily disturbed areas is less than the 20-percent contingency applied to the long-term
estimate. Thus, the long-term estimate ($3,392,948) is higher than the short-term estimate
($3,322,877).

The restoration cost estimates for Stateline 3 must be added to the estimated cost of
restoring the areas occupied by Stateline 1 and 2 to estimate of the full cost of site restoration
of the entire Stateline Wind Project site.

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

The Council finds that the value of the short-term financial assurance bond or letter of
credit for restoring the Stateline 3 site should be $3,322,900 (rounded total), in 2002 dollars,
during construction of Stateline 3. This bond or letter of credit should remain in force until the
certificate holder has fully restored the temporarily disturbed areas and has a replacement
bond or letter of credit in place. The value of the replacement bond or letter of credit for the
restoration of the Stateline 3 site, including the contingency to cover long-term uncertainty,
should be $3,392,900 (rounded total) in 2002 dollars. The long-term bond or letter of credit
should remain in force until the certificate holder has fully restored the site, as required under
Condition (98). The amounts stated in this paragraph should be adjusted annually as described
in Condition (109).

If the certificate holder builds fewer than 279 wind turbines, the restoration cost would
be less. The cost estimate would depend on the number of wind turbines actually constructed,
and what related or supporting facilities were built. The Council authorizes the Office of
Energy to make adjustments, as needed, to the value of the bond or letter of credit if fewer
than 279 wind turbines are built. For calculating any such adjustments, the Office shall use the
same methodology and cost estimates as described above (Condition (109)).

In the Request for Amendment #2, FPL proposed to provide a letter of credit during
construction of Stateline 3 in the amount of $3,033,347. After construction is complete and
the areas of temporary disturbance have been restored, FPL proposed to replace the
construction letter of credit with a long-term letter of credit in the amount of $2,537,927.
However, these amounts can be treated as preliminary because they did not reflect subsequent
information provided to the Office of Energy. In the Request for Amendment #2, FPL
included a letter from SunTrust Banks, Inc., dated October 18, 2002, stating that the bank
would “reasonably be likely to issue” letters of credit “in an aggregate amount at any one time
outstanding” not to exceed $4.4 million. SunTrust Banks, Inc., is a well-known, creditworthy
financial institution. This amount exceeds both the short-term and long-term financial

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33 Dave Stevens, Senior Loan Officer with the Office of Energy’s loan program, reviewed the financial ratings of
SunTrust Banks, Inc., in July 2002 and advised that it would be an acceptable institution for issuing a letter of
credit.
assurance amounts discussed above. Currently, FPL has submitted to the State of Oregon a letter of credit in the amount required by the First Amended Site Certificate.34

It is customary for a performance bond to contain provisions allowing the surety to complete construction of a project in order to reduce its potential liability. However, Oregon law and Council rules allow only a site certificate holder to construct or operate an energy facility. ORS 469.320(1); OAR 345-027-0100(1). The Council requires the certificate holder to assure that the surety has agreed to comply with all applicable statutes, Council rules and site certificate conditions if the surety retains the right to complete construction, operate or retire the energy facility. In addition, the Council requires that surety seek Council approval before commencing construction, operation or retirement activities.

Stateline 2

In the Final Order on Amendment #1, the Council concluded that the Stateline 2 site could be restored adequately to a useful, non-hazardous condition. FPL has submitted the letter of credit required by that order and is in compliance with the financial assurance condition (Condition (102)). There has been no change of circumstances that affects the Council’s findings under this standard as stated in the Final Order on Amendment #1.

Conclusions of Law

The Council finds that the Stateline 3 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. The Council finds that $3,322,900 (in 2002 dollars) is the appropriate financial assurance amount during construction of Stateline 3. The Council further finds that $3,392,900 (in 2002 dollars) is the appropriate financial assurance amount during the life of the Stateline 3 facility after completion of construction. The Council authorizes the Office of Energy to make adjustments to the value of the bond or letter of credit, subject to the terms of Condition (109). The Council further finds that the certificate holder, subject to the conditions stated in this order, has demonstrated a reasonable likelihood of obtaining a bond or letter of credit, satisfactory to the Council, in an amount adequate to restore the site to a useful, non-hazardous condition. Conditions (4), (15), (19), (41), (43), (62), (80), (98), (102), (109) and (119) relate to these findings. The Council concludes that the certificate holder has met the Retirement and Financial Assurance Standard for Stateline 3.

The Council finds that there has been no change of circumstances that would affect the Council’s previous conclusions regarding Stateline 2. The Council concludes that the certificate holder would continue to meet the Retirement and Financial Assurance Standard if the requested extension of the construction completion deadline were allowed.

3. Standards about Impacts of Construction and Operation

(a) Land Use

FPL has elected to have the Council make the land use determination. Accordingly, the following parts of OAR 345-022-0030 apply:

34 The First Amended Site Certificate requires the certificate holder to provide a letter of credit in the sum of $1,161,120 for restoration of the site of Stateline 1 and an additional $899,200 for restoration of the site of Stateline 2 (pending completion of construction).
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:

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(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).

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

(4) The Council may find goal compliance for a proposed facility that does not otherwise comply with one or more statewide planning goals by taking an exception to the applicable goal. Notwithstanding the requirements of ORS 197.732, the statewide planning goal pertaining to the exception process or any rules of the Land Conservation and Development Commission pertaining to the exception process, the Council may take an exception to a goal if the Council finds:

(a) The land subject to the exception is physically developed to the extent that the land is no longer available for uses allowed by the applicable goal;

(b) The land subject to the exception is irrevocably committed as described by the rules of the Land Conservation and Development Commission to uses not allowed by the applicable goal because existing adjacent uses and other relevant factors make uses allowed by the applicable goal impracticable; or
(c) The following standards are met:

(A) Reasons justify why the state policy embodied in the applicable goal should not apply;

(B) The significant environmental, economic, social and energy consequences anticipated as a result of the proposed facility have been identified and adverse impacts will be mitigated in accordance with rules of the Council applicable to the siting of the proposed facility; and

(C) The proposed facility is compatible with other adjacent uses or will be made compatible through measures designed to reduce adverse impacts.

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Findings of Fact

The proposed Stateline 3 facilities would lie entirely on privately-owned land zoned for Exclusive Farm Use (EFU) within the land use jurisdiction of Umatilla County. The Council applies the Umatilla County land use ordinances in effect on November 15, 2002, the date FPL submitted its revised Request for Amendment #2. The land use ordinances in effect then were the same land use ordinances that the Council applied in making land use findings in the Final Order on the Application.

Under OAR 345-022-0030(2)(b)(A), quoted above, the facility must also comply with Land Conservation and Development Commission (LCDC) administrative rules and goals and any land use statutes directly applicable to the facility under ORS 197.646(3). The statute makes a new or amended goal, rule or statute directly applicable to the local government’s land use decisions if the local government has not yet amended its comprehensive plan and land use regulations to implement the new provision.

The Umatilla County Board of Commissioners found the proposed Stateline 3 to be “consistent with all applicable county land use standards, including those found in the Comprehensive Plan and the Development Ordinance.” The Commissioners relied on the County Planning Department’s Staff Findings and Conclusions, dated December 12, 2002 (“Findings”). The Commissioners based their conclusion, in part, on a list of recommended conditions.

Based on the analysis below, the Council finds that Stateline 3 would comply with the applicable substantive criteria of Umatilla County and with all directly applicable provisions of the LCDC administrative rules.

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35 OAR 345-027-0070(9) provides that, in making a decision on a request to amend a site certificate, the Council applies the applicable substantive criteria in effect on the date the certificate holder submitted the request for amendment. In this case, the certificate holder submitted its revised amendment request on November 15, 2002, replacing the earlier request submitted July 1, 2002, in its entirety.

36 The Council identified the “applicable substantive criteria” in the Final Order on the Application, beginning on page 20.

37 Letter from the Commissioners, December 18, 2002.
Umatilla County Development Code

UCDC Section 152.060 – Conditional Uses Permitted

In its Findings, the County identified the proposed Stateline 3 as a “commercial utility facility.” Under UCDC § 152.060(F), “commercial utility facilities for the purpose of generating power for public use by sale” are a conditional use in Umatilla County’s EFU zone. UCDC § 152.060 makes conditional uses subject to “applicable supplementary regulations in §§ 152.010 through 152.016 and §§ 152.545 through 152.562, and §§ 152.610 through 152.616.” Further, the ordinance requires a zoning permit, pursuant to § 152.025, following the approval of a conditional use permit.

UCDC § 152.611 gives the County the authority to impose conditions to “protect the best interests of the surrounding area or the county as a whole.” Umatilla County has recommended conditions for the proposed Stateline 3, and the substance of those recommendations is incorporated in the conditions that are a part of this order.

UCDC Section 152.061 – Limitations on Conditional Uses

UCDC § 152.061 imposes the following limiting criteria, “if determined appropriate,” on conditional uses in an EFU zone. It requires that the proposed use:

(A) Is compatible with farm uses described in O.R.S. 215.203(2) and the intent and purpose set forth in O.R.S. 215.243, and will not significantly affect other existing resource uses that may be on the remainder of the parcel or on adjacent lands;

This section addresses compatibility with “farm use,” which is defined in ORS 215.203(2) as “the current employment of land for the primary purpose of obtaining a profit in money by raising, harvesting and selling crops or the feeding, breeding, management and sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying and the sale of dairy products or any other agricultural or horticultural use or animal husbandry or any combination thereof.” This section also addresses compatibility of the proposed use with the “intent and purpose set forth in ORS 215.243.” The referenced statute

38 In the Goal 3 discussion that begins on page 48, we find that the proposed substation and 115-kV or 230-kV transmission line are authorized on EFU land as “utility facilities necessary for public service” under ORS 215.283(1)(d). Utility facilities necessary for public service are “uses permitted with a zoning permit” under UCDC § 152.058(D), rather than conditional uses under UCDC § 152.060(F). Uses permitted with a zoning permit are subject to UCDC §§ 152.007 (compliance with comprehensive plan) and 152.025 (zoning permit) and the supplementary regulations in UCDC §§ 152.010 through 152.016 and §§ 152.545 to 152.562. The proposed substation and transmission line comply with the criteria in UCDC § 152.058(D). See page 44 for a discussion of § 152.025. See page 45 for a discussion of compliance with the County’s comprehensive plan. See page 44 for a discussion regarding UCDC §§ 152.010 through 152.016 and §§ 152.545 through 152.562. However, we include the substation and transmission line in our discussion of UCDC § 152.060, in light of the County’s conclusion and the scope of UCDC § 152.616(T), which lists not only facilities that generate power but also facilities that distribute power.

39 See page 44 for discussion on UCDC §§ 152.010 through 152.016 and §§ 152.545 through 152.562. Section 152.610 is a definition of “conditional uses.” Sections 152.611 through 152.614 address procedural matters rather than substantive land use criteria. See page 39 for discussion of § 152.615. See page 41 for discussion of § 152.616.

40 See page 44 for a discussion of § 152.025.

41 The County has acknowledged that the site certificate conditions address and accommodate all of the recommended conditions (Dennis Olson, e-mail, dated March 11, 2003).
sets forth Oregon's agricultural land use policy, which states, in part: "The preservation of a
maximum amount of the limited supply of agricultural land is necessary to the conservation of
the state's economic resources and the preservation of such land in large blocks is necessary
in maintaining the agricultural economy of the state."

The Stateline 3 facilities would be located on privately-owned parcels of land. The
total acreage of the privately-owned parcels is approximately 20,000 acres, but the Stateline 3
facilities would occupy approximately 75 acres. Of the 75 acres that Stateline 3 would
occupy, approximately 46 acres are cultivated or are otherwise developed farmland, 20 acres
are native grassland used for cattle grazing and 9 acres are enrolled in the Conservation
Reserve Program (CRP).^42

The turbines would be spaced approximately 250 feet apart. Turbine blades at their
lowest extent would be approximately 88 feet above the ground. The tower pads would have a
surface area of approximately 40 feet by 40 feet. Access roads would run along each turbine
string and connect the strings. Existing roads would be used to the extent possible. New
access road construction and improvements to existing farm roads would be coordinated with
the landowners to minimize any crop impacts. The electrical and communications cables
would be located along the strings and the underground cables would be buried at a depth of
at least 3 feet. See Conditions (37), (44) and (62).

Stateline 3 would include an 8.5-mile 115-kV or 230-kV transmission line. This
transmission line would be attached to wooden H-frame pole structures (approximately 112
two-pole structures) with a minimum ground clearance for the lowest conductor of about 30
feet. In addition to this higher-voltage line, Stateline 3 would include about 17 miles of
aboveground 34.5-kV collector lines on single-pole structures (approximately 365 single-pole
structures) with minimum ground clearance of the lowest conductor of about 25 feet. The
ground clearance would avoid impacts to farming or grazing operations. Altogether, the poles
for the aboveground lines would permanently disturb less than a half-acre of land. The
proposed substation would be located on two acres of land not currently used for agricultural
activities.

Operation of the facility would have no effect on resource use of the remainder of the
affected parcels or on adjacent lands. Landowners would be able to conduct farm operations
under and around the turbine strings and aboveground transmission lines. With the exception
of the substation, the proposed facilities would not be fenced. Stateline 3 would not interfere
with the current use of the land for the primary purpose of raising crops and grazing. The
spacing of the towers, height of the turbine blades and aboveground transmission lines and
depth of the underground cables would avoid interference with agricultural activities. At least
one of the affected landowners concurs that the construction and operation of the expansion
would not have any significant impact on his farming activities.^43

^42 The Conservation Reserve Program is a voluntary program for agricultural landowners. The program
encourages landowners to plant long-term resource-conserving covers to improve soil, water, and wildlife
resources. Through the CRP, landowners receive annual rental payments, incentive payments and annual
maintenance payments for certain activities and cost-share assistance to establish approved cover on eligible
cropland. The Commodity Credit Corporation within the U.S. Department of Agriculture administers the
program through the Farm Service Agency.

^43 Letter, dated June 2002, from Robert Cannon of Sandy Cove Ranches, Inc., owner of one of the properties on
FPL states that the leases with the landowners require FPL to make reasonable efforts not to disturb farming and ranching activities on the facility site. The leases also preclude FPL from holding the landowners responsible for any damage to the facilities caused by the landowners' livestock.\textsuperscript{44} The leases protect landowners from any increases in property taxes associated with the construction or operation of the facility.\textsuperscript{45}

Construction activities would be compatible with farm use and would not affect resource use of the remainder of the parcel or adjacent lands (Condition (40)). In addition to the area permanently occupied by the expansion facilities, construction would temporarily disturb approximately 345 acres. The certificate holder would restore temporarily disturbed areas after construction of the Stateline 3 facilities (Conditions (20), (68) and (82)). The certificate holder would backfill trenches within two weeks after excavation and would reseed the affected area as soon as possible. Topsoil removed during trenching would be separated and returned as topsoil (Condition (62)). Water would be used for dust suppression during construction and roads and turbine pads would be covered with gravel immediately upon exposure, thereby limiting wind or water erosion (Condition (61)). Any waste concrete left at the facility site would be buried at a minimum depth of three feet below the ground surface (Condition (72)).

When Stateline 3 is retired, structures would be removed to three feet below ground surface and the area would be reseeded. See discussion of the Council’s Retirement and Financial Assurance Standard at page 26.

\textit{(B) Does not interfere seriously with accepted farming practices as defined in O.R.S. 215.203(2)(c) on adjacent lands devoted to farm uses, nor interfere with other resource operations and practices on adjacent lands, and will not force a significant change in or significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.}

In its Findings, the Umatilla County Planning Department concluded that the proposed Stateline 3 “would not interfere significantly with accepted farming practices as defined in O.R.S 215.203(2)(c) on adjacent lands devoted to farm uses, nor interfere with other resources operations and practices on adjacent lands, and would not force a significant change in or significantly increase the cost of accepted farming practices on surrounding lands devoted to farm use.”\textsuperscript{46} Agricultural activity on farmlands adjacent to the Stateline 3 site consists of non-irrigated cultivation of wheat and cattle grazing. Some areas are under the CRP. There are no prime agricultural soils within the facility site.

Under O.R.S 215.203(2)(c), “accepted farming practice” means a mode of operation that is common to farms of a similar nature, necessary for the operation of such farms to obtain a profit in money and customarily utilized in conjunction with farm use. Stateline 3 would have little or no impact on customary farm operations or the cost of accepted farm practices on adjacent lands.\textsuperscript{47} During construction, the project might cause temporary impacts

\textsuperscript{44} Request for Amendment #2, pages 34 - 35.
\textsuperscript{45} Request for Amendment #2, page 34.
\textsuperscript{46} Findings, page 5.
\textsuperscript{47} As stated above, the leases with the affected landowners require FPL to make reasonable efforts not to disturb farming and ranching activities on the facility site. The leases protect the landowners from any increases in
to farming due to an increase in construction-related traffic. Once operational, however,
Stateline 3 would generate little traffic and would not limit access to the affected parcels at
any time of year. The location of facility structures might require changes to cropping patterns
in the immediate vicinity of the turbine strings, access roads, met towers and support
structures for aboveground transmission lines. However, operation of Stateline 3 would cause
no impacts on adjacent lands that would significantly interfere with or increase the cost of
farm practices on surrounding lands.

(C) Does not materially alter the stability of the overall land use pattern of the
area. The county shall consider the cumulative impact of non-farm dwellings on
other lots or parcels in the area similarly situated, and whether the creation of the
parcel will lead to creation of other parcels to the detriment of agriculture in the
area.

In its Findings, the Umatilla County Planning Department found that Stateline 3
would not materially alter the overall land use pattern of the area and that the area would
remain in farm use.58 We considered the cumulative effect of the proposed expansion
facilities along with the existing Stateline and Vansycle Ridge facilities.49 As discussed
above, the construction and operation of Stateline 3 would be compatible with farming
activities, which are the primary use of the land in the area of the proposed facility site.
Stateline 3 would create no new lots, parcels or non-farm dwellings to the detriment of
agriculture in the area. It would not alter the parcel size or primary use of the property on
which the facilities would be located or on other properties in the area.

Stateline 3 would permanently occupy only 75 acres of farmland on parcels that
together cover 20,000 acres. Traffic-related impacts during construction would be temporary.
The cumulative impact of Stateline 3 together with the existing wind energy facilities nearby
is not likely to make it more difficult for existing types of farms in the area to continue
operations. The cumulative effect of these facilities is not likely to diminish opportunities for
expansion of farming activities, leasing farm property or acquiring water rights. Farming
activities are likely to continue on the properties on which Stateline facilities are located and
on the surrounding properties. The proposed Stateline 3, together with the existing wind
facilities, is not expected to diminish the number of properties or acres in farm use or
destabilize the pattern of land use in the area.

(D) A Covenant Not to Sue with regard to normal farming practices shall be
recorded as a requirement for approval.

A covenant not to sue is unnecessary because the lease agreements between FPL and
the landowners would adequately address the issues otherwise addressed by a covenant not to
sue.50 FPL states that the terms of the lease agreements with the landowners “are identical or
substantially similar to” the terms of the leases on the Stateline 1 properties.51 In the Final

58 Findings, page 6.
49 A letter from the affected landowner states that the Vansycle facility does not significantly hinder farm
operations (Site Certificate Application, Attachment K-4).
50 See discussion of UCDC § 152.061(A) above.
51 See the Site Certificate Application, Attachment K-8. See also the discussion of UCDC § 152.061(A) above.
Order on the Application, the Council found those leases provided adequate protection for normal farming practices.

**UCDC Section 152.615 – Additional Restrictions**

UCDC § 152.615 gives the County the authority to impose conditions on a proposed use:

In addition to the requirements and criteria listed in this subchapter, the Hearings Officer may impose the following conditions upon a finding that circumstances warrant such additional restrictions:

(A) Limiting the manner in which the use is conducted, including restricting hours of operation and restraints to minimize such environmental effects as noise, vibration, air pollution, glare or odor;

The Department of Environmental Quality (DEQ) has established regulations for industrial noise sources. DEQ's industrial noise limits do not apply to sound from construction sites (OAR 340-035-0035(5)(g)), but the certificate holder would limit the noisiest of those activities to daytime hours (Condition (78)). Operational noise levels would be within the applicable noise limits. We discuss the DEQ noise standard at page 99. During construction, the certificate holder would implement dust control and suppression measures (Condition (61)). Construction activities would not cause vibration, glare or odor. Facility operations would not cause vibration, air pollution, glare or odor.

(B) Establishing a special yard, other open space or lot area or dimension;

This provision does not apply to the proposed expansion.

(C) Limiting the height, size or location of a building or other structure;

There are no specific height limitations in the EFU zones. Umatilla County has not expressed any concerns with the height, size or location of the turbines or other facilities.

(D) Designating the size, number, location and nature of vehicle access points;

There would be three vehicle access points for Stateline 3. These access points would connect access roads on private property to county roads. The certificate holder would be required to submit a road approach application to the Umatilla County Department of Public Works.

(E) Increasing the required street dedication, roadway width or improvements within the street right-of-way;

There would be no new public roads or construction in public rights-of-way.

(F) Designating the size, location, screening, drainage, surfacing or other improvement of a parking or loading area;

Stateline 3 would not require new parking or loading areas, except at the proposed substation. The two-acre substation site would include a parking area.
(G) Limiting or otherwise designating the number, size, location, height and lighting of signs;

Signs would be limited to those required for operation or safety or required by federal, state or local law. See Condition (37).

(H) Limiting the location and intensity of outdoor lighting and requiring its shielding;

With the exception of the substation, lighting would be limited to warning lights required by the Federal Aviation Administration. See Condition (37). The certificate holder would use substation lighting for nighttime repairs, operations or maintenance. At other times, the lighting would be switched off.

(I) Requiring diking, screening, landscaping or other methods to protect adjacent or nearby property and designating standards for installation and maintenance;

Diking, screening and other methods of protecting adjacent properties are unnecessary and infeasible. Turbine color would be a neutral light gray or white (depending upon the color of the existing adjacent turbines).

(J) Designating the size, height, location and materials for a fence;

With the exception of the substation, Stateline 3 would require no fencing. The site of the proposed Stateline 3 facilities is a remote area on private property. The turbine controls and access ladders would be located inside locked towers. The towers would be tubular as opposed to lattice construction. See Conditions (37) and (38). The substation would be fenced with a chain link fence. The Umatilla County Planning Department did not propose any conditions related to the fence around the substation.

(K) Protecting and preserving existing trees, vegetation, water resources, wildlife habitat, or other significant natural resources;

Stateline 3 would not affect existing trees, rivers or other standing bodies of water. We discuss the potential impacts on wetlands at page 106. Proposed access roads and overhead lines would cross streams in certain locations but applicable site certificate conditions would mitigate any impacts. The certificate holder would carry out weed control in consultation with the county weed control board (Conditions (30) and (64)). To minimize erosion, areas temporarily disturbed by construction activities would be re-vegetated, and roads and turbine pads would be covered with gravel immediately following exposures (Condition (61)). The certificate holder would take measures to avoid, minimize and mitigate impacts to wildlife and wildlife habitat (see discussion of the Council’s Fish and Wildlife Habitat Standard at page 75).

(L) Parking area requirements as listed in §§ 152.560 through 152.562 of this chapter.

Stateline 3 would not require new parking areas, except at the proposed substation. A substation is not a use listed in § 152.560, which specifies off-street parking requirements. Section 152.561 does not apply because it pertains to loading areas for school children and merchandise. The certificate holder would have to comply with and applicable requirements of § 152.562 (Additional Off-Street Parking and Loading Requirements).
UCDC Section 152.616 – Standards for Review of Conditional Uses

UCDC § 152.616(T) contains specific criteria for utility facilities as conditional uses:

(T) Commercial utility facilities. ... These uses are allowed provided that:

(1) Facility is designed to minimize conflicts with scenic values and adjacent forest, farming and recreational uses as outlined in policies of the Comprehensive Plan;

Considering the distance from scenic areas, the intervening topography, the spacing of the turbines, the neutral colors of the turbines and the absence of emissions causing other visual impacts, Stateline 3 would not conflict with scenic values.52 In its Findings, the Umatilla County Planning Department found that Stateline 3 “is designed and located to minimize conflicts with scenic values and adjacent farming uses as outlined in policies of the Comprehensive Plan.”53

For the reasons discussed under UCDC § 152.061, Stateline 3 would not conflict with scenic values or adjacent farm uses. There are no adjacent forest uses. All of the adjacent land is privately owned. With the exception of temporary impacts of noise and traffic associated with construction, Stateline 3 would not conflict with adjacent recreational uses.54

(2) Facility be of a size and design to help reduce noise or other detrimental effects when located adjacent to farm, forest and grazing dwelling(s) or a recreational residential zone;

Stateline 3 would not be located adjacent to any farm, forest or grazing dwellings or adjacent to a recreational residential zone. The closest occupied dwelling is located approximately 2,900 feet from the nearest Stateline 3 turbine.55 All other dwellings in the vicinity are 3,700 feet or more from the nearest turbine.

The discussion of the DEQ noise standard at page 99 addresses the anticipated noise impacts of Stateline 3. Other possible detrimental impacts include visual and traffic impacts. Some Stateline 3 turbines might be visible from the closest farm dwellings. However, the height of the wind turbines and the need for unobstructed access to the wind resource make visual impact unavoidable. The certificate holder would apply feasible measures to reduce the visual impact of the proposed facility (Condition (37)).56 We assess the potential traffic impacts in the discussion of the Public Services Standard at page 94.

(3) Facility be fenced when located adjacent to dwelling(s) or a Mountain Recreational or Forest Residential Zone and landscaping, buffering and/or screening be provided;

Stateline 3 would not be located adjacent to any dwellings or to a Mountain Recreational or Forest Residential Zone.

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52 See discussion of the Council’s Scenic and Aesthetic Values Standard at page 60.
54 See discussion of the Council’s Recreation Standard at page 64.
55 Request for Amendment #2, page 87.
56 See discussion of the Council’s Scenic and Aesthetic Values Standard at page 60.
(4) Facility does not constitute an unnecessary fire hazard and consideration be
made of minimum fire safety measures if located in a forested area, which can
include but are not limited to:

(a) The site be maintained free of litter and debris;

(b) Use of non-combustible or fire retardant treated materials for structures and
fencing;

(c) Removal of all combustible materials within 30 feet of structures;

In its Findings, the Umatilla County Planning Department found that Stateline 3
would not constitute an unnecessary fire hazard. The proposed expansion is not located in a
forested area. The towers and pads would be constructed of fire retardant materials and the
turbines would have built-in fire prevention measures (Condition (103)). The proposed
substation would be in a remote location, enclosed by a security fence. The substation site
would be surfaced with crushed rock and maintained free of litter and debris (Condition (86)).
One fire hazard posed by the aboveground transmission lines is the potential for insulator
failure or damage by gunshot causing a conductor to drop to the ground. However, line
insulators rarely fail, and the 115-kV or 230-kV transmission line would have
fiberglass/polymer insulators, which are more resistant to gunshot than porcelain insulators.
The certificate holder would not store combustible materials at the facility (Condition (31))
and would use only a small amount of combustible material during construction and
operation. The certificate holder would implement fire response and prevention measures
related to staff training, equipment and coordination with local fire departments (Conditions
(34), (58) and (96)). The Helix and Milton-Freewater Rural Fire Protection Districts serve the
Stateline 3 area. FPL has confirmed with the fire chiefs of both districts that the construction
and operation of Stateline 3 would not constitute a fire hazard. The Milton-Freewater Rural
Fire Protection District has also confirmed that it would be able to provide service to the
entire Stateline 3 project if necessary.

(5) Major transmission towers, poles and similar gear shall consider locations
within or adjacent to existing rights-of-way in order to take the least amount of
timber land out of production and maintain the overall stability and land use
patterns of the area, and construction methods consider minimum soil disturbance
to maintain water quality;

Stateline 3 would not take any timberland out of production. It would maintain the
overall stability and land use patterns in the area as discussed under UCDC § 152.061 above.
The certificate holder would implement mitigation measures to minimize soil disturbance
during construction. Construction would be subject to an NPDES 1200-C construction permit
and regulated by the erosion control plan and best management practices required by that
permit. Trenches would be backfilled. Topsoil removed and separated during trenching would

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57 Findings, page 6.
58 The aboveground 34.5-kV transmission line insulators would be porcelain. However, because the insulators on
these lines would hold the conductors above the crossarm of the support structure, there is a lower fire risk
compared to the higher-voltage lines. Damage to an insulator would most often cause the conductor to drop to
the crossarm rather than to the ground.
59 E-mail from Milton Freewater Fire Chief, dated June 10, 2002 (Request for Amendment #2, Exhibit 7).
be respread, and the areas would be revegetated. Areas used for staging, laydown and
turnaround areas or disturbed during road construction would be scarified and revegetated.
Roads and turbine pads would be covered with gravel immediately upon exposure, thereby
limiting wind or water erosion. See Conditions (20), (44), (60), (61), (62) and (68).

(6) Facility shall not alter accepted timber management operations on adjacent
forest land;

This criterion is not applicable because Stateline 3 is not adjacent to forestland or
timber management operations.

(7) Facility shall adequately protect fish and wildlife resources by meeting
minimum Oregon State Department of Forestry regulations;

This criterion is not applicable because Stateline 3 would not affect acreage governed
by Oregon Department of Forestry regulations. We address protection of fish and wildlife
resources below in the discussion of the Council’s Fish and Wildlife Habitat Standard at page
75 and Threatened and Endangered Species Standard at page 71.

(8) Access roads or easements be improved to a standard and follow grades
recommended by the Public Works Director;

FPL proposes improvements to existing roads and construction of new roads for
access to the turbine strings and individual turbines. Construction of road improvements and
access roads would comply with county-approved standards and the requirements of the
NPDES construction permit. See Conditions (44) and (81). After completion of construction
of aboveground transmission lines, no permanent access roads would be needed along
transmission line routes. Inspection of transmission lines would be done on foot or by all-
terrain vehicle.

(9) Road construction be consistent with the intent and purposes set forth in the
Oregon Forest Practices Act or the 208 Water Quality Program to minimize soil
disturbance and help maintain water quality;

The Oregon Forest Practices Act does not apply to Stateline 3. However, road
construction work would be performed under an NPDES 1200-C construction permit and be
regulated by an erosion control plan and best management practices required by that permit.
Further, the certificate holder would cover roads and turbine pads with gravel immediately
upon exposure, thereby limiting wind or water erosion. See Conditions (60) and (61).

(10) Complies with other conditions deemed necessary by the Hearings Officer.

In its Findings, the Umatilla County Planning Department recommended conditions
for Stateline 3, and the substance of those recommendations is incorporated in the conditions
that are a part of this order.
UCDC Section 152.063 – Development Standards

UCDC § 152.063 contains dimensional and development standards applicable in an EFU zone. Subsections (A) through (C) of the ordinance establish setback requirements from streets, property lines, county roads, public roads, state highways and public or private access easements. Stateline 3 complies with these setback requirements to the extent that they apply. Subsection (D) addresses the distance of a dwelling from aggregate mining operations and does not apply. Stream setback requirements in subsection (E) do not apply because Stateline 3 would not require sewage disposal installations or construction of structures, buildings or similar permanent fixtures along streams.

Subsection (F) requires compliance with regulations found in §§ 152.010 through 152.016, §§ 152.545 through 152.562 and §§ 152.570 through 152.577. With the exception of UCDC § 152.015 (fences), the regulations in §§ 152.010 through 152.016 do not apply to the proposed facility because they address uses that are not part of Stateline 3. UCDC § 152.015 requires that fences meet all Oregon Uniform Building Code requirements. As required by Condition (2), the certificate holder must comply with all applicable laws and regulations, including building codes (see page 111). UCDC §§ 152.545 through 152.548 address sign regulations. Any signs erected at site would be signs required by law or for operation and safety (Condition 37). With respect to the parking and loading requirements of UCDC § 152.560 through 152.562, the gravelized turbine pads would provide sufficient parking along the turbine strings, and the substation area would include a parking area. No other parking or loading areas are needed. The exceptions described in UCDC §§ 152.570 through 152.577 do not apply to Stateline 3 because they address uses that are not part of the proposed facility.

UCDC Section 152.025 – Zoning Permit

UCDC § 152.025 addresses the need for a zoning permit:

(A) Prior to the construction, reconstruction, addition to or change in use of a structure, or the change in use of a lot or the installation or replacement of a mobile home on a lot, a zoning permit shall be obtained from the County Planning Department. Within the flood hazard area, a zoning permit shall be required for all other developments including placement of fill, mining, paving, excavation or drilling. Structures of 120 square feet or less in area and structures described in § 152.026 (farm uses) do not require a zoning permit except when located in a designated flood hazard area. A zoning permit shall be voided after one year unless construction has commenced. The Planning Commission or its authorized agent may extend the permit for an additional period not to exceed one year upon written request.

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60 The County did not include Section 152.063 in its statement of the applicable substantive criteria (see Final Order on the Application at page 20). However, we include the section because it includes standards applicable in an EFU zone.

61 Umatilla County does not consider transmission line support poles to be “structures” for the purposes of UCDC § 152.063(E). Memorandum from Dennis Olson to Anne Walsh, dated February 20, 2003.

62 The County did not include Section 152.025 in its statement of the applicable substantive criteria (see Final Order on Application at page 20). However, we include the section because of a cross-reference to it in § 152.060, one of the identified applicable substantive criteria.
(B) Zoning permits shall be issued by the Director according to the provisions of this chapter. The Planning Director shall not issue a zoning permit for the improvement or use of land that has been previously divided or otherwise developed in violation of this chapter, regardless of whether the applicant created the violation, unless the violation can be rectified as part of the development.

The certificate holder will need a zoning permit before construction of Stateline 3 because the proposed facilities exceed 120 square feet in size. The land on which Stateline 3 would be located has not been developed or divided in violation of the Umatilla County Development Code.63

Umatilla County Comprehensive Plan

The Umatilla County Comprehensive Plan contains findings and policy statements that address overall planning goals adopted by the county. Although the policy statements do not contain specific substantive criteria, we discuss the relevant policies below.

Energy Conservation Element – Policy 1

Encourage rehabilitation/weatherization of older structures and the utilization of locally-feasible renewable energy resources through use of tax and permit incentives.

Stateline 3 would be a “locally-feasible renewable energy resource” eligible under this policy for encouragement through tax and permit incentives. However, the County has not proposed any specific tax or permit incentives for Stateline 3.

Agricultural Plan Element – Policy 8

The county shall require appropriate procedures/standards/policies be met in the Comprehensive Plan and Development Ordinance when reviewing nonfarm uses for compatibility with agriculture.

The Umatilla County Development Code provisions discussed above establish standards that non-farm uses must meet for compatibility with agriculture. For the reasons discussed under UCDC § 152.061 above, Stateline 3 would be compatible with agriculture.

Open Space, Scenic and Historic Areas, and Natural Resources – Policy 20

(a) Developments of potentially high visual impacts shall address and mitigate adverse visual impacts in their permit application, as outlined in the Development Ordinance standards.

The cumulative effect of Stateline 3 together with both Stateline 1 and 2 and the Vansycle Ridge facility would have a visual impact.64 The height and number of wind turbines could be considered a “potentially high visual impact.” The certificate holder has addressed visual impact and mitigation in the amendment request. The certificate holder would implement feasible measures to reduce the visual impact of the proposed facility (Condition (37)).

63 Dennis Olson, e-mail, dated March 6, 2003.
64 In addition, Umatilla County has issued a conditional use permit for the construction of the “Combine Hills Turbine Ranch,” a wind energy facility proposed by Eurus Oregon Wind Power Development, L.L.C. The Combine Hills project would consist of up to 104 wind turbines in the general vicinity of Stateline 3.
(b) It is the position of the County that the Comprehensive Plan designations and zoning already limit scenic and aesthetic conflicts by limiting land uses or by mitigating conflicts through ordinance criteria. However, to address any specific, potential conflicts, the County shall insure special consideration of the following when reviewing a proposed change of land use:

1. Maintaining natural vegetation whenever possible.

The certificate holder would minimize the areas of disturbance during construction of Stateline 3 to the extent possible. Temporarily disturbed areas would be re-vegetated upon completion of construction. The certificate holder would comply with measures to prevent soil erosion and noxious weed species from taking hold in disturbed areas. See Conditions (20), (30), (44), (60), (61), (62), (68) and (82).

2. Landscaping area where vegetation is removed and erosion might result.

Implementation of the erosion control plan and best management practices required by the NPDES 1200-C permit would minimize erosion associated with construction of turbines and roads. The certificate holder would re-vegetate temporarily disturbed areas and cover the turbine pads and roads with gravel as soon as possible. The certificate holder would comply with measures to reduce soil erosion and to prevent noxious weed species from taking hold in disturbed areas. See Conditions (29), (30), (60), (61) and (68).

3. Screening unsightly land uses, preferably with natural vegetation or landscaping.

Stateline 3 would not create “unsightly land uses.” The color of the turbine towers would be gray or white to reduce visual contrast with the surrounding landscape. Other screening measures would not be feasible. See Condition (37).

4. Limiting right-of-way widths and numbers of roads intersecting scenic roadways.

There would be minor modification of existing farm roads and limited construction of new access roads. Facility rights-of-way and access roads would not intersect with any scenic roadways. See Condition (44).

5. Limiting signs in size and design so as not to distract from the attractiveness of the area.

The use of signs would be limited as described in Condition (37). Signs would not distract from the attractiveness of the area.

6. Siting developments to be compatible with surrounding area development and recognizing natural characteristics of the location.

As has been discussed above, Stateline 3 would be compatible with development in the surrounding area (farm use). It would retain the open landscape and, to the extent possible, recognize the natural characteristics of the location.
7. Limiting excavation and filling only to those areas where alteration of the
natural terrain is necessary and revegetating such areas as soon as
possible.

No major excavation or fill would be needed. Minor fill would be used for two stream
crossings, as discussed below at page 106. Excavation would be necessary for construction of
turbines and turbine pads, the substation, met towers and aboveground transmission lines and
for construction and improvement of roads. Turbine pads would be located on gentle, rather
than steep slopes, thereby reducing the amount of excavation and consequent erosion.
Existing roads would be used to the extent possible. New roads would be contoured to the
existing terrain to the extent possible. The certificate holder would limit areas of soil
disturbance within specified corridors along both new and improved roads, near the turbine
pads and trenches and in designated staging and turnaround areas. Temporarily disturbed area
would be re-vegetated as soon as possible. See Conditions (44), (61), (68) and (82).

8. Protection of vistas and other views which are important to be recognized
because of their limited number and importance to the visual attractiveness
of the area.

Stateline 3 would not significantly affect any scenic vista or the visual attractiveness
of the area. See discussion of the Council’s Scenic and Aesthetic Values Standard at page 60.

9. Concentrating commercial developments in areas where adequate parking
and public services are available and discouraging strip commercial
development.

Stateline 3 would not be open to the public and would not encourage strip commercial
development. Existing parking is adequate and most public services unnecessary. Wind
energy generation requires location in open spaces accessible to the wind resource and away
from other commercial structures.

Open Space, Scenic and Historic Areas, and Natural Resources – Policy 26

The County will cooperate with the [Umatilla] Tribe, Oregon State Historic
Preservation Office, and others involved in identifying and protecting Indian
cultural areas and archaeological sites.

In addition to the cultural resource surveys Stateline 1 and 2, the Confederated Tribes
of the Umatilla Indian Reservation (CTUIR) conducted a field survey of all areas proposed
for ground-disturbing activities associated with Stateline 3. The field crew identified cultural
resource sites and isolated finds, all of which the certificate holder would avoid during
construction. See discussion of the Council’s Historic, Cultural and Archaeological Resources
Standard at page 93. A qualified cultural resource expert would be on the site during
construction of Stateline 3. The certificate holder would notify the Office of Energy, the
Oregon State Historic Preservation Office and the CTUIR if previously unidentified cultural
resources were discovered during construction. See Conditions (75) and (76).
Directly Applicable State Provisions

Goal 3

Umatilla County has not amended its land use regulations to implement amended LCDC rules related to Goal 3 and ORS 215.283. Specifically, the directly applicable LCDC rules are OAR 660-033-0120, 660-033-0130 and 660-012-0065. The Council must determine whether Stateline 3 complies with these provisions.

ORS 215.283 identifies the non-farm uses permitted on EFU-zoned land. Each part of the proposed Stateline 3 expansion must fit within the scope of a use described in ORS 215.283(1), (2) or (3). The Stateline 3 expansion includes the energy facility (wind turbines) and its related or supporting facilities (met towers, collector cables, 115-kV or 230-kV transmission line, substation and access roads).

To determine whether a particular part of the proposed Stateline 3 expansion is allowed on EFU-zoned land, the Council must first determine whether the Legislature has created a use category specific to that part. If so, then the Council would evaluate that part of the facility against the criteria applicable to that use category.

For example, the Legislature has created a use category for “commercial utility facilities for the purpose of generating power for public use by sale” in ORS 215.283(2)(g). The parts of Stateline 3 that would generate power for public sale are the wind turbines (collectively, the “energy facility”). The energy facility fits within this use category. Thus, ORS 215.283(2)(g) authorizes the energy facility to be located on EFU-zoned land.

As described below, most of the Stateline 3 related or supporting facilities fall within specific use categories. However, if the Legislature has not created a use category specific to a particular related or supporting facility, then the Council must decide whether it is nevertheless reasonable, for Goal 3 purposes, to characterize that related or supporting facility as a part of the “principal use” (the energy facility). If so, the Council would evaluate it together with the energy facility under ORS 215.283(2)(g).

In Dierking v. Clackamas County, 38 Or LUBA 106, affirmed 170 Or App 683, 688 (2000), the Court of Appeals addressed the question whether a component facility should be characterized as a part of the principal use. The Court held that a component should be considered part of the principal use if it (1) was essential to the functioning of the use and (2) had no independent utility. We have applied the Dierking test to the Stateline 3 related or supporting facilities to determine whether those components that do not fall within a specific use category may nevertheless be treated as part of the principal use.

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65 Under the land use standard, OAR 345-022-0030, the Council must determine not only whether a proposed facility complies with the applicable substantive criteria identified by the local government but also whether it 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).” Under ORS 197.646(3), if a local government has not amended its comprehensive plan or land use regulations to implement a new or amended statewide planning goal, land use statute or LCDC rule, the new or amended state provision is directly applicable to local government land use decisions.

66 OAR 660-033-0120 references Table 1, which describes the specific uses permitted on agricultural land. OAR 660-033-0130 identifies the minimum standards applicable to those uses. OAR 660-012-0065 describes transportation improvements on rural lands.

67 See discussion of applicable LCDC rules below at page 51.
Substation

The proposed substation would fall within the scope of ORS 215.283(1)(d), which allows the siting of "utility facilities necessary for public service" on EFU-zoned land, subject to the provisions of ORS 215.275 (discussed below at page 50). The proposed substation would include switching equipment and transformers to step up the voltage of power generated by the Stateline 3 turbines from 34.5 kV to either 115 kV or 230 kV. The substation is necessary to allow transmission of the electricity generated by the energy facility over higher voltage lines to the main grid interconnection in Washington and ultimately to public customers.

115-kV or 230-kV Transmission Line

Like the substation, the transmission line would fall within the scope of ORS 215.283(1)(d) as a utility facility "necessary for public service," subject to the provisions of ORS 215.275 (discussed below at page 50). The 115-kV or 230-kV transmission line is necessary to transmit power from the substation to the main power grid.

Access Roads

ORS 215.283(3) authorizes certain roads that are not otherwise allowed under ORS 215.283(1) or (2). ORS 215.283(3) provides as follows:

(3) Roads, highways and other transportation facilities and improvements not allowed under subsections (1) and (2) of this section may be established, subject to the approval of the governing body or its designee, in areas zoned for exclusive farm use subject to:

(a) Adoption of an exception to the goal related to agricultural lands and to any other applicable goal with which the facility or improvement does not comply; or

(b) ORS 215.296 for those uses identified by rule of the Land Conservation and Development Commission as provided in section 3, chapter 529, Oregon Laws 1993.

This provision allows public or private roads on EFU lands, subject to the provisions of subsection (a) or (b), as applicable. The Stateline 3 access roads appear to be uses identified by LCDC rule and therefore specifically allowed under subsection (b). As such, these roads are subject to ORS 215.296. ORS 215.296(1) provides for approval of the use only if the use will not:

(a) Force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; or

(b) Significantly increase the cost of accepted farm or forest practices on surrounding lands devoted to farm or forest use.

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68 The proposed new access roads and improvements to existing farm roads are not allowed under ORS 215.283(2)(g) as an accessory use to the energy facility under the Dierking test. Although access roads are necessary to the operation of the energy facility, the roads would have independent utility. The affected landowners could use them for farm-related activities. At the option of the landowners, the access roads may remain in use after retirement of the energy facility. We find it reasonable to characterize the roads as a use separate from the energy facility because of their independent utility.

69 The Council made a similar finding in the Final Order on Amendment #1, page 34.
These requirements are substantially similar to the criteria in UCDC § 152.061(B), which we have discussed above at page 37. For the reasons explained in that discussion, the proposed access roads for Stateline 3 would satisfy ORS 215.296.

Collector Cables

The collector cables could be allowed under ORS 215.283(1)(d) as a “utility facility necessary for public service.” However, in the context of a wind energy facility, it is reasonable to treat the collector cables as a part of the principal use. The collector cables are necessary for getting the power from the turbines to the “curb” for transmission to the grid. They are necessary for the operation of the facility. They have no utility independent from the operation of the turbines for generating power for public sale. Accordingly, it is reasonable to characterize the collector cables as part of the energy facility under ORS 215.283(2)(g).

Met Towers

Similarly, we find that the met towers should be evaluated under ORS 215.283(2)(g) as part of the principal use. The thirteen Stateline 3 met towers would occupy a total of approximately 130 square feet and would be located near turbine strings. Although met towers do not relate directly to the generation of power, they are necessary to the operation of the energy facility and have no independent utility. The met towers would be used primarily to verify turbine performance warranties by providing a measure of wind speed unaffected by turbulence caused by the turbines themselves. They are a standard element of all wind projects. The data from the met towers would be accessible only by the certificate holder. The met towers would be removed upon retirement of the facility. Thus, it is reasonable to characterize the met towers as being part of the principal use.

ORS 215.275

ORS 215.275 identifies the factors for deciding whether a utility facility is “necessary for public service.” Under ORS 215.275, a utility facility is “necessary” if reasonable alternatives have been considered and if the facility must be located on EFU land due to one or more of the factors. As discussed above, subject to ORS 215.275, the substation and the 115-kV or 230-kV transmission lines are utility facilities “necessary for public service” within the scope of ORS 215.283(1)(d). The substation and the 115-kV or 230-kV transmission lines satisfy two of the factors: locational dependence and the lack of available urban and non-resource lands (ORS 215.275(2)(b) and (2)(c)).

To avoid EFU land, the certificate holder would need to locate the substation several miles to the south or east of the proposed Stateline 3 turbines. The nearest alternative, non-EFU land in Oregon is located in Helix, approximately four miles south of the nearest

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70 If evaluated under ORS 215.283(1)(d), the collector cables would satisfy ORS 215.275 for the same reasons described above with respect to the substation and 115-kV or 230-kV transmission line. To serve their intended purpose, the collector cables must be physically connected to the turbine strings, all of which are located on EFU-zoned land.

71 The Council made a similar finding in the Final Order on Amendment #1, page 33-34.

72 As with the collector cables, the met towers could also be allowed under ORS 215.283(1)(d) as a “utility facility necessary for public service.” If evaluated under ORS 215.283(1)(d), the met towers would satisfy ORS 215.275 for the same reasons described above with respect to the substation and 115-kV or 230-kV transmission line. To serve their intended purpose, met towers must be located in the immediate vicinity of the turbine strings, all of which are located on EFU-zoned land.
Stateline 3 turbines. This would take the power farther away from the proposed point of interconnection to the main transmission grid in Washington to the north. Locating the substation in Helix would be impractical because it would require transmitting power from the turbines a long distance to the south by way of the collector cables, with resulting line losses. Locating the substation in Helix would not only require substantially more collector cabling (from turbines to substation), almost all of which would be on EFU land, but would also require a longer 115-kv or 230-kv transmission line on EFU land. In short, practical considerations make the substation locationally dependent, and there are no urban or non-resource lands on which the substation could be located and still serve the project purpose. Thus, there are no reasonable alternatives, and location of the substation on EFU land is “necessary.” The substation is allowable on EFU land under ORS 215.283(1)(d).

Likewise, there are no alternative transmission line routes for the 115-kv or 230-kv line that would affect less EFU land. FPL has proposed an 8.5-mile transmission line between the proposed new substation and the regional power grid in Washington. Any route from the proposed substation would lie on EFU-zoned land. The transmission line would have to be even longer if the substation were not near the turbines on EFU land. There are no existing rights-of-way in the project area that the certificate holder could use instead of the proposed route. The transmission line must cross land that is zoned for exclusive farm use in order to achieve a reasonably direct route. There are no urban or other non-resource lands through which the certificate holder could route the line. The transmission line is locationally dependent, and there are no reasonable alternatives to locating it on EFU land. The transmission line therefore qualifies as a utility facility necessary for public service under ORS 215.283(1)(d).

ORS 215.275(5) requires the imposition of “clear and objective conditions” on siting a utility facility under 215.283 (1)(d) “to mitigate and minimize the impacts of the proposed facility, if any, on surrounding lands devoted to farm use in order to prevent a significant change in accepted farm practices or a significant increase in the cost of farm practices on the surrounding farmlands.” The potential impacts on farmland are addressed in the discussion of UDC § 152.061 above at page 35. In that discussion, we reference numerous site certificate conditions that “minimize and mitigate” potential impacts on farmland. No additional conditions are needed to meet the requirements of ORS 215.275(5).

**LCDC Rules Applicable to the Principal Use**

The principal use is the energy facility. As discussed above, we evaluate the met towers and collector cables as part of the energy facility under the *Dierking* test. ORS 215.283(2)(g) authorizes “commercial utility facilities for the purpose of generating power for public use by sale” on agricultural land, subject to ORS 215.296. This section discusses applicable LCDC rules. OAR 660-033-0120 (Table 1) lists the “commercial utility facility” use as an “R” (“use may be approved, after required review”) and references the minimum standards found in OAR 660-033-0130(5) and (22).

OAR 660-033-0130(5) provides as follows:

(5) Approval requires review by the governing body or its designate under ORS 215.296. Uses may be approved only where such uses:

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75 See the discussion of Table 1 in the Final Order on the Application at page 33.
(a) Will not force a significant change in accepted farm or forest practices on surrounding lands devoted to farm or forest use; and

(b) Will not significantly increase the cost of accepted farm or forest practices on lands devoted to farm or forest use.

The identical standards appear in ORS 215.296. These standards are substantially similar to the criteria in UCDC § 152.061(B), which we have discussed above at page 37. For the reasons explained in that discussion, the principal use would meet the OAR 660-033-0130(5) and ORS 215.296 standards.

OAR 660-033-0130(22) provides as follows:

(22) A power generation facility shall not preclude more than 20 acres from use as a commercial agricultural enterprise unless an exception is taken pursuant to OAR Chapter 660, Division 4.74

An exception is required under OAR 660-033-0130(22) only if the “power generation facility” precludes more than 20 acres from use as a commercial agricultural enterprise.75 The Stateline 3 energy facility together with the met towers and aboveground collector cables would permanently occupy about ten acres.76 The “power generation facilities” for Stateline 1 and 2 combined would permanently occupy about six acres.77 “Power generation facilities” for the entire Stateline project (Stateline 1, 2 and 3), would thus preclude less than 20 acres from use as a commercial agricultural enterprise. Therefore, no Goal 3 exception is required.

Although the proposed new access roads and expansions of existing roads would preclude substantially more than 20 acres, the access roads are not part of the principal use (the “power generation facility”). Instead, we evaluate them as a separate use. Accordingly, the area occupied by access roads is not included as a part of the area that the “power generation facility” would preclude from agricultural use.

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74 The 20-acre threshold in subsection (22) applies to non-high-value farmland. As discussed under the Council’s Soil Protection Standard at page 54, the soils in the Stateline 3 area are not prime farmland, and so the 20-acre threshold applies. A 12-acre threshold would apply under OAR 660-033-0130(17) if the affected area were high value farmland.

75 It is unclear that the area in which farm use would be precluded qualifies as a “commercial agricultural enterprise” as that term is used in OAR 660-033-0130(5). For purposes of completeness, we assume without deciding that the area would qualify as a commercial agricultural enterprise.

76 Request for Amendment #2, Table 3.1, page 11. The turbine pads would occupy approximately 10 acres, the towers for the overhead portion of the 34.5-kv line would occupy approximately 0.034 acres and the met towers would occupy approximately 0.003 acres. The underground collector cables would not preclude use of the overlying land for agricultural purposes and for that reason are not included in this analysis. Similarly, because the proposed 115-kv or 230-kv transmission line and substation are allowed on EFU land under ORS 215.283(1)(d), they are not subject to the acreage threshold in OAR 660-033-0130(22).

77 According to Table B-1 of the site certificate application, the Stateline 1 turbines and met towers occupy approximately four acres of land. According to the Request for Amendment #1, Table 1, the Stateline 2 turbines and met towers would occupy approximately two acres. Thus, the total acreage occupied by the Stateline 1 and 2 “power generation facilities” is six acres. The collector cables for Stateline 1 and 2, all of which are underground, would not preclude use of the overlying land for agricultural purposes and are therefore not included in this analysis.
LCDC Rule Applicable to Roads and Transportation Facilities

As discussed above, ORS 215.283(3) applies to roads and transportation facilities. OAR 660-033-0120 (Table 1) lists “roads, highways and other transportation facilities and improvements” as an “R” (“use may be approved, after required review”) and references the minimum standards found in OAR 660-033-0130(13).

OAR 660-033-0130(13) provides as follows:

(13) Such uses may be established, subject to the adoption of the governing body or its designate of an exception to Goal 3, Agricultural Lands, and to any other applicable goal with which the facility and improvement does not comply. In addition, transportation uses and improvements may be authorized under conditions and standards as set forth in OAR 660-012-0035 and 660-012-0065.

The Stateline 3 access roads are “transportation improvements” allowed under OAR 660-012-0065. OAR 660-012-0065(3)(a) states that “accessory transportation improvements for a use that is allowed or conditionally allowed by...ORS 215.283” are consistent with Goal 3. The proposed access roads are, in this context, “accessory transportation improvements” for the energy facility. This use is allowed by ORS 215.283(2)(g), as described above. Therefore, the construction and improvement of access roads for Stateline 3 would not require an exception to Goal 3.

Goal 5

The purpose of Statewide Planning Goal 5 is to protect natural resources and conserve scenic and historic areas and open spaces. Under Goal 5, energy sources are among the natural resources that qualify for protection. OAR 660-023-0190 identifies “wind areas” as energy sources for purposes of Goal 5.

The goal requires local governments to “adopt programs that will protect natural resources and conserve scenic, historic, and open space resources for present and future generations.” Although Goal 5 does not impose substantive criteria for siting an energy facility, we include this brief discussion of Goal 5 for information purposes because the Umatilla County Planning Department has referred to Goal 5 in its Findings.

Under OAR 660-023-0030, local governments are obliged to inventory and determine the significance of natural resource sites within their jurisdiction. Energy sources “applied for or approved through the Oregon Energy Facility Siting Council” are automatically deemed significant. The local government is required to adopt a list of significant Goal 5 resources as a part of its comprehensive plan or as a land use regulation.

For all significant resource sites, OAR 660-023-0040 requires local governments to develop a program “to achieve Goal 5.” In effect, this means a program to protect Goal 5.

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78 OAR 660-012-0035 addresses “Transportation System Plans” and is not relevant to the proposed Stateline 3 access roads.

79 ORS 469.504(7) requires Umatilla County to comply with Goal 5 by amending its comprehensive plan and land use regulations to implement the Council’s decision with respect to Stateline on or before its next periodic review.
resources from potential conflicting uses. The local government must base its Goal 5 program on “an analysis of the economic, social, environmental, and energy consequences that could result from a decision to allow, limit, or prohibit a conflicting use.” However, this analysis “need not be lengthy or complex.” Based on the analysis, the local government must decide whether to allow, limit or prohibit conflicting uses for significant resource sites. The local government is then required to adopt comprehensive plan provisions and land use regulations to implement its Goal 5 program.

In this case, Umatilla County must decide whether its land use ordinances allow any other use on EFU land that could adversely affect the wind resource upon which the operation of Stateline relies. The evaluation of such conflicting uses and decisions regarding a program to protect significant natural resources are matters of local government authority. The requirements of Goal 5 are outside of the scope of the Council’s Land Use Standard, and therefore there are no findings for the Council to make regarding Goal 5.

**Stateline 2**

In the Final Order on Amendment #1, the Council concluded that the Stateline 2 facilities complied with the Land Use Standard, subject to the conditions stated in that order. There has been no change of circumstances that affects the Council’s findings under this standard as stated in the Final Order on Amendment #1.

**Conclusions of Law**

The Council finds that the proposed Stateline 3 facilities comply with applicable substantive criteria and with the LCDC administrative rules and goals and land use statutes directly applicable to the facility under ORS 197.646(3). The Council further finds that the proposed Stateline 3 facilities comply with the statewide planning goals adopted by the Land Conservation and Development Commission. Conditions (2), (20), (29), (30), (31), (33), (34), (37), (38), (40), (44), (58), (60), (61), (62), (64), (65), (68), (72), (75), (76), (81), (82), (86), (96) and (103) relate to these findings. Based on these findings, the Council concludes that the proposed Stateline 3 facilities comply with the Land Use Standard.

The Council finds that there has been no change of circumstances that would affect the Council’s conclusions regarding Stateline 2. The Council concludes that the Stateline 2 facilities would continue to meet this standard if the requested extension of the construction completion deadline were allowed.

(b) 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

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80 OAR 660-023-0010 provides: “Conflicting use” is a land use, or other activity reasonably and customarily subject to land use regulations, that could adversely affect a significant Goal 5 resource (except as provided in OAR 660-023-0180(1)(b)). Local governments are not required to regard agricultural practices as conflicting uses.
chemical factors such as salt deposition from cooling towers, land application of
liquid effluent, and chemical spills.

Findings of Fact

The Council considers adverse impacts to soils because of potential related impacts to
agricultural and forest land uses, native vegetation, fish and wildlife habitat and water quality.
The potential adverse impacts from construction and operation of Stateline 3 are erosion and
compaction.

The Office reviewed the Soil Survey of Umatilla County\textsuperscript{81} and online soil maps\textsuperscript{82} to
verify the soil types in the area of the proposed expansion. The principal soil types are
Ritzville silt loam, Walla Walla silt loam and Lickskillet very stony loam. For Ritzville and
Walla Walla silt loam soils, the risk of water erosion is high on slopes greater than 12 percent.
Soil blowing hazard is moderate. Lickskillet very stony loam has a high water erosion hazard.

During construction, all areas where vegetation is removed would be exposed to wind
and water erosion. Excavations for underground cables would temporarily expose the
excavated soils until the cables are laid, trenches are backfilled and the area has been
revegetated. Roadway widening and turbine pad construction would require removal of
surface vegetation before construction, exposing the soil to erosion. After construction, some
areas of cut slope could remain exposed to increased erosion.

The operation of heavy equipment and truck traffic for hauling concrete, aggregate,
water and other materials and supplies could cause localized soil compaction. Compaction of
soils could result in temporary loss of agricultural productivity where the vehicles operate off
the access roads.

During operation, precipitation could result in surface water collecting on, and
draining from, gravel surfaces or structures. Soils could be exposed to increased erosion
during repair of underground cables.

During operation of the facility, the certificate holder would use small amounts of
chemicals such as lubricating oils and cleaners for the turbines and pesticides for weed
control. However, all hazardous materials would be stored and used in compliance with
applicable local, state and federal law (Condition (32)). Deposition of salts or chemicals and
land application of effluent are not potential impacts from construction or operation.

The certificate holder would comply with measures to reduce or prevent erosion and
other soil impacts during construction and operation. See Conditions (29), (60), (61), (62),
(68) and (92).

Of the 420 acres that would be temporarily or permanently disturbed by Stateline 3,
approximately 234 acres are in agricultural use.\textsuperscript{83} Soil uses that rely on productive soils in the
area include growing small grain crops, such as winter wheat, and summer fallow or
rangeland for cattle grazing. Without irrigation, the soil types in the area are not considered

\textsuperscript{81} Johnson and Makinson, \textit{Soil Survey of Umatilla County Area, Oregon}, USDA Soil Conservation Service
(November 1988).
\textsuperscript{82} Natural Resources Conservation Service, Pacific Northwest Soil Survey Region
(http://www.or.mnrsc.usda.gov/soil/mo/mo_reports_or.htm)
\textsuperscript{83} Request for Amendment #2, Tables 2.1, 3.1, 6a and 6b.
prime farmland. Ritzville and Walla Walla silt loams on slopes under 7 percent could qualify as prime farmland when irrigated.

**Stateline 2**

In the Final Order on Amendment #1, the Council concluded that the Stateline 2 facilities complied with the Soil Protection Standard, subject to the conditions stated in that order. There has been no change of circumstances that affects the Council’s findings under this standard as stated in the Final Order on Amendment #1.

**Conclusions of Law**

The Council finds that the design, construction and operation of the proposed Stateline 3 facilities, taking into account mitigation and subject to the conditions stated in this order, are not likely to result in a significant adverse impact to soils. Conditions (29), (32), (60), (61), (62), (68) and (92) relate to this finding. Based on this finding, the Council concludes that the proposed Stateline 3 facilities comply with the Soil Protection Standard.

The Council finds that there has been no change of circumstances that would affect the Council’s conclusions regarding Stateline 2. The Council concludes that the Stateline 2 facilities would continue to meet this standard if the requested extension of the construction completion deadline were allowed.

(c) 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. Cross-references in this rule to federal or state statutes or regulations are to the version of the statutes or regulations in effect as of March 29, 2002:

(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

None of the proposed Stateline 3 facilities would be located within any protected area designated under OAR 345-022-0040(1). The analysis area for Stateline 1 was the area within 20 miles from the site of Stateline 1 facilities. Stateline 2 extended the analysis area by approximately 2 miles to the south. The proposed Stateline 3 facilities extend the analysis area approximately 8 miles to the south and a half-mile to the northeast. Within the expanded analysis area, there are no protected areas other than those the Council has already addressed in the Final Orders on the Application and on Amendment #1, with the exception of the Whitman Mission National Historic Site. In those orders, the Council concluded that construction and operation of Stateline 1 and 2 were not likely to cause significant adverse impact to any protected area.

The nearest protected area, the Whitman Mission, is in Washington approximately 8.5 miles from the nearest proposed Stateline 3 turbine. The McNary National Wildlife Refuge in Washington is approximately 12 miles from the nearest Stateline 3 turbines. The nearest potential protected area, the Wallula Habitat Management Unit, is about 5 miles from the nearest Stateline 3 turbines. There are existing turbines (part of the Stateline project in Washington) that are closer to each of these areas. The proposed Stateline 3 facilities are at a greater distance than Stateline 1 turbines from other protected areas and potential protected areas identified in the Final Order on the Application.

Noise

In previous orders, the Council has found that the anticipated noise from construction and operation of Stateline 1 and 2 was not likely to cause a significant impact on protected areas that are at least 5 miles away. The proposed Stateline 3 turbines and other construction areas are no closer to identified protected areas than the Stateline 1 and 2 facilities. The Office

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84 The Whitman Mission is administered by the National Park Service and receives the same protection as a National Park or Monument.
85 Turbines in proposed strings HG-S and HG-T.
86 Final Order on the Application, page 47.
87 Final Order on the Application, page 47; Final Order on Amendment #1, page 40.
has received no complaints regarding noise from construction or operation of Stateline 1 and 2. Given the distance and intervening topography, noise from construction or operation of Stateline 3 is likely to be inaudible at the nearest protected area. There would be no significant noise impact on any protected area or potential future protected area.

Traffic

Two U.S. highways pass near protected areas. Highway 730, along the Columbia River, passes near Hat Rock State Park and the Stateline Habitat Management Unit (a possible future protected area). Highway 12 runs near the Whitman Mission, McNary National Wildlife Refuge and three possible future protected areas (Two Rivers, Peninsula and Wallula Habitat Management Units). Construction of Stateline 3 turbine strings HG-S and HG-T could affect traffic on these highways. Construction access for these turbines would follow the North Access Route.\(^8^8\) Construction access for all other Stateline 3 facilities would be from the south, along the West, Central and East Access Routes. Highways leading to these access routes do not run near any of the identified protected areas.

Proposed turbine strings HG-S and HG-T account for 15 of the 279 Stateline 3 turbines. Traffic associated with construction of these turbine strings would be a small fraction of the total construction traffic for Stateline 3. The level of traffic can be estimated based on the analysis done for Stateline 1. In the Final Order on the Application, the Council found that construction of the 127 proposed Stateline 1 turbines would generate 12,707 vehicle trips. Based on a compressed construction schedule of 96 days, the Council found that construction would result in average daily traffic (ADT) of 133 vehicle trips. For Stateline 1, the ADT was disbursed over three construction access (transporter) routes.\(^8^9\) Assuming that vehicle trips are in direct proportion to the number of turbines being built, construction of the 15 proposed HG-S and HG-T turbines would generate about 1,500 vehicle trips. Further assuming a 96-day construction schedule for HG-S and HG-T, the estimated ADT associated with construction of these turbines would be 16.\(^9^0\)

An ADT of 16 vehicle trips would not significantly increase overall traffic loads on Highways 12 and 730, which are busy major highways. Traffic associated with construction of these turbines would not interfere with access to any of the protected areas. The increase would not require highway improvements near the protected areas or potential protected areas. Traffic impact during operation would be negligible.

Visual Impact

At the identified protected areas, the visual impact of Stateline 3 is likely to be insignificant. The nearest protected area is approximately 10 miles from the closest Stateline 3 turbines, and potential protected areas are all at least 5 miles away. In the Final Order on the Application, the Council found that Stateline 1 would not cause a significant visual impact to protected areas at these distances. All proposed Stateline 3 facilities are at least as far away from protected areas as any of the Stateline 1 turbines.

\(^{8^8}\) Request for Amendment, Figure 15. This route was identified as Transporter Route 5 in the site certificate application.

\(^{8^9}\) Final Order on the Application, page 71.

\(^{9^0}\) This assumes, conservatively, that construction of Stateline 3 would take place on a schedule similar to construction of Stateline 1. If construction of Stateline 3 takes longer, the ADT would be less.
Stateline 2

In the Final Order on Amendment #1, the Council concluded that the Stateline 2 facilities complied with the Protected Areas Standard, subject to the conditions stated in that order. There has been no change of circumstances that affects the Council's findings under this standard as stated in the Final Order on Amendment #1.

Conclusions of Law

The Council finds that the proposed Stateline 3 facilities are not located in a protected area as defined by OAR 345-022-0040(1) and that the design, construction and operation of Stateline 3, taking into account mitigation and subject to the conditions stated in this order, are not likely to result in significant adverse impact to any protected area. Condition (37) relates to this finding. The Council concludes that the proposed Stateline 3 facilities comply with the Protected Areas Standard.

The Council finds that there has been no change of circumstances that would affect the Council's conclusions regarding Stateline 2. The Council concludes that the Stateline 2 facilities would continue to meet this standard if the requested extension of the construction completion deadline were allowed.

(d) Scenic and Aesthetic Values

OAR 345-022-0080

(1) Except for facilities described in sections (2), to issue a site certificate, the Council must find that the design, construction, operation and retirement of the facility, taking into account mitigation, are not likely to result in significant adverse impact to scenic and aesthetic values identified as significant or important in applicable federal land management plans or in local land use plans in the analysis area described in the project order.

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Findings of Fact

There is no question that presence of a large number of wind turbines within the agricultural landscape of northern Umatilla County has a visual impact. However, under the Scenic and Aesthetic Values Standard, the Council does not attempt to reconcile conflicting opinions about the general visual impact of the facility. Instead, the standard focuses narrowly on "scenic and aesthetic values identified as significant or important in applicable federal land management plans or in local land use plans in the analysis area." In making its findings, the Council must answer two questions: 1) Are there any "significant or important" scenic values identified in applicable land use plans? 2) Would the visual features of the facility be likely to result in "significant adverse impact" to those values?

Visual Features of the Proposed Facility

The proposed Stateline 3 site occupies an overall area of approximately 30 square miles. Within that area, 279 wind turbine towers and tower pad areas, approximately 30 miles of new or improved access roads, a new substation and 25 miles of transmission line would cover a total of about 75 acres of land surface. Turbines would be arrayed along natural ridges
within the expansion area. The turbine towers would be approximately 165 feet tall at the
turbine hub and 242 feet tall overall including the length of the turbine blades. The towers
would be smooth, tubular steel structures, approximately 14 feet in diameter at the base. The
towers would be painted a neutral light gray color to match existing Stateline turbines west of
Butler Grade Road. Towers east of Butler Grade Road would be painted a neutral white color
to blend with the nearby Vansycle Wind Project. All turbine towers would be of the same type
and appearance throughout the Stateline facility. In addition, thirteen 165-foot meteorological
towers would be built. Lighting required by the Federal Aviation Administration (FAA)
would make the facility visible at night. 91

The proposed new substation would be located in a canyon and would not be visible
from any public road nearby or from any distant vantage point. The proposed 115-kV or 230-
kV transmission line would be similar to transmission lines constructed in Washington for
Stateline 1. The portions of these existing transmission lines that are located along the ridges
generally blend into the background and are not readily noticeable from Highway 12 in
Washington, except where the transmission lines cross the highway or run close to it. At
distant vantage points, the proposed Stateline 3 transmission line would blend into the
background or would not be visible.

Land Use Planning Authorities

The analysis area for Stateline 1 was the area within 30 miles from the site of
Stateline 1 facilities. Stateline 2 extended the analysis area by approximately 2 miles to the
south. The proposed Stateline 3 facilities extend the analysis area approximately 8 miles to the
south and a half-mile to the northeast. Within the extended analysis area, FPL considered the
following managed areas 92 for potential scenic values in addition to those identified during the
review of Stateline 1 and 2: 93

<table>
<thead>
<tr>
<th>Area</th>
<th>Management</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>McKay Creek National Wildlife</td>
<td>Federal</td>
<td>Oregon</td>
</tr>
<tr>
<td>North Fork Umatilla Wilderness</td>
<td>Federal</td>
<td>Oregon</td>
</tr>
<tr>
<td>Wenaha-Tucannon Wilderness</td>
<td>Federal</td>
<td>Oregon</td>
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<tr>
<td>Juniper Dunes Wilderness</td>
<td>Federal</td>
<td>Washington</td>
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<tr>
<td>Charbonneau Park</td>
<td>Federal</td>
<td>Washington</td>
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<tr>
<td>Fishhook Park</td>
<td>Federal</td>
<td>Washington</td>
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<tr>
<td>Levey Park</td>
<td>Federal</td>
<td>Washington</td>
</tr>
<tr>
<td>Emigrant Springs State Park</td>
<td>State</td>
<td>Oregon</td>
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<tr>
<td>Morrow County</td>
<td>County</td>
<td>Oregon</td>
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<tr>
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<td>Washington</td>
</tr>
<tr>
<td>Prescott</td>
<td>City</td>
<td>Washington</td>
</tr>
</tbody>
</table>

91 At night, the required lights are red-colored, which reduces visual impact. The FAA requires white flashing
lights in the daytime.
92 OAR 345-022-0080 requires consideration of “applicable federal land management plans,” which would
include areas such as National Forests or National Wildlife Refuges, and “local land use plans,” which would
include tribal lands, state lands, counties and incorporated cities in the analysis area.
93 The findings under the Scenic and Aesthetic Values Standard as discussed in the Final Order on the
Application, pages 60-62, are incorporated herein by this reference.
Cities

None of the cities within the analysis area (except Walla Walla, Washington) has designated scenic or aesthetic values in their local land use plans. As discussed in the Final Order on the Application, the scenic views identified by the City of Walla Walla are views of the Blue Mountains to the east (away from the Stateline facility). Some of the proposed Stateline 3 turbines would be approximately 4 miles from Helix, the closest municipality. However, intervening ridgelines would block the view of most if not all turbines. Prescott, Washington, is the only incorporated city among the five additional towns that FPL identified for this amendment request.94 Prescott is located in a canyon at least 27 miles northeast of the nearest Stateline 3 turbine and would not have a direct line of site to the facility. It has no identified significant or important scenic resources.

Counties

The Council has previously reviewed the county land use plans for Umatilla County, Oregon, and Walla Walla, Benton and Franklin counties in Washington. The comprehensive plans of Walla Walla and Benton counties do not identify any significant or important scenic values. The closest portion of Franklin County is about 17 miles from the nearest Stateline 1 and 2 turbines, and even farther from Stateline 3, and no significant visual impact is likely at that distance.

The Umatilla County Comprehensive Plan identifies Wallula Gap (on the Columbia River) as a significant scenic area. From Wallula Gap, the closest Stateline 3 turbines are about seven miles away (strings HG-S and HG-T). In the Final Order on the Application, the Council found that the scenic value of Wallula Gap was as a scenic area “to look upon” rather than as a vantage point “to look from.” The presence of wind turbines seven miles away (if visible at all) would not cause a significant adverse impact to that identified scenic value.

The Council standard refers only to important scenic resources identified in “land use plans.” Nevertheless, in the Final Order on the Application, the Council addressed two other scenic resources that a Umatilla County Technical Report identified as “outstanding sites and views”: Hat Rock State Park and Highway 204 (a scenic highway). The Council found that the Stateline 1 facility would be at least 16 miles distant from both Hat Rock State Park and Highway 204 and that the visual impact of the facility would be insignificant at that distance. The proposed Stateline 3 turbines also would be at least 16 miles distant from Hat Rock Park. Some Stateline 3 turbines would be approximately 8 or 9 miles from the nearest section of the Highway 204 scenic area. If visible at all, the Stateline 3 turbines at this distance are not likely to result in significant adverse impact to the scenic value of the highway.95

State Land Management Plans

Emigrant Springs State Park is within the expanded analysis area approximately 25 miles to the south of Stateline 3. Because of the surrounding terrain and distance from the

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94 The other towns identified were Tollgate (OR), Duncan (OR), Meacham (OR) and Dixie (WA).
95 As further evidence to support this conclusion, FPL cited USDA Forest Service, Landscape Aesthetics, A Handbook for Scenery Management (Agriculture Handbook 701). The Handbook defines “Background” as a distance ranging from 4 miles to the horizon. In this zone, the Handbook states that landform ridgelines and horizon lines are the dominant visual characteristic. FPL concludes: “At distances of this magnitude, the Facility would be a minor and a subordinate part of the visual environment.” (Request for Amendment #2, page 68).
park, the construction and operation of the Stateline 3 facilities would not be likely to result in a significant adverse impact to the scenic value of the park.

The Wallula Junction Overlook in Washington (part of the Lewis and Clark Interpretive Project) has scenic views to the west, away from the Stateline facility. Any Stateline 3 turbines that could be visible at the overlook would be at least 6 miles away and would be obscured by existing Stateline turbines in Washington (and not subject to Council jurisdiction). Therefore, the Stateline 3 facilities are not likely to result in any significant adverse impacts to the scenic views at the overlook.

FPL identified three parks in Washington (Charbonneau, Fishhook, and Levey) that are owned by the State of Washington but operated by the U.S. Army Corps of Engineers. These parks are within the expanded analysis area but are approximately 20 miles north of the nearest Stateline 3 facilities. The parks are located within the Snake River Canyon. The visual impact of the Stateline 3 facilities (if visible at all) would be insignificant.

Confederated Tribes of the Umatilla Indian Reservation

The land use plan for the Confederated Tribes of the Umatilla Indian Reservation does not identify significant or important scenic or aesthetic values.

Federal Management Plans

The nearest Stateline 3 facilities are at least 18 miles from the Umatilla National Forest. As discussed in the Final Order on the Application, designated scenic areas within the National Forest generally do not have a line of site to the Stateline facility. FPL identified specific areas within the National Forest that are within the expanded analysis. The North Fork of the Umatilla Wilderness is 20 miles away from Stateline 3 and the Wenaha-Tucannon Wilderness is 29 miles away. At this distance, the Stateline 3 facilities are unlikely to have a significant impact on the scenic areas.

The McKay Creek National Wildlife Refuge (NWR) is about 22 miles to the south of Stateline 3 in a canyon south of Pendleton. At that distance, any impact to the scenic values of the wildlife refuge is likely to be insignificant.

The Juniper Dunes Wilderness area is about 28 miles north of the Stateline 3. If any Stateline 3 facilities are visible from Juniper Dunes, they are not likely to result in any significant adverse impact to the scenic value of the wilderness area.

FPL identified the Whitman Mission National Historic Site, approximately 10 miles north of Stateline 3. However, no federal management plan identifies the Whitman Mission as having any significant or important scenic values. Some existing Vansycle Wind Project turbines are visible and some Stateline 3 turbines might be visible from the site. However, at a distance of 10 miles, the Stateline 3 turbines would be a minor element of the background and would not result in significant adverse impact to the scenic value of the historic site.

Stateline 2

In the Final Order on Amendment #1, the Council concluded that the Stateline 2 facilities complied with the Scenic and Aesthetic Values standard, subject to the conditions

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FPL consulted the site supervisor and the site compliance officer for this information.
stated in that order. There has been no change of circumstances that affects the Council’s findings under this standard as stated in the Final Order on Amendment #1.

Conclusions of Law

The Council finds that the design, construction, operation and retirement of the proposed Stateline 3 facilities, taking into account mitigation and subject to the conditions stated in this order, are not likely to result in significant adverse impact to scenic and aesthetic values identified as significant or important in applicable federal land management plans or in the local land use plans in the analysis area. Condition (37) relates to this finding. The Council concludes that the proposed Stateline 3 facilities comply with the Scenic and Aesthetic Values standard.

The Council finds that there has been no change of circumstances that that would affect the Council’s conclusions regarding Stateline 2. The Council concludes that the Stateline 2 facilities would continue to meet this standard if the requested extension of the construction completion deadline were allowed.

(e) 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.

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Findings of Fact

In the Final Orders on the Application and Amendment #1, the Council concluded that Stateline 1 and 2 would not likely result in significant adverse impact to important recreational opportunities in the analysis area. The proposed Stateline 3 facilities extend the analysis area for Stateline 1 and 2 approximately 8 miles to the south and a half-mile to the northeast. There are no additional important recreational opportunities within the extended analysis area that have not already been considered by the Council.97 For the same reasons discussed in the Final Order on the Application, Stateline 3 is not likely to result in a

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97. The findings under the recreation standard as discussed in the Final Order on the Application, pages 65-66, are incorporated herein by this reference.
significant adverse impact to important recreational opportunities in the analysis area, taking
into consideration the factors listed in the Council’s standard.

Stateline 2

In the Final Order on Amendment #1, the Council concluded that the Stateline 2
facilities complied with the Recreation Standard, subject to the conditions stated in that order.
There has been no change of circumstances that affects the Council’s findings under this
standard as stated in the Final Order on Amendment #1.

Conclusions of Law

The Council finds that the design, construction and operation of the proposed Stateline
3 facilities, taking into account mitigation and subject to the conditions stated in this order, are
not likely to result in significant adverse impact to important recreational opportunities in the
analysis area. There are no conditions specifically related to this finding. However, other
conditions may serve to mitigate the impact of the facility on recreational opportunities (for
example, Condition (37) related to the Scenic and Aesthetic Values standard). The Council
concludes that the proposed Stateline 3 facilities comply with the Recreation Standard.

The Council finds that there has been no change of circumstances that that would
affect the Council’s conclusions regarding Stateline 2. The Council concludes that the
Stateline 2 facilities would continue to meet this standard if the requested extension of the
construction completion deadline were allowed.

(f) Public Health and Safety Standards for Wind Energy Facilities

OAR 345-024-0010

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

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

(b) 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

The proposed Stateline 3 turbines would be located on private property with limited
access to the public. The nearest occupied dwelling would be approximately 2,900 feet away
from any turbine. The design of the proposed Stateline 3 turbines is the same as the design of
the Stateline 1 and 2 turbines. In the Final Orders on the Application and Amendment #1, the
Council concluded that the proposed turbine design would exclude members of the public
from close proximity to the turbine blades and electrical equipment. The Council concluded
that the proposed design and operation of the facility would protect the public from structural failure of the tower or blades.\textsuperscript{98}

The certificate holder would notify the Office of any accidents or mechanical failures associated with operation of the facility that may result in public health and safety concerns (Condition (36)). The turbine towers would have locked access doors and the tubular design would deter climbing (Condition (38)). Pad-mounted transformers located at each turbine would be located inside locked metal cabinets (Condition (103)). The proposed substation would be enclosed by a seven-foot-tall chain link fence with barbed wire at the top pointing out at a 45-degree angle (Condition (113)). The certificate holder would inspect turbine blades on a regular basis for signs of wear or potential failure (Condition (95)).

\textbf{Stateline 2}

In the Final Order on Amendment \#1, the Council concluded that the Stateline 2 facilities complied with the Council’s Public Health and Safety Standards for Wind Energy Facilities, subject to the conditions stated in that order. There has been no change of circumstances that affects the Council’s findings under this standard as stated in the Final Order on Amendment \#1.

\textbf{Conclusions of Law}

The Council finds that the certificate holder can design, construct and operate the proposed Stateline 3 facilities to exclude members of the public from close proximity to the turbine blades and electrical equipment. The Council further finds that the certificate holder can design, construct and operate the proposed Stateline 3 facilities to preclude structural failure of the tower or blades that could endanger the public safety. The Council finds that the certificate holder can design, construct and operate the proposed Stateline 3 facilities to have adequate safety devices and testing procedures designed to warn of impending failure and to minimize the consequences of such failure. These findings take into account mitigation and are subject to the conditions stated in this order. Conditions (36), (38), (95), (103) and (113) relate to these findings. The Council concludes that the proposed Stateline 3 facilities comply with the Public Health and Safety Standards for Wind Energy Facilities.

The Council finds that there has been no change of circumstances that that would affect the Council’s conclusions regarding Stateline 2. The Council concludes that the Stateline 2 facilities would continue to meet these standards if the requested extension of the construction completion deadline were allowed.

\textbf{(g) Siting Standards for Wind Energy Facilities}

\textbf{OAR 345-024-0015}

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

\textsuperscript{98}Council findings and conclusions regarding OAR 345-024-0010 as discussed in the Final Order on the Application (page 78) and in the Final Order on Amendment \#1 (pages 51-52) are incorporated herein by this reference.
(1) Can design and construct the facility to reduce visual impact by methods including, but not limited to:

(a) Not using the facility for placement of advertising, except that advertising does not include the manufacturer's label or signs required by law;

(b) 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 Transportation, Transportation Development Branch, Aeronautics Section; and

(c) Using only those signs necessary for facility operation and safety and signs required by law;

(2) Can design and construct the facility to restrict public access by the following methods:

(a) For a horizontal-axis wind energy facility with tubular towers, using locked access sufficient to prevent unauthorized entry to the interior of the tower;

(b) For a horizontal-axis wind energy facility with lattice-type towers:

(A) Removal of wind facility tower climbing fixtures to 12 feet from the ground;

(B) Installation of a locking, anti-climb device on the wind facility tower; or

(C) Installation of a protective fence at least 6 feet high with a locking gate; or

(c) For a vertical-axis wind energy facility, installation of a protective fence at least 6 feet high with a locking gate;

(3) Can design and construct facility to reduce cumulative adverse environmental impacts in the vicinity to the extent practicable by measures including, but not limited to, the following, where applicable:

(a) 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;

(b) Combining transmission lines and points of connection to local distribution lines;

(c) Connecting the facility to existing substations, or if new substations are needed, minimizing the number of new substations; and

(d) Avoiding, to the extent practicable, the creation of artificial habitat for raptors or raptor prey. Artificial habitat may include, but is not limited to:

(A) Above-ground portions of foundations surrounded by soil where weeds can accumulate;

(B) Electrical equipment boxes on or near the ground that can provide shelter and warmth; and
(C) Horizontal perching opportunities on the towers or related structures.

Findings of Fact

The Stateline 3 wind turbines would be similar in overall appearance to the existing Stateline 1 and 2 turbines. The certificate holder would reduce the visual impact of the proposed facility by the measures described in Condition (37). The turbine towers would have only the minimum lighting required by the Federal Aviation Administration. Stateline 3 would have only those signs required for facility operation and safety.

The Stateline 3 turbines would be horizontal-axis wind turbines on tubular towers. Access to each tower would be through a locked access door accessible only to authorized project staff (Condition (38)).

The certificate holder would use existing roads where feasible (Condition (44)). Approximately nine miles of existing roads (typically 8 feet wide) would be expanded to a 20-foot width. The certificate holder would construct an additional 21.5 miles of new access and turbine string roads. Road construction would be designed to minimize erosion and prevent the introduction of invasive weeds where soil is disturbed during construction (Conditions (60) and (61)).

Electric transmission lines for Stateline 3 would include 30.5 miles of underground 34.5-kV collector lines and 17 miles of aboveground collector lines. Both underground and aboveground lines would follow road rights-of-way as much as possible. An aboveground collector line would carry the electric output from the turbines in the center and south turbine string clusters to the proposed new substation. From the substation, an aboveground 115-kV or 230-kV transmission line would carry the combined electrical output to the main power grid by an interconnection with an existing transmission line in Washington. The 115-kV or 230-kV line would run 8.5 miles from the substation to the Washington border.

Transmission line pole structures create potential perching sites for raptors. The use of anti-perching devices on all proposed single-pole and double-pole structures within one mile of any turbine would discourage raptors from using these structures (Condition (114)). Turbine towers and met towers would be tubular structures that would not provide additional perching opportunities. To reduce the risk of electrocution, the certificate holder would design structures for the aboveground 34.5-kV and higher-voltage transmission lines so that electrical conductors are spaced far enough apart to reduce the risk of bird electrocution (Condition (115)).

To avoid creating artificial habitat for raptor prey, the certificate holder would spread gravel on all above ground portions of the turbine pads to reduce the potential for weed infestation and raptor use (Condition (64)). The certificate holder would consult with the Umatilla County weed control board and implement an ongoing weed control plan (Conditions (30) and (65)). Pad-mounted transformer structures at the turbine sites would be enclosed, providing no opportunities for sheltering raptor prey (Condition (103)).

Stateline 2

In the Final Order on Amendment #1, the Council concluded that the Stateline 2 facilities complied with the Council’s siting standards for wind energy facilities, subject to the conditions stated in that order. There has been no change of circumstances that affects the Council’s findings under this standard as stated in the Final Order on Amendment #1.
Conclusions of Law

The Council finds that the certificate holder, taking into account mitigation and subject to the conditions stated in this order, can design and construct the Stateline 3 facilities to reduce visual impact, to restrict public access and to reduce cumulative adverse environmental impacts in the vicinity to the extent practicable. Conditions (30), (37), (38), (44), (60), (61) (64), (65), (103), (114) and (115) relate to these findings. The Council concludes that the proposed Stateline 3 facilities comply with the Siting Standards for Wind Energy Facilities.

The Council finds that there has been no change of circumstances that that would affect the Council’s conclusions regarding Stateline 2. The Council concludes that the Stateline 2 facilities would continue to meet these standards if the requested extension of the construction completion deadline were allowed.

(h) Siting Standards for Transmission Lines

OAR 345-024-0090

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

(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

This standard addresses electric fields and induced currents produced by electric transmission lines. We discuss magnetic fields created around electrical conductors under Public Health and Safety at page 108. Electric fields form around electrical conductors in proportion to the voltage of the line. The proposed Stateline 3 facility would include about 30.5 miles of underground 34.5-kV transmission lines (collector lines) and 17 miles of aboveground 34.5-kV collector lines. In addition, the facility would include an 8.5-mile aboveground 115-kV or 230-kV transmission line from the proposed new substation to the Washington border. The certificate holder would be required to design and construct the transmission lines to meet the standards for electric fields and induced currents that are incorporated in OAR 345-024-0090 (Condition (113)). The certificate holder would design the transmission lines in compliance with applicable codes and standards after consultation with the Oregon Public Utility Commission (Condition (110)).

The underground collector system would be installed at a depth of at least 3 feet in a manner similar to the underground collector system for Stateline 1 and 2. In the Final Order on the Application, the Council found the design and construction of the underground collector system proposed for Stateline 1 would reduce any measurable electric field below the 9 kV per meter threshold at one meter above ground and that induced currents would be
insignificant.\textsuperscript{99} For the same reasons discussed in the Final Order on the Application, the electric field produced by the underground 34.5-kV collector lines proposed for Stateline 3 would also meet the standards of OAR 345-024-0090.

The aboveground 34.5-kV lines would be attached to single-pole wood structures that are typically 42 feet high (Condition (113)). The minimum ground clearance to the lowest conductor would be 25 feet. FPL provided data estimating the electric field strength based on a model developed by the Bonneville Power Administration. For the 34.5-kV line, the estimated maximum electric field (directly below the centerline) is 0.124 kV per meter at one meter above ground.\textsuperscript{100} This is well below the Council’s 9 kV per meter electric field limit. The strength of the electric field diminishes with distance from the centerline, and FPL estimated the field strength would drop to 0.012 kV per meter at a distance of 100 feet from the centerline.

The aboveground 115-kV or 230-kV line would be attached to H-frame wooden structures that consist of two poles connected by cross-members (Condition (113)). The typical overall height of the H-frame structures is 70 feet, and the minimum design ground clearance would be 30 feet to the lowest conductor. Using the same model described above, FPL estimated maximum electric field at one meter above ground for each option. As shown in the table below, the electric field strength would be well below the standard of 9 kV per meter under either option\textsuperscript{101}.

<table>
<thead>
<tr>
<th>OPTION</th>
<th>Voltage</th>
<th>Electric Field Strength (kV/m)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Left (100')</td>
</tr>
<tr>
<td>1</td>
<td>115-kV</td>
<td>0.089</td>
</tr>
<tr>
<td>2</td>
<td>230-kV</td>
<td>0.259</td>
</tr>
</tbody>
</table>

The 115-kV or 230-kV transmission line would be approximately 4,600 feet away from the nearest residence. The 34.5-kV line would be approximately 2,200 feet away from the nearest residence. At these distances, the electric field produced by the transmission lines would not rise above background levels. Except for road crossings, the aboveground transmission lines would be located on private property accessible to the landowners but not open to the general public.

FPL has not proposed specific measures to minimize induced currents or voltages that may result from the interaction of magnetic fields with structures such as fences. However, a mandatory site certificate condition requires that the certificate holder implement measures to protect against induced currents in structures on the ground, such as fences, cattle guards and trailers (Condition (6)).

\textit{Stateline 2}

In the Final Order on Amendment #1, the Council concluded that the Stateline 2 facilities complied with the Council’s Siting Standards for Transmission Lines, subject to the

\textsuperscript{99} The findings under the siting standards for transmission lines in the Final Order on the Application, pages 78-79, are incorporated herein by this reference.
\textsuperscript{100} Request for Amendment #2, Exhibit 22.
\textsuperscript{101} Response to the Office of Energy’s request (30) for additional information, February 20, 2003.
conditions stated in that order. There has been no change of circumstances that affects the
Council’s findings under this standard as stated in the Final Order on Amendment #1.

Conclusions of Law

The Council finds that the certificate holder can design, construct and operate the
proposed underground and aboveground transmission system for Stateline 3 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 finds that the certificate holder
can design, construct and operate the Stateline 3 transmission system so that induced currents
will be as low as reasonably achievable. These conclusions take into account mitigation and
are subject to the conditions stated in this order: Conditions (2), (6), (62), (110) and (113)
relate to these findings. The the Council concludes that the proposed Stateline 3 facilities
comply with the Siting Standards for Transmission Lines.

The Council finds that there has been no change of circumstances that that would
affect the Council’s conclusions regarding Stateline 2. The Council concludes that the
Stateline 2 facilities would continue to meet these standards if the requested extension of the
construction completion deadline were allowed.

4. Standards to Protect Wildlife

(a) 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,
operation and retirement 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,
operation and retirement 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

Threatened and Endangered Species - Plants

The amendment request included a report on rare plant species in the Stateline 3 area prepared by Eagle Cap Consulting. The Office of Energy received no comments from the Oregon Department of Agriculture (ODA) regarding the certificate holder’s amendment request. There are no applicable protection and conservation programs adopted under ORS 564.105(3).

The rare plant investigation addressed all plant species of concern that might exist within the Stateline 3 area, including all federally listed, proposed or candidate plant species, all plant species listed as endangered or threatened by the ODA and species on Oregon Natural Heritage Program’s (ONHP) rare plant lists. Eagle Cap Consulting performed field surveys of the project area between April and July 2001 and between April and August 2002. Some areas potentially affected by Stateline 3 were not surveyed for rare plant species in 2001 or 2002. The certificate holder would survey these areas in 2003 and report to the Office (Condition 111).

The ONHP lists rosy balsamroot (Balsamorhiza rosea) as a rare plant species, but the plant is not listed as threatened or endangered by the ODA. Nine populations of rosy balsamroot were found in the Stateline 3 project area. It is likely that ground disturbance during construction would affect some of the individuals in these populations. Because there are several disjunct populations of rosy balsamroot within the project area, the proposed Stateline 3 facilities are not likely to jeopardize the continued existence of the species.

The plant surveys found no other species of concern. Cultivation and grazing has modified much of the habitat in the area. Construction and operation of Stateline 3 is not expected to adversely affect any Oregon endangered or threatened plant species.

Threatened and Endangered Species - Wildlife

The amendment request included a wildlife investigation and habitat assessment report performed by Karen Kronner, Northwest Wildlife Consultants, Inc. In addition, the amendment request included a baseline avian study for portions of the proposed Stateline 3 facility outside the boundary of the original study area for the Stateline Wind Project (Stateline 1). The Oregon Department of Fish and Wildlife (ODFW) has reviewed the amendment request and has expressed no disagreement with the certificate holder’s assessment of the potential for occurrence of threatened and endangered species in the Stateline 3 area.

Based on the analysis done for Stateline 1, there are only three threatened or endangered wildlife species that might be affected by the Stateline facilities. The Washington ground squirrel is a state endangered and federal candidate species that occupies

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102 Request for Amendment #2, Exhibit 25, Rare Plant Investigation, Stateline Expansion Project, Eagle Cap Consulting (August 26, 2002).
103 Request for Amendment #2, Exhibit 12, Pre-construction Wildlife Investigation, Stateline 3 Part A and Part B Wind Project, Northwest Wildlife Consultants, Inc. (October 14, 2002).
104 Request for Amendment #2, Exhibit 15, Baseline and Other Relevant Wildlife Data For Portions of Stateline 3 Wind Power Project, WEST and Northwest Wildlife Consultants, Inc. (October 8, 2002).
105 See further discussion in Application for Site Certificate (January 2001), Exhibit Q.
shrub-steppe habitat. The bald eagle is listed as threatened by both state and federal wildlife agencies. Bald eagles nest in trees or on cliffs and occasionally forage on small mammals and carrion in upland areas. The peregrine falcon is listed as endangered in Oregon but was recently removed from the federal endangered species list.

Kronner’s report addressed other federal candidate species and species of concern. Investigation of potential impacts to these species is appropriate because of the possibility that they might become federally listed as threatened or endangered in the future. However, the habitat in the Stateline 3 area is unsuitable for most of these species, and the Council’s Threatened and Endangered Species Standard does not apply to them.

Washington Ground Squirrel

The current range of the Washington ground squirrel (WGS) is reduced and fragmented compared to the known, historic distribution. There are scattered small clusters of use throughout the Stateline area in Oregon and Washington. Parts of the proposed Stateline 3 site contain grassland habitat suitable for the WGS. However, much of the Stateline 3 area is cultivated land that does not support the species.

In the amendment request as originally submitted in July 2002, the only identified impact of proposed Stateline 3 facilities on WGS habitat would have been from an aboveground 34.5-kV collector line between turbine string TJ-C (and the existing Vansycle A turbine string) and the proposed North Star substation. Eight poles supporting the transmission line would have been placed in a known WGS use area. To avoid this impact, FPL redesigned the transmission line route. The redesigned route of the proposed aboveground transmission line is entirely outside of the known WGS use area.

FPL has identified a sizeable active WGS colony near the proposed extensions of turbine strings BG-B and BG-C. Previous investigations document an historic colony located near proposed string BG-E, but much of this area has recently been plowed and reseeded for enrollment in the CRP. The certificate holder would conduct appropriate pre-construction surveys for the presence of WGS in suitable habitat (Condition (56)). If squirrel activity were detected, the certificate holder would establish no-construction areas in consultation with ODFW and implement other appropriate mitigation measures.

Construction and operation of the proposed Stateline 3 facilities would directly affect an estimated 12.3 acres of known WSG habitat. Upon completion of construction, the certificate holder would reseed most of this disturbed area (7.7 acres) to restore the habitat. The permanent footprint of the proposed facilities would occupy 4.6 acres of known WGS habitat. Most of the permanent disturbance (3.1 acres) would be in shallow, rocky soil considered less valuable to the WGS than the deeper soils that the squirrel needs for burrowing. Altogether, the estimated WGS habitat resource at turbine strings BG-B, BG-C and BG-E totals approximately 505 acres, and so the direct habitat impact from construction and operation of the proposed facilities would be relatively small.

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106 Further discussion of federal candidate species and species of concern and their potential for occurrence in the Stateline 1 area is found in the Application for Site Certificate (January 2001), Exhibits P and Q. Potential for occurrence in the Stateline 3 area is the same, given the proximity and similar habitat, elevation and topography.  
107 See Request for Amendment #2, Exhibit 14, Figure 4 (Known WGS Sites in the Project Area).
The certificate holder would implement a plan to avoid or mitigate for impacts to WGS habitat (Condition (107)). Implementation of the plan would help ensure that the Stateline 3 facility would not cause any significant reduction in the likelihood of survival of the WGS. Based on the small area of direct impact on WGS habitat, the existence of the WGS in other suitable habitat throughout the Stateline project area and the measures described in the mitigation plan, the Council finds that the construction, operation and retirement of the proposed Stateline 3 facilities are not likely to cause a significant reduction in the likelihood of survival or recovery of the WGS.

**Bald Eagle**

During surveys in 1995, one bald eagle was observed in Washington approximately three miles north of any Stateline 1 facilities, and another bald eagle was observed at least seven miles southwest of the nearest Stateline 1 facilities. There have been no sightings of bald eagles in any of the other wildlife surveys that have been conducted since then. Bald eagles may fly through the general Stateline area during migration. The mitigation actions described in Conditions (52), (70), (114) and (115) would reduce the risk of potential adverse effects on bald eagles. Post-construction monitoring for avian impacts would detect unforeseen bald eagle fatalities and provide a basis for deciding whether additional mitigation actions should be taken (Conditions (93) and (94)). The presence of this species in the Stateline area is extremely rare, and therefore it is unlikely that the construction and operation of the proposed Stateline 3 would have any adverse effect.

**Peregrine Falcon**

A possible peregrine falcon nest site has been identified in Washington approximately six miles from proposed turbine string HG-S. This species may forage within the site of the Stateline project in Oregon or migrate through the area. Peregrine falcons can fly up to twelve miles from their nest while hunting. However, none have been observed in Oregon during avian surveys or other studies conducted on the Stateline site. Collision with wind turbines is not likely, due to the distance between the nest site and new turbines. Also, little prey is available in the area near the turbines, compared to the Columbia River bluffs and surrounding uplands. The mitigation actions described in Conditions (52), (70), (114) and (115) would reduce the risk of potential adverse effects on any peregrine falcons in the area. Post-construction monitoring for avian impacts would detect unforeseen falcon fatalities and provide a basis for deciding whether additional mitigation actions should be taken (Conditions (93) and (94)). Construction and operation of the proposed Stateline 3 facilities is not likely to have an adverse effect on the species.

**Stateline 2**

In the Final Order on Amendment #1, the Council concluded that the Stateline 2 facilities complied with the Council’s Threatened and Endangered Species Standard, subject to the conditions stated in that order. There has been no change of circumstances that affects the Council’s findings under this standard as stated in the Final Order on Amendment #1.

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108 We discuss the impact on Category 1 habitat and the Council’s balancing authority below at page 84.
Conclusions of Law

The Council finds that no conservation program applies and that the design, construction, operation and retirement of the proposed Stateline 3 facilities, taking into account mitigation and subject to the conditions stated in this order, are not likely to cause a significant reduction in the likelihood of survival or recovery of any threatened or endangered species listed under Oregon law. Conditions (52), (56), (63), (65), (69), (70), (93), (94), (107), (114) and (115) relate to these findings. The Council concludes that the proposed Stateline 3 facilities comply with the Threatened and Endangered Species Standard.

The Council finds that there has been no change of circumstances that would affect the Council’s conclusions regarding Stateline 2. The Council concludes that the Stateline 2 facilities would continue to meet this standard if the requested extension of the construction completion deadline were allowed.

(b) Fish and Wildlife Habitat

OAR 345-022-0060

To issue a site certificate, the Council must find that the design, construction, operation and retirement 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

Mitigation Goals and Standards

The Oregon Department of Fish and Wildlife (ODFW) has defined six categories of habitat in order of value to wildlife. The definitions are contained in OAR 635-415-0025. The rule establishes mitigation goals and corresponding implementation standards for each habitat category.

“Habitat Category 1” is irreplaceable, essential habitat for a fish or wildlife species, population, or a unique assemblage of species and is limited on either a physiographic province or site-specific basis, depending on the individual species, population or unique assemblage. The mitigation goal for Category 1 habitat is no loss of either habitat quantity or quality. This goal requires avoidance of impacts.

“Habitat Category 2” is essential habitat for a fish or wildlife species, population, or unique assemblage of species and is limited on either a physiographic province or site-specific basis depending on the individual species, population or unique assemblage.

If impacts are unavoidable, the mitigation goal for Category 2 habitat is no net loss of either habitat quantity or quality and provision of a net benefit of habitat quantity or quality. The Council interprets this to mean that both habitat quantity and quality are preserved and either habitat quantity or habitat quality is improved. To achieve this goal, impacts must be avoided or unavoidable impacts must be mitigated through reliable in-kind, in-proximity habitat mitigation to achieve no net loss of either pre-development habitat quantity or quality. In addition, a net benefit of habitat quantity or quality must be provided.

“Habitat Category 3” is essential habitat for fish and wildlife, or important habitat for fish and wildlife that is limited on either a physiographic province or site-specific basis,
depending on the individual species or population. The mitigation goal for Category 3 habitat is no net loss of either habitat quantity or quality. The Council interprets this to mean that both habitat quantity and quality are preserved. The goal is achieved by avoidance of impacts or by mitigation of unavoidable impacts through reliable in-kind, in-proximity habitat mitigation to achieve no net loss in either pre-development habitat quantity or quality.

"Habitat Category 4" is important habitat for fish and wildlife species. The mitigation goal for Category 4 habitat is no net loss in either existing habitat quantity or quality. The Council interprets this to mean that both existing habitat quantity and quality are preserved. The goal is achieved by avoidance of impacts or by mitigation of unavoidable impacts through reliable in-kind or out-of-kind, in-proximity or off-proximity habitat mitigation to achieve no net loss in either pre-development habitat quantity or quality.

"Habitat Category 5" is habitat for fish and wildlife having high potential to become either essential or important habitat. If impacts are unavoidable, the mitigation goal for Category 5 habitat is to provide a net benefit in habitat quantity or quality. The Council interprets this to mean that there is some improvement in either habitat quality or quantity. The goal is achieved by avoidance of impacts or by mitigation of unavoidable impacts through actions that contribute to essential or important habitat.

"Habitat Category 6" is habitat that has low potential to become essential or important habitat for fish and wildlife. The mitigation goal for Category 6 habitat is to minimize impacts. The goal is achieved through actions that minimize direct habitat loss and avoid impacts to off-site habitat.

Stateline 3 Habitat and Potential Impacts

Temporary and Permanent Impacts from Construction and Operation

FPL contracted with an expert, Karen Kronner, of Northwest Wildlife Consultants, Inc., to conduct a habitat assessment. Kronner had conducted earlier habitat assessments for Stateline 1 and 2. Kronner conducted field surveys of the Stateline 3 area at various times in the spring and summer of 2002. The results of the habitat assessment are included in a report entitled "Pre-Construction Wildlife Investigation, Stateline 3 Part A and Part B Wind Project."

All of the proposed Stateline 3 facilities would be located on privately-owned land. The permanent structures would occupy approximately 75 acres. Construction activities would temporarily disturb an additional area of approximately 345 acres. Figures 10 at Exhibit 10 of the amendment request, incorporated here by reference, show the habitat categories in the Stateline 3 area, as identified by FPL. ODFW has reviewed the amendment request and has concurred with FPL’s classifications. The following table summarizes the affected habitat:

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109 Request for Amendment #2, Exhibit 12.
110 Permanent structures include the turbine pads, met tower pads, transmission poles, substation, new and expanded access and turbine string roads and turn-around areas.
111 Details of the areas permanently occupied and temporarily disturbed are shown in the Request to Amend Site Certificate, pages 8-13, Tables 2 and 3, incorporated herein by this reference.
<table>
<thead>
<tr>
<th>Category</th>
<th>Vegetation Types</th>
<th>Acres of temporary disturbance</th>
<th>Acres of permanent impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Grassland Steppe</td>
<td>7.7</td>
<td>4.6</td>
</tr>
<tr>
<td>2</td>
<td>Grassland Steppe; Riparian</td>
<td>41.5</td>
<td>10.2</td>
</tr>
<tr>
<td>3</td>
<td>Grassland Steppe; CRP$^{113}$</td>
<td>57.9</td>
<td>8.5</td>
</tr>
<tr>
<td>5</td>
<td>New CRP Seeded Grassland</td>
<td>46.7</td>
<td>5.9</td>
</tr>
<tr>
<td>6</td>
<td>Dry Agriculture; Developed</td>
<td>191.4</td>
<td>46</td>
</tr>
<tr>
<td>Totals$^{114}$</td>
<td></td>
<td>345</td>
<td>75</td>
</tr>
</tbody>
</table>

In contrast to Stateline 1 and 2, Stateline 3 would directly affect Category 1 habitat. Permanent Stateline 3 facilities would occupy 4.6 acres of Category 1 habitat, and temporary disturbance would affect 7.7 acres. The identified Category 1 habitat areas are near the proposed northward extensions of turbine strings BG-B and BG-C and proposed new turbine string BG-E. These areas are identified as Category 1 because the habitat is “irreplaceable” and “essential” habitat for the Washington ground squirrel (WGS). The WGS is a state-listed endangered species.$^{115}$ We discuss the unavoidable impacts on Category 1 habitat and the need to apply the Council’s balancing authority below at page 84.

The potential for proposed expansion of the Stateline Wind Project to affect Category 1 habitat was first identified during the review of the site certificate application in 2001. At that time, FPL withdrew 27 turbines from the Council’s consideration after spring wildlife surveys detected the presence of the WGS. Since then, FPL, the Office of Energy and ODFW have had ongoing and extensive discussions about this issue. One outcome of these discussions was specific ODFW guidance on the identification of Category 1 habitat. FPL has applied that guidance in preparation of the Request for Amendment #2. FPL has more precisely identified the extent of Category 1 habitat and has designed the proposed BG-B and BG-C turbine strings to minimize direct impact on the habitat. FPL proposes to locate the turbines and access roads in the shallow soil areas of the WGS use area. This would create less of an impact to the core colony than construction in deeper soils where burrowing is possible and more use occurs throughout active periods.

Near proposed string BG-E, habitat suitable for the WGS was plowed and reseeded in 2002 to meet new Conservation Reserve Program (CRP) standards. No squirrels were observed during surveys conducted in April and May of 2002 at BG-E. However, one was observed in January 2002 near proposed turbines 13 and 14. The old field supported a small WGS colony in 2001, and a few scattered active holes were located in 2001 in native bunchgrass outside of the CRP field. For mapping current Category 1 habitat, Kronner drew a buffer around the active holes identified in 2001 to establish a use area. The soil is predominantly shallow Lickskillet stony loam with small patches of deeper soil. Most of the 17 proposed BG-E turbines would be located in this shallow rocky soil, in the newly planted CRP or along and adjacent to an existing farm road. The certificate holder would avoid native bunchgrass habitat to the west of BG-E because the area could function as connecting habitat for WGS that return to the historic site or move through the area.

$^{112}$ Rounded to the nearest 0.1 acre.
$^{113}$ Conservation Reserve Program
$^{114}$ Rounded to the nearest acre.
$^{115}$ OAR 636-100-0125 and table available from ODFW.
Raptor nesting sites are generally considered Category 1 habitat. Two sensitive status
raptors (Swainson’s hawk and ferruginous hawk) nest within two miles of proposed Stateline
3 turbines. Based on surveys in 2002, there were two Swainson’s hawk and three ferruginous
hawk nests within two miles. Among all raptor species, the closest nest site relative to a
proposed turbine is approximately 600 feet (great horned owl). Potential nest sites for long-
eared owl are within approximately 1,300 feet of GB-1. The closest red-tailed hawk nest is
approximately 1,100 feet from a proposed turbine, and the closest Swainson’s hawk nest is
approximately 1,300 feet from a proposed turbine. The closest ferruginous hawk nest is
approximately 1,000 feet from the nearest proposed turbine.

A small basalt cliff between BG-D and BG-E has had intermittent ferruginous hawk
activity through the years. Bats utilizing habitat in Vansycle Canyon may forage and are
likely to pass through the uplands of the project area during summer and the fall migration
period.

The permanent footprint of the proposed Stateline 3 facilities would occupy
approximately 10 acres of Category 2 habitat. In addition, construction of proposed facilities
would temporarily affect approximately 42 acres of Category 2 habitat. Most of this habitat is
grassland steppe habitat, although construction would temporarily affect a small amount of
riparian habitat (less than one-half acre). By definition, Category 2 habitat is high-value
habitat, considered “essential” for a wildlife species.\textsuperscript{116}

Proposed Stateline 3 facilities would permanently occupy approximately 8.5 acres of
Category 3 habitat. In addition, approximately 58 acres of this habitat category would be
temporarily affected during construction. Grassland steppe is the predominant vegetation type
of the affected Category 3 habitat. However, temporary impact would affect almost 18 acres
of established CRP grassland, and the permanent footprint would occupy 3 acres of
established CRP. Category 3 habitat is considered “essential” for wildlife.\textsuperscript{116} The proposed
Stateline 3 facilities would not affect any Category 4 habitat, which is considered “important”
habitat for fish and wildlife species.

Category 5 identifies habitat that has “high potential to become either essential or
important habitat.” In the Stateline 3 area, land that is in transition to CRP is identified as
Category 5. The proposed Stateline 3 facilities would permanently occupy about 6 acres of
this habitat. In addition, construction of the facilities would temporarily affect about 47 acres.

Most of the acreage of both permanent impact and temporary disturbance would be on
currently cultivated or otherwise developed farmland identified as Category 6 habitat.
Permanent facilities would occupy 46 acres and construction activity would temporarily affect
approximately 191 acres of Category 6 habitat.

\textbf{Indirect Effects}

Construction and operation of the facility would not only have direct effects on
habitat, both temporary and permanent, but also indirect effects. Of special concern are the

\textsuperscript{116} Category 2 and Category 3 grassland and CRP habitat in the Stateline area is important habitat for wildlife
species including but not limited to grasshopper sparrow, savannah sparrow, vesper sparrow, short-eared owl,
burrowing owl, northern harrier, horned lark, western meadowlark, long-billed curlew, ring-necked pheasant,
Hungarian partridge, chukar partridge, California quail and Swainson’s hawk.
indirect effects on essential or important wildlife habitat within the analysis area; that is, effects on the quality of habitat identified within Categories 1, 2 and 3.

Indirect effects on habitat quality during construction could occur because of disturbance from equipment and people, noise and vehicle traffic. During operation, human activity and operation of the wind turbines in areas near important or essential habitat could cause indirect effects on habitat quality. During operation, a decline in use by, or significant fatalities of, species known to use important or essential habitat in the analysis area would imply an indirect impact on habitat quality. Wildlife surveys and monitoring required under the Oregon Wildlife Monitoring Plan (Revised), Attachment A, have been designed to help determine whether the operation of the wind facility has an indirect effect on the quality of wildlife habitat. Fatalities of grassland species, for example, or a significant reduction in the use of habitat attributed to facility operation, could indicate a loss of habitat quality due to indirect impacts of the facility. Analysis of monitoring data might indicate impacts to wildlife or wildlife habitat that the certificate holder has not adequately addressed by mitigation. If these impacts result in a loss of habitat quality, further mitigation may be required.

**Impacts During Retirement**

The anticipated equipment dismantling and road removal activities necessary to retire the energy facility and restore the energy facility site to a useful condition would have effects on wildlife habitat similar to the effects of construction. It is likely that the activities to restore the site would temporarily disturb additional area similar in amount to the area temporarily disturbed during construction. Completion of retirement would restore habitat in areas formerly occupied by facility structures or roads. Condition (98) requires the certificate holder to retire the facility according to a retirement plan approved by the Council. The retirement plan must include information on minimizing impacts to fish, wildlife and the environment during the retirement process (OAR 345-027-0110).

**Mitigation**

**General Mitigation**

The certificate holder would design Stateline 3 to avoid adverse impacts to wildlife (Condition (52)). During construction, the certificate holder would implement general mitigation measures described in Conditions (63) and (65) to minimize impacts to wildlife and wildlife habitat. During operation, the certificate holder would implement measures to protect nesting areas and to mitigate impacts to wildlife and wildlife habitat (Conditions (89), (90) and (91)).

**Category 1**

As described above, the proposed Stateline 3 would have a permanent impact on 4.6 acres of Category 1 habitat and a temporary impact during construction on an additional 7.7 acres of Category 1 habitat. Under the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025, the “mitigation goal” for Category 1 habitat is no loss of either habitat quantity or quality. This is achieved through avoidance of impacts. If impacts cannot be avoided, then the goal cannot be achieved. Construction and operation of turbine strings BG-B, BG-C and BG-E, as proposed in the amendment request, would be inconsistent with the habitat mitigation goals and standards of OAR 635-415-0025 because of the direct permanent and temporary impacts on Category 1 habitat.
Therefore, the Council concludes that the proposed Stateline 3 does not comply with
the Council’s habitat standard. However, the Council may approve construction and operation
of Stateline 3 based on the Council’s balancing authority under ORS 469.501(3). We discuss
the Council’s balancing authority below at page 84.

FPL would avoid direct impacts on raptor and burrowing owl nest sites, which are also
Category 1 habitat. During construction, the certificate holder would establish no-construction
buffers around nesting areas or otherwise avoid impacts (Conditions (53), (54), (116) and
(117)). During operation, the certificate holder would monitor raptor and burrowing owl nest
sites as described in the Oregon Wildlife Monitoring Plan (Revised), Attachment A,
incorporated in this order (Condition (93)). The purpose of the monitoring would be to
determine whether operation of the facility results in a reduction of nesting activity or nesting
success in the local populations of these species. Analysis of monitoring data might indicate
impacts to wildlife or wildlife habitat that the certificate holder has not adequately addressed
by mitigation. If these impacts result in a loss of habitat quality, further mitigation may be
required.

Mitigation of Permanent Impacts

The proposed Stateline 3 would have a permanent impact on 18.7 acres of Category 2
and 3 habitat. The ODFW mitigation goal for impacts on Category 2 and 3 habitat is “no net
loss” of habitat quality or quantity. Both the quantity and quality of Category 2 and 3 habitat
must be preserved. To achieve the “no net loss” goal for Category 2 and 3 habitat, the
certificate holder would improve an equal area (18.7 acres) of land that has become infested
with weeds. This area would be a portion of a 35-acre enhancement area.

For Category 2 habitat, in addition to the “no net loss” goal, the ODFW rule requires a
“net benefit” in either habitat quantity or quality. FPL proposes to provide a “net benefit” in
habitat quantity for the permanent impacts to Category 2 habitat, recognizing that the dry
environment of the Stateline area makes it difficult to achieve a net improvement of habitat
quality beyond a Category 2 standard. The proposed Stateline 3 facilities would occupy 10.2
acres of Category 2 habitat. The certificate holder would achieve a net benefit in quantity by
improving habitat conditions on a 35-acre enhancement area.

The proposed Stateline 3 facilities would occupy 5.9 acres of Category 5 habitat. For
Category 5 habitat, the ODFW rule also requires a “net benefit” in habitat quantity or quality,
but the “no net loss” goal does not apply. To mitigate for the permanent impacts to Category 5
habitat, the certificate holder must provide some improvement in either quality or quantity of
habitat. The 35-acre enhancement area would provide a “net benefit” in habitat quantity for
the permanent impacts to Category 5 habitat.

The certificate holder would improve habitat conditions on a 35-acre habitat
enhancement area (Condition (112)). The enhancement area would provide both “no net loss”
and “net benefit” mitigation for the permanent losses of Category 2, 3 and 5 habitat.\footnote{The proposed Stateline 3 facilities would have a permanent impact on 24.6 acres of Category 2, 3 and 5 habitat combined. Thus, the 35-acre enhancement area would include 10.4 additional acres of improved habitat to achieve the “net benefit” goal for Category 2 and 5 impacts.} This
enhancement area would be in one contiguous parcel. The certificate holder would maintain it
for the life of the Stateline facility. Habitat enhancement procedures, monitoring and success
criteria are described in the *Revegetation Plan (Revised)*, Attachment B, incorporated in this order.

The proposed Stateline 3 facilities would have a permanent impact on 46 acres of currently cultivated or otherwise developed farmland. This land is Category 6 habitat, which is of low value to wildlife. The ODFW mitigation standard for Category 6 habitat is to minimize direct habitat loss. As FPL has demonstrated with the construction of Stateline 1 and 2, the permanent facilities for Stateline 3 would have a minimal footprint.

**Mitigation of Temporary Impacts**

In addition to the permanent impacts, construction of the proposed Stateline 3 facilities would have temporary impact on Category 2, 3, 5 and 6 habitat. The ODFW standard requires mitigation for temporary impacts as well as permanent impacts, and the same mitigation goals apply.

Construction of Stateline 3 would have a temporary impact on about 42 acres of Category 2 habitat. To meet the “no net loss” standard, the certificate holder would revegetate the affected area (Condition (65)). Revegetation to restore Category 2 habitat quality would be subject to success criteria described in the *Revegetation Plan (Revised)*, Attachment B.

The ODFW standard for Category 2 also requires a “net benefit” in habitat quantity or quality. FPL would address the “net benefit” requirement by providing an increase in habitat quality through implementation of the *Revegetation Plan*. Through weed control measures and the restoration of a shrub component (sagebrush) in the revegetated area, implementation of the *Revegetation Plan* would result in net benefit in habitat quality compared to some of the adjacent and nearby habitat that has been degraded by weed infestation and wildfires (loss of sagebrush). The net benefit is a diversity of native vegetation that, at maturity, is expected to achieve a mosaic of grass and shrubs resembling historic habitat conditions. In time, the sagebrush and diversity of grasses would provide wildlife cover as well as seed sources to spread desirable vegetation to other non-cropland habitat near the revegetated areas.

Moreover, the certificate holder would apply the same methods, seed mixture, monitoring and success criteria required in the *Revegetation Plan* to all temporarily disturbed non-cropland, including Category 3 areas. Although the ODFW standard for Category 3 does not require a “net benefit,” implementation of the *Revegetation Plan* would improve the quality of restored Category 3 compared to current conditions. In effect, a Category 2 quality standard would be applied to acres that are currently Category 3, resulting in an overall “net benefit” in habitat quality in the Stateline area.

Construction of Stateline 3 would have a temporary impact on about 58 acres of Category 3 habitat. The certificate holder would revegetate the affected area to meet the “no net loss” standard that applies to Category 3 (Condition (65)). Revegetation to restore Category 3 habitat quality would be subject to success criteria described in the *Revegetation Plan*.

Construction of Stateline 3 would have a temporary impact on 47.4 acres of Category 5 habitat. This area is identified as “New CRP Seeded Grassland.” The ODFW standard for

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118 Stateline 3 also would have temporary impacts on Category 1 habitat. Any impact to Category 1 habitat violates OAR 345-022-0060. We discuss the Council’s balancing authority below at page 84.
Category 5 requires a “net benefit” in habitat quantity or quality. To meet this standard, the certificate holder would implement the *Revegetation Plan*, which would result in an overall “net benefit” in habitat quality in the Stateline area. The certificate holder would revegetate the temporarily affected Category 5 areas as described in the *Revegetation Plan* (Condition (65)). Revegetation methods would be consistent with CRP requirements. The seed mixture listed in the *Revegetation Plan* meets or exceeds the standard “native” seed mixtures for CRP land in the Stateline project area, and the reseeding rate (lbs./acre) exceeds the current CRP standards. The success criteria described in the *Revegetation Plan* would satisfy the success criteria requirements under the CRP program.

Construction of Stateline 3 would have a temporary impact on 191 acres of Category 6 habitat. This acreage would be restored to agricultural use. The certificate holder would minimize impacts to the temporarily disturbed areas by mitigation measures described in Condition (68). Construction and operation of Stateline 3 would not have significant indirect impacts on the quality of this habitat.

**Mitigation of Indirect Effects**

Construction and operation of the proposed Stateline 3 facilities could result in indirect effects on habitat quality. The certificate holder would be required to implement the *Oregon Wildlife Monitoring Plan (Revised)*, Attachment A. Analysis of monitoring data might indicate impacts to wildlife or wildlife habitat that the certificate holder has not adequately addressed by mitigation. If these impacts result in a loss of habitat quality, further mitigation may be required.

**Retirement**

The certificate holder would retire the Stateline facility according to an approved final retirement plan (Condition (98)). Under OAR 345-027-0110, a retirement plan must receive Council approval before retirement activities occur and before termination of the site certificate. The certificate holder must include in the retirement plan information on how to minimize impacts to fish, wildlife and the environment during the retirement process.

**Oregon Wildlife Monitoring Plan**

To ensure that the operation of Stateline 3 complies with the Council’s Fish and Wildlife Habitat Standard, the certificate holder would conduct wildlife monitoring (Condition (93)) and, as needed, mitigate for the loss of habitat quality by measures approved by the Office (Condition (94)). The overall objectives for monitoring the Stateline facility, including Stateline 1, 2 and 3, are:

1. To determine whether the facility causes significant fatalities of birds and bats, and
2. To determine whether the facility results in a loss of habitat quality.

The details of the monitoring components, statistical analysis and data reporting are described in the *Oregon Wildlife Monitoring Plan (Revised)*, Attachment A, incorporated in this order. The requirement of monitoring during the operation of the Stateline facilities is a necessary part of finding compliance with the fish and wildlife standard. Adequate monitoring provides data necessary to evaluate the impacts of facility operation. If monitoring reveals

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119 The plan may be revised from time to time, as provided in Section 13 of the plan.
significant unforeseen impacts, additional mitigation may be needed to ensure that operation
of the facility is consistent with the habitat mitigation goals and standards. If the data show
significant impacts to wildlife or wildlife habitat, the certificate holder would mitigate for the
loss of habitat quality by measures approved by the Office (Condition (94)).

General Findings of Consistency

The Council’s Fish and Wildlife Habitat Standard requires the Council to find that
design, construction, operation and retirement “is consistent with” the fish and wildlife habitat
mitigation goals and standards established by ODFW in OAR 635-415-0025. The Council
makes the following general findings of consistency:

- **Design:** By location of the proposed wind turbines and structural design, the
  proposed facility avoids impacts to wildlife and to essential and important habitat
to the extent reasonably possible.

- **Construction:** Construction of the proposed Stateline 3 turbines and related or
  supporting facilities would have a direct impact on 12.3 acres of Category 1
  habitat. Therefore, the proposed Stateline 3 does not comply with OAR 345-022-
  0060.

Including both permanent and temporary impacts, construction of Stateline 3
would have a direct impact on 51.7 acres of Category 2 habitat, 66.4 acres of
Category 3 habitat, 52.6 acres of Category 5 habitat and 237.4 acres of Category 6
habitat.

To mitigate for the permanent loss of Category 2, 3 and 5 habitat, and to provide a
“net benefit” in quantity for affected Category 2 and 5 habitat, the certificate
holder would provide habitat enhancement on 35 acres of weed-infested, degraded
habitat in one contiguous parcel (Condition (112)). The proposed enhancement
area would meet the requirement of “in-kind, in-proximity” mitigation.

The certificate holder would restore all areas of temporary disturbance to Category
2, 3, and 5 habitat (Condition (65)) as described in the Revegetation Plan
(Revised), Attachment B. Implementation of the Revegetation Plan would result in
an overall improvement of habitat quality, which would meet the “net benefit”
requirement for temporary impacts to Category 2 and 5 habitat.

The certificate holder would minimize the impact to Category 6 habitat to the
extent reasonably possible. The certificate holder would restore areas of temporary
disturbance to Category 6 habitat to a condition suitable for agricultural use
(Condition (68)).

The certificate holder would implement general mitigation measures described in
Conditions (54), (56), (63), (65), (69), (101), (116) and (117) during construction
to minimize impacts to wildlife and wildlife habitat.

- **Operation:** The certificate holder would mitigate for indirect impacts to wildlife
  and wildlife habitat, as described in Conditions (89), (90) and (91). Operational
  monitoring as described in the Oregon Wildlife Monitoring Plan (Revised) would
  provide data necessary to evaluate the operational impacts of the facility. Analysis
  of monitoring data might indicate impacts to wildlife or wildlife habitat that the
certificate holder has not adequately addressed by mitigation. If these impacts result in a loss of habitat quality, further mitigation may be required (Condition (94)).

- Retirement: The site would be restored according to a retirement plan as required by OAR 345-027-0110 (Condition (98)). Site restoration would restore habitat in areas formerly occupied by the facility and in areas temporarily disturbed during retirement.

**Stateline 2**

In the Final Order on Amendment #1, the Council concluded that the Stateline 2 facilities complied with the Council’s Fish and Wildlife Habitat Standard, subject to the conditions stated in that order. There has been no change of circumstances that affects the Council’s findings under this standard as stated in the Final Order on Amendment #1. However, in consultation with ODFW, the Office has proposed a modification Condition (101) to allow the certificate holder greater flexibility in scheduling and completing construction of the remaining Stateline 2 facilities. This condition addresses restrictions on construction activities near a known ferruginous hawk nest site.

**Conclusions of Law**

In addressing impacts on habitat other than Category 1 habitat, the Council finds that the design, construction, operation and retirement of the proposed Stateline 3 facilities, taking into account mitigation and subject to the conditions stated in this order, are consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025. Conditions (7), (8), (14), (52), (63), (65), (68), (82), (89), (90), (91), (93), (94), (98), (101), (104), (112), (114), (115), (116) and (117) relate to this finding. However, due to an unavoidable impact on Category 1 habitat, the Council concludes that the proposed Stateline 3 facilities do not comply fully with the Fish and Wildlife Habitat Standard.

The Council finds that there has been no change of circumstances that would affect the Council’s conclusions regarding Stateline 2. The Council concludes that the Stateline 2 facilities would continue to meet this standard if the requested extension of the construction completion deadline were allowed. The Council adopts a modification of Condition (101) that relates to this standard.

**5. Category 1 Habitat and the Balancing Analysis under OAR 345-022-0000(2)**

As described above, the construction and operation of the proposed Stateline 3 facilities would have unavoidable impacts on Category 1 habitat. Under the ODFW wildlife habitat standard, incorporated in OAR 345-022-0060, the mitigation goal for Category 1 is “no loss of either habitat quantity or quality.” This can be achieved only by avoidance; the ODFW standard allows no other means of mitigation. Because the proposed Stateline 3 cannot avoid direct impacts to Category 1 habitat, the construction and operation of Stateline 3 would not be “consistent” with the ODFW standard. Accordingly, the proposed Stateline 3 does not comply with the Council’s Fish and Wildlife Habitat Standard.

Therefore, to issue an amended site certificate that would allow construction and operation of Stateline 3, the Council must determine whether to allow an exception to the Fish and Wildlife Habitat standard under the Council’s “balancing” authority described in OAR...
345-022-0000(2), quoted above at page 22. To allow an exception, the Council must
determine whether the overall public benefits of the facility at the proposed site outweigh the
damage to the resource that is protected by the standard the facility does not meet.

ORS 469.501(3) gives the Council its balancing authority. The Council considers and
applies its balancing authority for the first time in this order.

In this case, the “resource that is protected by the standard the facility does not meet”
is Category 1 habitat within the site of the proposed Stateline 3. The potential damage to the
resource is a loss of quantity of Category 1 habitat that, by definition, is irreplaceable and
essential to the Washington ground squirrel (WGS). The WGS is a state-listed endangered
species. The following table summarizes the estimated acreage impacts on the Category 1
habitat resource at BG-B, BG-C and BG-E.

<table>
<thead>
<tr>
<th>Turbine Strings</th>
<th>Total area of Category 1 Resource (acres)</th>
<th>Area of temporary disturbance (acres)</th>
<th>Area of permanent disturbance (acres)</th>
<th>Total area of disturbance (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BG-B and BG-C</td>
<td>479</td>
<td>7</td>
<td>4.2</td>
<td>11.2</td>
</tr>
<tr>
<td>BG-E</td>
<td>26</td>
<td>0.7</td>
<td>0.4</td>
<td>1.1</td>
</tr>
<tr>
<td>Total</td>
<td>505</td>
<td>7.7</td>
<td>4.6</td>
<td>12.3</td>
</tr>
</tbody>
</table>

Construction and operation of the proposed Stateline 3 would have a direct and
permanent impact on 4.6 acres of Category 1 habitat and a direct but temporary impact on 7.7
acres of Category 1 habitat. FPL proposes to construct 46 turbines, along with access roads
and underground collector cables, in Category 1 habitat at BG-B, BG-C and BG-E. In
addition, the certificate holder would conduct appropriate pre-construction surveys for the
presence of WGS in suitable habitat (Condition (56)) at other proposed turbine strings. If
squirrel activity were detected, the certificate holder would establish no-construction areas in
consultation with ODFW and implement other appropriate mitigation measures. Below, we
have analyzed the factors set out in OAR 345-022-0000(2) for weighing the potential damage
to the identified Category 1 resource against the overall public benefit likely to result from
construction and operation of the proposed Stateline 3 facilities.

**Damage to the Resource**

First, the Council must consider the potential damage to the resource. The Council
must determine whether the damage to the resource is acceptable or inconsequential in
ultimate effect. OAR 345-022-0000(2) lists four factors, discussed below. The Council may
consider other factors in making the required finding.

**(A) The uniqueness and significance of the resource that would be affected**

The affected resource is identified Category 1 habitat near the proposed northward
extensions of existing turbine strings BG-B and BG-C and proposed new turbine string BG-E.
The fact that this habitat is suitable for WGS makes it especially significant, due to the status
of the species as endangered under Oregon law. The habitat at BG-B and BG-C provides

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120 Based on Request for Amendment #2, Exhibit 14, and Anne Walsh, e-mail dated March 17, 2003.
121 Suitable habitat at other turbine strings has not been classified as Category 1 habitat because WGS have not
been found in those locations.
forage, shelter (burrows) and dispersal corridors for an active WGS colony. Proposed turbine string BG-E would affect an area historically occupied by a WGS colony but that is not currently occupied. A large portion of the suitable habitat at BG-E has been plowed to meet new CRP standards. It is therefore Category 5 habitat (having high potential to become either essential or important wildlife habitat). Although it is not suitable for WGS in its current condition, it could become WGS habitat in the future.

Not all Category 1 habitat near proposed turbine strings BG-B, BG-C and BG-E is equally important for the WGS. The most valuable habitat is the deeper soil areas supporting native bunchgrass. These areas are on the east side of the BG-B and BG-C ridges and in some locations between the two ridges. Construction in shallow, rocky soils is likely to create less of an impact to the core colony than construction in deeper soils. Of the 11.2 acres that Stateline 3 would directly affect at BG-B and BG-C, 7.7 acres are composed of shallow, rocky soil generally unsuitable for supporting WGS burrows. Construction of the proposed BG-B and BG-C turbine strings would affect 3.5 acres of deep soil, but the permanent facilities would occupy only about one acre of deep soil. At BG-E, Stateline 3 would affect only 1.1 acres of Category 1 habitat, and most of the area has shallow soil.

The WGS habitat at BG-B, BG-C and BG-E is not a unique resource. Suitable habitat exists elsewhere in the area near Stateline facilities. FPL has identified 10 to 15 colonies of WGS within the Stateline project area. However, the current range of the WGS is reduced and fragmented in comparison to the historic distribution of the species.

(B) The degree to which the resource is already affected by development

Agricultural uses including plowing and cattle grazing, invasive non-native plants and activity on existing farm roads already affect the Category 1 habitat at BG-B, BG-C and BG-E. The habitat surrounding BGE has been plowed and reseeded for conversion to CRP resource land.

Although the Oregon Fish and Wildlife Commission has listed the WGS as an endangered species, the Oregon Endangered Species Act does not prohibit development activity on private land or otherwise restrict a landowner’s use of private land.122 The Category 1 habitat resource in the Stateline area is on private land. The resource is vulnerable to future agricultural use and other development.

(C) Whether there are reasonable alternatives to allowing the damage to occur

In designing Stateline 3 to include the 46 wind turbines at BG-B, BG-C and BG-E, FPL has taken reasonable steps to minimize the damage to the Category 1 habitat resource. During construction, temporary staging would occur outside the resource area. FPL would sequence the stages of construction allow for a narrower impact area. FPL would arrange turbines, access roads and underground transmission cables to minimize damage to the deeper soil areas.

The only alternative to allowing the damage to occur would be to prohibit construction of the proposed turbines and related facilities at BG-B, BG-C and BG-E. The effect would be

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122 The Oregon Endangered Species Act, by itself, does not require a private landowner to take action to protect a threatened species or endangered species. ORS 496.192. However, it is illegal to kill an endangered species. ORS 498.026.
to decrease the generation capacity of the Stateline 3 project by 30.4 MW. It is not a simple matter to relocate wind turbines. Effective wind power development is location-dependent. That is, turbines must be placed where there is a significant wind resource and as near as possible to existing transmission lines. Wind turbines cannot be located on slopes that are too steep or unstable. In addition, landowners must agree to the location of the turbines, access roads and construction disturbances. Wind facilities on farmland must be located so that there is minimal interference with agricultural activities.

(D) The magnitude of the anticipated damage to the resource

FPL’s wildlife consultant surveyed all habitat within 1,000 feet of the centerline of proposed turbines and access roads at BG-B, BG-C and BG-E. Based on consultations with ODFW regarding the characteristics of suitable habitat for the WGS, the consultant identified all Category 1 habitat within the survey area. All active WGS sites were mapped and buffered by a 785-foot use area. Potential connecting corridors to other WGS sites were included in the classification of Category 1 habitat. Following these procedures, the consultant estimated the acreage of Category 1 habitat at BG-B and BG-C to be 479 acres. At BG-E, the consultant established a 785-foot use area buffer around active sites identified in 2001 and estimated the acreage to be 26 acres.

The habitat to the east of BG-C appears to support a large, active colony. Near BG-B, the area appears to be a squirrel dispersal area rather than a natal site. The habitat at BG-E lacks sufficient quantities of deep soil to support more than a small colony of WGS.

Of the 479 acres of Category 1 habitat identified near BG-B and BG-C, the proposed Stateline 3 facilities would occupy 4.2 acres. During construction, an additional 7 acres would be temporarily disturbed. The total area of permanent and temporary impact would be 11.2 acres, which is about 2 percent of the known Category 1 habitat near BG-B and BG-C. FPL has designed the turbine strings to avoid the deep soil areas that squirrels typically use for burrowing. Slightly more than one acre of deep soil would be affected by permanent facilities at BG-B and BG-C.

At BG-E, the proposed facilities would permanently occupy less than one-half acre of Category 1 habitat out of a 26-acre identified resource. Construction would temporarily affect an additional 0.7 acres. The combined temporary and permanent impacts would affect about 1.1 acres, which is about 4 percent of the known Category 1 habitat in the survey area near BG-E.

In addition to minimizing the area of impact, FPL has proposed a mitigation plan that includes a 400-acre conservation area. The Resource Impact Avoidance and Mitigation Plan, Attachment C, incorporated in this order, contains the details of the plan. The conservation area would be protected from further development during the life of the facility. Out of the total Category 1 habitat near BG-B and BG-C (479 acres), the conservation area would protect 352 acres (more than 73 percent). Although the landowners’ current land uses would be permitted, the land would not be plowed and grazing would be limited to historic practices. At all three turbine strings, the certificate holder would reseed the areas of temporary disturbance as described in the Revegetation Plan (Revised), Attachment B. The mitigation

123 The “use area” was defined by ODFW in guidance provided to the certificate holder for determining Category 1 habitat.
plan also includes monitoring of the existing WGS colony, an inventory of WGS distribution
dear BG-E and support for scientific research on the habitat requirements and behaviors of the
WGS.

In view of the lack of protection for WGS habitat at the present time in the absence of
this proposed development, construction and operation of the proposed BG-B, BG-C and
BG-E wind turbines, together with implementation of the mitigation plan, might have a net
positive effect on the long-term health and survival of the existing WGS colony. However, the
natural biological factors and behaviors are difficult to anticipate. For example, the WGS may
vacate a site or move throughout the landscape over time. The overall objective of the
Resource Impact Avoidance and Mitigation Plan is to limit potential human-caused habitat
alterations while conserving the integrity of the existing colony and providing suitable habitat
for the life of the wind project.

Overall Public Benefits

The Council must also consider the overall public benefits of the proposed facility at
the proposed site. The overall public benefits are public benefits the Council finds are likely
to result from construction and operation of the proposed facility. The Council must consider
the five factors set out in OAR 345-022-0000(2)(b), discussed below, but may also consider
other factors.

(A) The contribution of the proposed facility toward maintaining reliable energy
delivery to an area in the state

The proposed turbines at BG-B, BG-C and BG-E would have a generating capacity of
approximately 30.4 MW. The electricity generated from these turbines would provide a
reliable, renewable source of electricity to the region.\textsuperscript{124} Wind energy is a reliable source of
electricity because it is not subject to fluctuations in the price for natural gas or other types of
fuel. The wind energy source is available on-site and is a permanently-sustainable energy
source. Although the electricity generated from these turbines would not necessarily serve a
particular area in the state, it would contribute to a reliable supply within the Western
electricity transmission system, of which Oregon is a part.

(B) The expected effect of the proposed facility on total resource cost, as defined in
OAR 345-001-0010\textsuperscript{125}, and average delivered price of energy to end users

This factor compares the resource cost of the proposed energy facility with the most
likely alternative. The Office has compared the "total resource cost" of a wind energy facility
and a combined-cycle combustion turbine (CCCT) energy facility, based on current cost

\textsuperscript{124} This finding is not a determination of need for new generating facilities. The Oregon Legislature has
prohibited the Council from making such determination or requiring a showing of need or cost effectiveness for
generating facilities. ORS 469.310 and 469.501.

\textsuperscript{125} OAR 345-001-0010 defines "total resource cost" as follows: "Total resource cost" shall be calculated using
consistent financial assumptions between resource types. "Total resource cost" means the sum of:
(a) The direct cost of conservation or other non-generation resources;
(b) 1.1 times the direct cost of generation facilities, including incremental transmission and distribution
costs; and
(c) The discounted sum of the net emissions of pollutants listed in Table 1 of the definition of "net
emissions" in this rule, multiplied by their respective monetary values.
estimates developed by the Northwest Power Planning Council. In estimating the total
resource cost of the CCCT alternative, the Office included the monetary value of carbon
dioxide emissions at $10 per ton and assumed a natural gas price ranging from $3.50 to $4.50
per million Btu. This analysis resulted in a total resource cost for a wind energy facility of
$0.046 per kilowatt-hour, compared with the CCCT cost ranging from $0.043 to $0.051 per
kilowatt-hour. The total resource cost of a CCCT, therefore, varies significantly with fuel
cost, making long-term predictions uncertain. This analysis shows that the total resource cost
of a wind facility may be equal to, or less than, the cost of the alternative resource when the
price of natural gas is $4.00 per million Btu or higher. In addition, the public would benefit
from the stable cost of wind generation, which is not subject to fuel cost uncertainty.

In a competitive market, the “average delivered price of energy to end-users” is a
function of the marketplace. This factor is not applicable to a merchant power plant such as
the proposed Stateline 3. In today’s energy market, it is unlikely that any single merchant
plant would have a measurable effect on delivered price.

(C) The overall environmental effects of the facility, considering resources other
than the resource protected by the standard the facility does not meet and effects
other than those considered under paragraph (B)

Wind power, compared to the likely alternative generating resource (natural gas) has
significant environmental benefits. Wind power creates no regulated air emissions and emits
no carbon dioxide. Wind turbines do not require water for cooling. Wind turbines consume no
fossil fuels to generate power. Although wind turbines must be located in open spaces, they
can be developed in a manner that is compatible with agricultural activities. As described
under other findings of fact and conclusions of law in this order, the proposed Stateline 3
complies with all other Council standards that address environmental resources.

(D) Consistency of the proposed facility with Oregon energy policy as described in
ORS 469.010

ORS 469.010 describes Oregon energy policy as follows:

469.010 Policy. The Legislative Assembly finds and declares that:

(1) Continued growth in demand for nonrenewable energy forms poses a
serious and immediate, as well as future, problem. It is essential that future
generations not be left a legacy of vanished or depleted resources, resulting in
massive environmental, social and financial impact.

(2) It is the goal of Oregon to promote the efficient use of energy resources and
to develop permanently sustainable energy resources. The need exists for
comprehensive state leadership in energy production, distribution and utilization.
It is, therefore, the policy of Oregon:

(a) That development and use of a diverse array of permanently sustainable
energy resources be encouraged utilizing to the highest degree possible the private
sector of our free enterprise system.

(b) That through state government example and other effective
communications, energy conservation and elimination of wasteful and
uneconomical uses of energy and materials be promoted. This conservation must
include, but not be limited to, resource recovery and materials recycling.

(c) That the basic human needs of every citizen, present and future, shall be
given priority in the allocation of energy resources, commensurate with
perpetuation of a free and productive economy with special attention to the
preservation and enhancement of environmental quality.

(d) That state government assist every citizen and industry in adjusting to a
diminished availability of energy.

(e) That energy-efficient modes of transportation for people and goods shall be
encouraged, while energy-inefficient modes of transportation shall be
disencouraged.

(f) That cost-effectiveness be considered in state agency decision-making
relating to energy sources, facilities or conservation, and that cost-effectiveness be
considered in all agency decision-making relating to energy facilities.

(g) That state government shall provide a source of impartial and objective
information in order that this energy policy may be enhanced.

This statement of Oregon energy policy begins by declaring that the growth in demand
for nonrenewable energy sources is a serious problem. To address this problem, ORS
469.010(2) sets out the twin goals of promoting both energy efficiency and development of
"permanently sustainable energy resources." The policy does not define "permanently
sustainable" except in contrast with "nonrenewable energy resources." By implication, the
Legislature has established the promotion of renewable energy sources such as wind power as
a policy goal for the state.

Allowing construction and operation of the 46 proposed wind turbines at BG-B, BG-C
and BG-E is consistent with the policy goal of promoting renewable energy sources. The
policy encourages "to the highest degree possible" private sector development of
"permanently sustainable energy resources." FPL is a private sector company. In its Request
for Amendment #2, FPL has proposed a significant expansion of the Stateline Wind Project.
The generating capacity of the 46 wind turbines proposed at BG-B, BG-C and BG-E
represents 16 percent of the proposed capacity of the Stateline 3 expansion. Approval of the
proposed BG-B, BG-C and BG-E wind turbines would likely result in construction of the
turbines and the addition of their incremental generating capacity to the regional supply of
electricity. Approval of the proposed Stateline 3 expansion would encourage development of
renewable energy sources consistent with Oregon’s energy policy.

(E) Recommendations from any special advisory group designated by the Council
under ORS 469.480

The Special Advisory Group for the Stateline Wind Project is the Umatilla County
Board of Commissioners. The Commissioners submitted comments on the proposed
Amendment #2 in a letter dated December 18, 2002. In their comments, the Commissioners
found that the proposed Stateline 3 expansion "appears to be consistent with applicable
county land use standards." The Commissioners have not commented specifically on the issue
of the overall public benefit of the proposed BG-B, BG-C and BG-E wind turbines or the
potential damage to the Category 1 habitat resource. However, the Commissioners based their
finding of consistency with the county land use standards on the Planning Department staff
review of the proposed expansion. The staff review included a finding that the expansion “is a
renewable resource project that addresses and conforms to the Governor's Executive Order on
Sustainability (No. EO-00-07).”126 The staff review also found that the proposed expansion
would provide economic benefits to the county. The economic benefits would include
construction jobs, purchases from area businesses and property tax revenues.

Findings under OAR 345-022-0000(2)

Based on consideration of the factors described above and implementation of the
proposed Resource Impact Avoidance and Mitigation Plan, the Council finds that the overall
public benefits of the facility, including the 46 wind turbines proposed at BG-B, BG-C and
BG-E, outweigh the damage to the resource protected by the Council's Fish and Wildlife
Habitat Standard. Although the damage to Category 1 habitat may not be inconsequential, the
Council finds that the damage is acceptable, based on the proposed facility design and the
mitigation plan. The certificate holder has designed the proposed turbine strings to avoid or
minimize damage to the habitat that is of highest value to the WGS. The certificate holder
would, in addition, implement a mitigation plan that would counterbalance the unavoidable
impacts of the proposed turbines on Category 1 habitat (Condition (107)).

Conclusions of Law

The Council concluded, above, that the design, construction, operation and retirement
of the proposed Stateline 3 facilities would not comply with the Fish and Wildlife Habitat
Standard because of the unavoidable impact on Category 1 habitat. However, based on
analysis of the factors discussed above, the Council has applied its balancing authority under
OAR 345-022-0000(2) and concludes that the overall public benefits of proposed turbine
strings BG-B, BG-C and BG-E, including the measures described in the Resource Impact
Avoidance and Mitigation Plan (Condition (107)), outweigh the damage to the Category 1
habitat resource protected by the Fish and Wildlife Habitat Standard.

6. Standards Not Applicable to Site Certificate Eligibility

Under ORS 469.501(4)127, the Council may issue a site certificate without making the
findings required by the following standards. However, the Council may impose site
certificate conditions based on the requirements of these standards.

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126 The Executive Order calls for the state to “develop and promote policies and programs that will assist Oregon
to meet a goal of sustainability within one generation – by 2025.” The full text of EO-00-07 is at
www.oregonsolutions.net/execorder/sustain_eo.cfm.
127 This statute provides that the Council may not impose certain standards “to approve or deny an application for
an energy facility producing power from wind.” ORS 469.300 defines an “application” as “a request for approval
of a particular site or sites for the construction and operation of an energy facility or the construction and
operation of an additional energy facility upon a site for which a certificate has already been issued, filed in
accordance with the procedures established pursuant to ORS 469.300 to 469.563, 469.590 to 469.619, 469.930
and 469.992.” Although ORS 469.501(4) does not explicitly refer to a request for a site certificate amendment,
we assume that the Legislature intended it to apply.
(a) 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 seismic zone and expected ground motion and ground failure, taking into account amplification, during 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 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;

(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.

***

Background Information

CH2M HILL performed a site-specific characterization of seismic, geologic and soil hazards for Stateline 1. The Office of Energy consulted with a qualified earthquake engineer, Douglas R. Schwarm, P.E., GeoEngineers, Inc., to review that analysis. The Final Order on the Application included site characterization and assessment of seismic, geologic and soil hazards in the Stateline 1 area.128 The Council found that the FPL had adequately characterized the Stateline 1 site in compliance with the Structural Standard and that Stateline 1 could be designed, engineered and constructed adequately to avoid potential dangers to human safety presented by seismic hazards. Although the Council did not require compliance with the structural standard when it reviewed the Request for Amendment #1, the Council applied the conditions related to the structural standard to the Stateline 2 expansion.

The Stateline 3 area is similar to Stateline 1 in topography, soil type, surface soil conditions and regional geology. FPL conducted soil borings and test pits at several locations throughout the Stateline 3 area. This test drilling indicated subsurface conditions comparable to both Stateline 1 and 2. In general, basalt bedrock underlies a layer of sandy silt (loess) that

128 The findings under the structural standard in the Final Order on the Application, pages 37-40, are incorporated herein by this reference.
varies in thickness. On some of the steeper ridges, bedrock is exposed at the surface and the
loess layer is a foot or less in thickness, but in other areas the loess layer may be greater than
30 feet thick. FPL intends to conduct additional hollow-stem auger and air trac explorations to
support the design of the turbine foundations.

In the amendment request, the certificate holder notes traces of what may be an
inactive fault underlying portions of proposed turbine strings G-B, BG-A, BG-C and several
sections of the aboveground 34.5-kV collector system and 115-kV or 230-kV transmission
lines. However, rupture of the fault is expected to result in a maximum displacement of 1 foot,
and the turbines are designed to withstand this magnitude of displacement without instability.
Automatic shut-down sensors in the turbine would deactivate the turbine if such displacement
were to occur.

The aboveground transmission lines and pole structures provide sufficient structural
capacity to resist earthquake ground motions. The aboveground lines, including single-pole
and H-frame support structures, would be designed according to the current National Electric

The certificate holder proposes to design the turbines according to the Oregon
Building Code and by amendment, the Uniform Building Code, 1997 edition. The certificate
holder would make appropriate design modifications if soil types SC or SD were encountered
during construction (Condition (49)). Structural safety conditions adopted by the Council for
Stateline 1 and 2 would apply also to Stateline 3 (Conditions (50), (51) and (59)).

The Oregon Department of Geology and Mineral Industries as had an opportunity to
comment on the Request for Amendment #2 but has raised no issues regarding the structural
standard and has proposed no new site certificate conditions.

Proposed Conditions

The Council finds that the design and construction of Stateline 3 should be subject to
conditions (49), (50), (51) and (59).

(b) 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, operation and retirement 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.

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Background Information

The project area is within the lands ceded to the United States by the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) as part of the Walla Walla Treaty of June 1855. The CTUIR conducted cultural resource surveys of the Stateline 3 area. The surveys included ground searches in areas proposed for ground disturbance along transects spaced a maximum of 30 meters apart. These field surveys, conducted in July 2002, identified six cultural resource sites and two isolated finds in Oregon. Previous surveys have identified two additional sites in Oregon.

The certificate holder would avoid each of these features during construction, except that trenching for underground collector cables would cross an historic railroad grade in six locations. The certificate holder would flag the sites in the field and create a buffer of at least 50 feet from any construction activities (Condition (75)). A cultural resource expert would be on site during construction to monitor the construction activities (Condition (75)). The State Historic Preservation Officer (SHPO) reviewed the amendment request and found no significant issues.

Proposed Conditions

The Council finds that the design, construction, operation and retirement of Stateline 3 should be subject to Conditions (75) and (76).

(c) 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.

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Background Information

In the Final Order on the Application, the Council found that the construction and operation of Stateline 1, taking into account mitigation, was not likely to cause significant adverse impact to the ability of communities within 30 miles of the facility to provide the services listed in the standard. The Office of Energy has not received any reports of adverse public service impacts from construction and operation of Stateline 1 and 2. Construction and operation of Stateline 3, as discussed below, are unlikely to have significant adverse impact on the ability of local communities to provide these services.

The proposed Stateline 3 expansion would be a larger construction project than Stateline 1. However, the project is comparable to the combined Stateline construction in Oregon and Washington during 2001, as shown by the table below.

<table>
<thead>
<tr>
<th></th>
<th>Stateline 1</th>
<th>Stateline in Washington*</th>
<th>Combined</th>
<th>Stateline 3</th>
</tr>
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<tr>
<td>Wind turbines</td>
<td>126</td>
<td>305</td>
<td>431</td>
<td>279</td>
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<td>Meteorological towers</td>
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<td>15</td>
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</tr>
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<td>Miles of expanded roads</td>
<td>4.3</td>
<td>11.7</td>
<td>16</td>
<td>9</td>
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<tr>
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<td>12.2</td>
<td>15.8</td>
<td>28</td>
<td>21.5</td>
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<td>Miles of underground collector line</td>
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<td>10</td>
<td>27</td>
<td>30.5</td>
</tr>
<tr>
<td>Miles of aboveground collector line</td>
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<td>17</td>
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<tr>
<td>Miles of 115-kV transmission line</td>
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<td>5.5</td>
<td>5.5</td>
<td>8.5**</td>
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<tr>
<td>Miles of 230-kV transmission line</td>
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<td>2.6</td>
<td>2.6</td>
<td>8.5**</td>
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<tr>
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<td>127</td>
<td>220</td>
<td>345</td>
</tr>
<tr>
<td>Acres of permanent disturbance</td>
<td>58</td>
<td>104</td>
<td>162</td>
<td>75</td>
</tr>
</tbody>
</table>

* Based on data reported in the Stateline Wind Project, SEPA Final Environmental Impact Statement (only 273 turbines were built)

**Either a 115-kV or a 230-kV line would be used. Length shown does not include new transmission line in Washington.

The construction of the Stateline facilities in 2001 did not significantly affect the ability of public and private providers in the area to provide public services. No problems associated with sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care or schools due to construction or operational activity of Stateline have been reported to the Office of Energy.

Water use

The certificate holder estimates water use during construction of Stateline 3 would be 15,000 to 120,000 gallons per day. Overall, a maximum of 17 million gallons of water would be needed. The City of Helix would be the primary source for this water, under the city’s existing water right permit (G-5150). The certificate holder would obtain an additional 7 million gallons of water from a source in Washington. We discuss water use further at page 24. During operation, water needs for the facility would be low and would not significantly affect water resources in the area.

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110 The findings under the former "Socio-Economic Impacts Standard" in the Final Order on the Application, pages 66-75, are incorporated herein by this reference.
**Sewers and Sewage Treatment**

During construction of Stateline 3, the impact on sewers and sewage treatment would be minimal (portable toilets would be used). Stormwater drainage during construction would be subject to a National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge Permit (Condition (60)) and measures described in Condition (61). Construction of Stateline 3 would generate solid waste that would require off-site disposal. The amount of solid waste is likely to be comparable to the amount generated during the construction of Stateline in Washington and Oregon in 2001.

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

The certificate holder estimates that construction of Stateline 3 would bring approximately 250 temporary new residents into the local area, at maximum. This estimate is comparable to temporary population increase estimated for the construction of Stateline in Washington and Oregon in 2001. With the addition of the proposed Stateline 3 facilities, FPL estimates a staff of up to 15 full-time and 10 part-time employees would be needed during operation for the entire Stateline project in Oregon and Washington. Impact to the ability of communities to provide housing, police and fire protection, health care and schools is not likely to be significant.

The majority of the Stateline 3 turbines are located within the Helix Rural Fire Protection District (HRFD).\(^{131}\) The balance of the turbines, the proposed substation and most of the overhead transmission lines fall within the jurisdiction of the Milton-Freewater Rural Fire District (MFRFD). FPL has consulted with the HRFD and MFRFD fire chiefs. They do not foresee any problem in providing fire protection services.\(^{132}\)

Fire protection for turbine, transmission line and substation components would include de-energizing the appropriate components and securing the area surrounding the component to create a safety zone. The rural fire departments would protect ground areas located safely away from burning electrical components. The proposed facilities would be monitored 24-hours a day by a Supervisory Control and Data Acquisition (SCADA) communication system. The SCADA system is capable of detecting electrical interruptions on the system and alerting wind facility personnel of any need to de-energize the electrical components of the facility.

**Traffic Safety**

Traffic safety impacts, if any, would arise from the numbers of vehicle trips generated by construction and operation and by the size and weight of the vehicles. However, the increase in local traffic during facility operation would be insignificant.

The number of vehicle trips associated with construction of Stateline 3 can be estimated based on the analysis done for Stateline 1. In the Final Order on the Application, the Council found that construction of the 127 proposed Stateline 1 turbines would generate 12,707 vehicle trips.\(^{133}\) Based on a compressed construction schedule of 96 days, the Council found that construction would result in average daily traffic (ADT) of 133 vehicle trips. For

\(^{131}\) Request for Amendment #2, Figure 15.


\(^{133}\) This estimate includes vehicle trips associated with construction of all related or supporting facilities.
Stateline 1, the ADT was disbursed over three construction access (transporter) routes.\textsuperscript{134} There have been no traffic safety problems or incidents reported to the Office of Energy during construction of Stateline 1 or 2.

Assuming that vehicle trips are in direct proportion to the number of turbines being built, construction of the 279 Stateline 3 turbines and related or supporting facilities could generate 27,915 vehicle trips. These vehicle trips would be distributed over four access routes.\textsuperscript{135} The 15 turbines in proposed turbine strings HG-S and HG-T would be served by the North Access Route. Construction of these turbines would generate an estimated 1,500 vehicle trips. Construction access to all other proposed turbine strings would be from the south, using the West, Center and East Access Routes. Construction of the 264 turbines in these strings would generate an estimated 26,415 vehicle trips. Calculation of ADT for the affected roads depends on the number of construction days. It is reasonable to assume that construction of Stateline 3 would require a construction schedule at least as long as the 96-day construction schedule for Stateline 1 and probably longer. Therefore, using the 96-day schedule as a “worst-case scenario,” the ADT for the North Access Route would be 16 vehicle trips and the ADT for the southern access routes would be 275 vehicle trips.

Traffic approaching the construction site from the north would use Highways 12 and 730. An ADT increase of 16 vehicle trips would not result in any significant traffic safety impact on these highways. Traffic approaching the construction site from the south would use Interstate 84 and State Highways 11 and 335. An ADT increase of 275 vehicle trips would have no significant traffic safety impact on I-84, which has a normal traffic volume of 9,800 to 15,000 ADT. Likewise, the traffic impact of 275 ADT on Highway 11, which has a normal traffic volume of 3,800 to 4,800 ADT, should not result in significant traffic safety problems. Only about half of the vehicle trips approaching the construction site from the south would use Highway 335. Traffic on Highway 335 would be affected by an estimated increase of 138 ADT during construction, compared to a normal traffic volume of 350 to 410 ADT. Assuming the “worst-case” construction schedule, an increase of traffic volume on Highway 335 by approximately one-third could affect traffic safety.

The size and weight of the vehicles are a concern in areas where roadways are designed for less than the legal load limit of 80,000 pounds or where pavement conditions are poor. In the Final Order on the Application, the Council found that the state highway system is designed and constructed to accommodate 80,000-pound gross vehicle weight equipment but that some county roads are built for a 4,000-pound vehicle weight limit.\textsuperscript{136} Generally, the heavy vehicles used during construction would be within the 80,000-pound limit.\textsuperscript{137} Long-term traffic safety of the county road system depends on the roads being in good repair. All Umatilla County roads used as access to the facility would be videotaped before beginning construction. Under a written agreement between Umatilla County and the contractor, the contractor would restore all roads used during construction to as good or better condition than they were before construction (Conditions (45) and (81)). In some locations, the county and private road system does not allow the two-way passage of 80,000-pound GVW vehicles. The

\textsuperscript{134} Final Order on the Application, page 71.
\textsuperscript{135} Request for Amendment #2, Figure 15.
\textsuperscript{136} Final Order on the Application, pages 71-72.
\textsuperscript{137} Exceptions may include transport of bulldozers and substation transformers, which would be subject to permits issued by the Oregon Department of Transportation.
certificate holder would write traffic control procedures into the contract specifications for 
construction of Stateline 3. Flaggers would be used at appropriate locations and times during 
construction to direct traffic and to ensure minimal conflicts among harvest and construction 
vehicles (Condition (77)).

Proposed Conditions

The Council finds that the construction and operation of Stateline 3 should be subject 
to conditions (31), (32), (33), (34), (35), (45), (48), (58), (60), (61), (71), (72), (73), (74), (77), 
(81), (85), (86), (87), (88), (96) and (103).

(d) 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, operation, and 
retirement 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.

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Background Information

In the Final Order on the Application, the Council made findings regarding the solid 
waste and wastewater likely to be generated during the construction, operation and retirement 
of Stateline 1 and the impact on surrounding communities.\footnote{The findings under the waste minimization standard in the Final Order on the Application, pages 76-77, are incorporated herein by this reference.} Solid waste and wastewater 
generated by construction, operation and retirement of Stateline 3 are likely to be similar in 
type to that generated by Stateline 1 and 2. Because construction of Stateline 3 includes more 
wind turbines than Stateline 1 and 2 combined plus construction of a substation and 
average transmission lines, the volume of waste is likely to be proportionally greater. 
Operation of the facility generates very little waste, although the volume of such waste would 
increase somewhat when the Stateline 3 facilities are built. The certificate holder would meet 
the same conditions regarding waste minimization and disposal for Stateline 3 as are required 
for both Stateline 1 and 2.
Proposed Conditions

The finds that the construction, operation and retirement of Stateline 3 should be subject to conditions (32), (71), (72), (73), (74), (83), (86) and (98).

VI. OTHER APPLICABLE REGULATORY REQUIREMENTS: FINDINGS AND CONCLUSIONS

1. Requirements under Council Jurisdiction

Under ORS 469.503(3), the Council must determine that the proposed 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.” Applicable Oregon statutes and administrative rules that are not addressed in section V of this order include the Department of Environmental Quality’s (DEQ) noise control regulations, the Division of State Lands’ regulations for disturbance to wetlands, the Water Resources Department’s (WRD) regulations for appropriating groundwater and the Council’s statutory authority to consider protection of public health and safety.

(a) Noise

The Office has received no complaints about noise produced by the operation of Stateline 1 and 2 wind turbines. Stateline 3 would expand the Stateline Wind Project into areas to the south and east of the existing facilities to properties currently unaffected by the noise produced by wind turbines. Because the new turbines would be an expansion of the existing Stateline energy facility, the Council must consider the cumulative effects of noise from all three phases of the project. In Oregon, noise is subject to regulation “to provide protection of the health, safety and welfare of Oregon citizens from the hazards and deterioration of the quality of life imposed by excessive noise emissions.” The applicable noise standard is OAR 340-035-0035(1)(b)(B):

OAR 340-035-0035

(1) Standards and Regulations:

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(b) New Noise Sources:

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(B) New Sources Located on Previously Unused Site:

(i) No person owning or controlling a new industrial or commercial noise source located on a previously unused industrial or commercial site shall cause or permit the operation of that noise source if the noise levels generated or indirectly caused by that noise source increase the ambient statistical noise levels, $L_{10}$ or $L_{50}$, by more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as measured at an appropriate measurement point, as specified in subsection (3)(b) of this rule.

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139 ORS 467.010.
Under OAR 340-035-0035(5)(g), noise produced by construction activities is exempt from regulation. However, to reduce impacts on nearby residences during construction activities, the certificate holder would confine the noisiest construction activities to the daylight hours (Condition (78)).

Findings of Fact

The special circumstances inherent in a wind energy facility make application of the DEQ noise standard especially difficult. In several respects, wind energy facilities are different from other industrial noise sources, such as gas-fired combustion energy facilities. These differences are significant in the context of applying the noise standard.

For example, a combustion facility is, in effect, a “point source” of noise. In contrast, a wind facility is a collection of multiple “point sources” spread over a large geographic area. This characteristic makes both the measurement of representative background noise levels and the prediction of facility-generated noise from a wind facility a complicated and expensive proposition. For a combustion facility, there are typically a small number of possible noise sensitive properties, and so selecting a representative point of measurement is relatively simple. For a wind developer, the geographic scope of the wind facility and variations in topography and other features make identification of the applicable noise sensitive properties more burdensome and probably more costly.

Further, the noise level from an operating combustion facility is relatively constant, independent of wind conditions. However, wind turbines produce noise as the wind causes the turbine blades to rotate. Therefore, the “noise levels generated or indirectly caused by” the noise source vary as wind conditions at the turbine change. Generally, turbine noise increases with an increase in wind speed at the turbine. Further complicating the analysis is the fact that wind speed at the point of measurement (the noise sensitive property) may be significantly different from wind speed at the closest wind turbine.

In addition, noise mitigation for a combustion facility is feasible through appropriate enclosures of the noise source, installation of silencers or other noise control measures. In contrast, there may be no practical noise control measures that could be applied to a wind turbine.

ORS 467.060 authorizes the Environmental Quality Commission (EQC) to grant variances from the requirements of the noise standard if the EQC finds that strict compliance with the rule or standard is “inappropriate.” For example, a variance may be based on a finding that “special circumstances render strict compliance unreasonable, unduly burdensome or impractical,” that “strict compliance would result in substantial curtailment or closing down of a business, plant or operation” or that “no other alternative facility or method of operating is yet available.” The EQC has adopted a process and standards for reviewing requests for variances. The DEQ no longer enforces the noise regulations and has no staff administer variance requests. However, the Council could consider a variance, supported by findings necessary under ORS 467.060 and OAR 340-035-0100, if there were an insufficient basis for finding a wind facility in compliance with the noise standard.

A variance is not necessary for Stateline 3, however. Based on the analysis below, the Council finds that Stateline 3 complies with the noise standard. In addition, the Council finds that the special circumstances and characteristics of wind facilities warrant consideration and
issuance of a variance, if it were necessary for an applicant to request a variance in a particular case.

The Council has found that both Stateline 1 and Stateline 2 would comply with the noise standard. To comply with OAR 340-035-0035, Stateline 3 must meet both the “ambient degradation” and “Table 8” tests, based on estimated noise levels at the “appropriate measurement point.” The “appropriate measurement point” is the point on a “noise sensitive property” that is 25 feet toward the noise source from the “noise sensitive building” or the point on the noise sensitive property line nearest the noise source, whichever is farther. “Noise sensitive property” is real property normally used for sleeping, or normally used for a school, church, hospital or public library.

The nearest noise sensitive property to any proposed Stateline 3 turbine is a residence identified as M-1. M-1 is approximately 2,900 feet west of proposed turbine string V-A. The next nearest noise sensitive property, R-7, is approximately 4,000 feet southeast of proposed turbine strings SH-C and V-B. A third noise sensitive property, M-2, is approximately 5,000 feet southeast of proposed turbine string HG-S. M-2 was also the appropriate measurement point for both Stateline 1 and 2.

**The “Table 8” Test**

To comply with the DEQ noise standard during operation, the noise generated by the proposed Stateline 3 wind turbines must not exceed the “levels specified in Table 8” as measured at the “appropriate measurement point.” Table 8 provides the following limits:

<table>
<thead>
<tr>
<th>Statistical Descriptor</th>
<th>Daytime (7:00 AM - 10:00 PM)</th>
<th>Nighttime (10:00 PM - 7:00 AM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$L_{50}$</td>
<td>55</td>
<td>50</td>
</tr>
<tr>
<td>$L_{10}$</td>
<td>60</td>
<td>55</td>
</tr>
<tr>
<td>$L_{1}$</td>
<td>75</td>
<td>60</td>
</tr>
</tbody>
</table>

The hourly $L_{50}$, $L_{10}$ and $L_{01}$ noise levels are defined as the noise level equaled or exceeded 50 percent, 10 percent and 1 percent of the hour, respectively.

Applying the same analysis the Council applied for Stateline 1, we assume that maximum turbine noise would occur at a wind speed of 56 mph. At wind speeds above 56 mph, the turbine blades feather to avoid damage to the turbines. To meet the Table 8 test, turbine noise

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140 The findings regarding Stateline 1 in the Final Order on the Application, pages 80-82, are incorporated herein by this reference. The findings regarding Stateline 2 in the Final Order on Amendment #1, pages 60-62, are incorporated herein by this reference.
141 OAR 340-035-0035(3)(b).
142 OAR 340-035-0015(38).
143 The location and designation of noise sensitive properties is shown in the Request for Amendment #2, Exhibit 20, Figures 17a and 17b.
144 The residence is approximately 2,000 feet nearest Stateline 1 turbine and 4,000 feet from the nearest Stateline 2 turbine.
at a wind speed of 56 mph must not exceed the levels specified in Table 8. In the site
certificate application for Stateline 1, FPL provided a statistical correlation of turbine noise to
wind speed over the range of wind speeds within which the turbines operate. The correlation
was based on sound level measurements of the V47-660 kW turbine carried out by acoustical
engineers for the turbine manufacturer, Vestas.

The applicable noise limit from Table 8 is the hourly L_{50} nighttime noise level of
50 dBA. To meet this standard, the combined noise radiating from Stateline 1, 2 and 3
turbines must not exceed 50 dBA. Assuming that all turbines were operating with a wind
speed of 56 mph, the hourly L_{50} noise levels generated by the Stateline wind turbines would
be 43 dBA at M-1, 44 dBA at R-7 and 49 dBA at M-2, based on FPL’s modeling
calculations.\textsuperscript{145} Each of these levels is below the maximum allowable nighttime limit of
50 dBA. Therefore, the Council finds that the proposed Stateline 3 expansion would meet the
Table 8 test.

\textit{Ambient Degradation Test}

Under the “ambient degradation” test, noise from the cumulative effects of Stateline 1,
2 and 3 turbines must not increase the ambient hourly L_{10} or L_{50} noise levels at the appropriate
measurement point “by more than 10 dBA in any one hour.”\textsuperscript{146} Under the DEQ regulations,
“ambient noise” means “the all-encompassing noise associated with a given environment,
being usually a composite of sounds from many sources near and far.”\textsuperscript{147}

For Stateline 1 and 2, the Council analyzed the ambient degradation test by assuming
that if the facility met the test under “worst-case” conditions, it would meet the test under all
conditions. The Council assumed that the “worst case” would be during low wind speed
conditions when the ambient noise level is likely to be the lowest but when there is sufficient
wind speed to produce noise from the operation of the wind turbines (the “cut-in” speed). The
Stateline wind turbines start rotating (and producing noise) at a wind speed of approximately
7.9 mph, measured at 10 meters above ground.\textsuperscript{148} Therefore, the Council assumed that
maximum ambient degradation (“worst-case” conditions) would occur at a wind speed of 7.9
mph.

We apply a “worst-case” analysis in lieu of requiring the applicant to provide actual
wind speed and ambient sound measurements over a wide range of wind conditions and over
a long period of time sufficient to characterize actual conditions. However, to require such an
intensive level of measurement effort would be unreasonable and unduly burdensome. A
“worst-case” analysis provides a more practical method of determining whether a wind
facility complies with the noise standard. The use of this approach should not be construed as

\textsuperscript{145} The predicted noise levels were calculated using CADNA/A, a commercial noise modeling program
developed by DataKustik GmbH of Munich. This program is used to model very complex industrial plants,
environmental features, terrain and topography. The computer modeling techniques employ the methodology of
recognized international standards (ISO 9613-2). Each turbine is modeled as a point source at 50 meters above
ground on a three dimensional topographic model of the project area.

\textsuperscript{146} This analysis of ambient degradation addresses the L_{50} statistical noise level. An L_{50} level is the level equaled
or exceeded 50 percent of the time. Therefore, applying the ambient degradation to the L_{50} level is the more
conservative approach.

\textsuperscript{147} OAR 340-035-0015(5).

\textsuperscript{148} In the application for a site certificate, FPL noted that the “cut-in” wind speed is about 9 mph at the 50-meter
hub height, which is about 7.9 mph at a typical 10-meter met tower height.
establishing a Council policy to apply a higher test or more stringent standard to wind energy
facilities than is applied to other types of energy facilities. It should be understood that
“worst-case” conditions are hypothetical conditions and not conditions that could be expected
to occur typically in nature.

For Stateline 1, the Council found that turbine noise (the predicted hourly $L_{50}$ noise
level) would be 37.8 dBA at M-2 with a wind speed of 7.9 mph. The Council reasoned that
the facility would meet the ambient degradation test if background noise (ambient noise at the
noise sensitive property in the absence of wind turbines) were always greater than 28.3 dBA
when the wind speed at the turbines was at the cut-in speed. If the background noise level
were greater than 28.3 dBA, the addition of 37.8 dBA would result in an increase in the
ambient sound level of less than 10 dBA (logarithmic addition), and the facility would meet
the ambient degradation test. The Council found it reasonable to assume that the wind-
generated background noise at M-2 would be at least at 28.3 dBA when the wind was 7.9 mph
at the turbines.

The same residence, M-2, was the measurement point for Stateline 2. The Council
found that turbine noise from Stateline 2 turbines would be approximately 30 dBA at M-2
with wind speed at the turbines at the cut-in speed. The Council found it reasonable to
conclude that the ambient noise degradation caused by the Stateline 2 turbines would not
increase ambient noise by more than 10 dBA at M-2. The Council’s reasoning for Stateline 2
was consistent with its reasoning in the review of Stateline 1.

For Stateline 3, FPL considered ambient noise degradation at M-1, R-7 and M-2. M-1
and R-7 are the closest noise sensitive properties to any Stateline 3 turbines.\textsuperscript{140} FPL included
M-2 because it is the closest noise sensitive property to the northern cluster of Stateline 3
turbines (strings HG-T and HG-S). M-2 is affected by the cumulative noise from Stateline 1
and 2.

At M-1, the background noise includes turbine noise produced by the Vansycle Ridge
Wind Project. The Vansycle turbines are much closer to M-1 than the nearest Stateline 3
turbine would be.\textsuperscript{150} FPL calculated that the cumulative noise from Stateline 1, 2 and 3
turbines at the cut-in speed would increase the background noise level at M-1 by less than 1
dBA.

FPL measured the ambient noise and wind speed at R-7 over a 10-day period. The
Office of Energy’s consultant on the DEQ noise standard, Kerrie G. Standlee, P.E., analyzed
the FPL data. Based on the data, Standlee concluded that a reasonable average background
noise level during the quiet hours of midnight to 6:00 AM was 26 dBA when the wind speed
at turbine hub-height is at or near the cut-in speed. At hub-height, the cut-in speed is about
9 mph. FPL’s modeling calculations predict that turbine noise at R-7 ranges from 34 dBA to
35 dBA at hub-height wind speeds of 9 to 15 mph. The logarithmic addition of 34 dBA
(turbine noise) to 26 dBA (background) would result in a combined ambient noise level of 35
dBA, or an increase of 9 dBA. The addition of 35 dBA (turbine noise) to 26 dBA

\textsuperscript{140} FPL also considered the property designated R-8, which is approximately 3,700 feet from the nearest
Stateline 3 turbine. However, R-8 is located in Washington. The DEQ noise regulation is premised on a policy to
“protect the health, safety, and welfare of Oregon citizens.” OAR 340-035-0005(1).

\textsuperscript{150} M-1 is approximately 1,800 feet from the nearest Vansycle turbine and 2,900 feet from the nearest proposed
Stateline 3 turbine.
(background) would result in a combined ambient noise level of 36 dBA, or an increase of 10
dBA. The data show that as turbine wind speed increases above 15 mph, the wind speed at R-
7 also increases and raises the ambient background noise level above 26 dBA. Based on this
analysis, Stancllee concluded that the operation of Stateline 3 would not cause the ambient
hourly L$_{50}$ noise level to increase by more than 10 dBA. Therefore, the ambient degradation
test is met.

The cumulative turbine noise level at R-7 from Stateline 1, 2 and 3 would be the same
as the turbine noise from Stateline 3 alone. The Stateline 1 and 2 turbines are so far away that
their noise would not cause a perceptible increase. Therefore, the cumulative noise at R-7
would meet the ambient degradation test as well.

Because of the distance between Stateline 3 turbines and M-2, operation of the
Stateline 3 turbines would not cause an increase in the predicted noise level at M-2 above the
predicted noise from Stateline 1 and 2 turbines. In the Final Orders on the Application and on
Amendment #1, the Council found that the noise from Stateline 1 and 2 would meet the
ambient degradation test at M-2.

For the reasons discussed above, the Council finds that the proposed Stateline 3
expansion would meet the ambient degradation test.

Post-Construction Measurement

The Council has often included post-construction noise measurement as a site
certificate condition for gas-fired combustion energy facilities. The characteristics of
combustion facilities justify post-construction measurement because such facilities include
many noise sources located at various points within the power plant site. Some of these noise
sources either partially block the sound radiating from another source or cause a different
noise-radiating pattern to occur around the site. Therefore, predicting the amount of noise
radiating to a noise sensitive property near a combustion power plant relies on many
assumptions about how noise would radiate from the proposed facility. Thus, post-
construction measurements are necessary to provide an added level of confidence about
compliance with the noise standard.

In the case of a combustion energy facility, assuming the DEQ ambient degradation
test applies, an applicant would measure the ambient background noise level at the
appropriate measurement point during the quietest hours of the day when the power plant
would be in operation (usually during the late night hours when the wind is calm). For
comparison, the certificate holder would then measure post-construction noise levels when the
plant is operating. Post-construction measurement would be done at the same measurement
point during the same hours of the day that were monitored for ambient noise before
construction. Typically, a condition in the site certificate requires the certificate holder to
measure post-construction noise when the wind is calm to reduce the effects of wind on the
amount of sound that radiates from the power plant to the noise sensitive property. This
procedure allows for a relatively direct comparison of ambient noise level before and after
construction of the power plant.

In contrast, the characteristics of wind energy facilities are quite different. In the case
of wind power, each turbine is a single noise source located on top of a high tower. The noise
radiating from each turbine with varying wind speeds can be determined with reasonable
accuracy from noise data supplied by the turbine manufacturer. Because the placement of individual turbines does not significantly influence the noise radiating patterns of the turbines, relatively simple and accurate prediction of the total noise radiating to a nearby noise sensitive property is possible. Thus, there is less need for the added level of confidence provided by post-construction noise measurements.

In addition, using post-construction measurement to confirm the noise modeling for a wind energy facility is not as simple as post-construction measurement of the noise from a combustion energy facility. Ordinarily, measurement of the ambient noise at a noise sensitive property is done when the wind is calm during the quietest hours of the day when the power plant is in operation. However, in the case of wind turbines, the operation of the noise source is dependent on the wind. For a wind facility, unlike a combustion power plant, measurement when the wind is calm at the turbines is not an appropriate time to determine ambient noise levels. In fact, because the noise from the turbines is directly related to wind speed at the turbines, and because wind speed at the sensitive property often affects background noise, it is almost impossible to specify exactly when the certificate holder should conduct ambient noise measurement to confirm pre-construction noise modeling. The relationship between wind speed at the turbine and wind speed at the property is inconsistent.

In our analysis for Stateline, we have assumed that the “worst case” (greatest potential for failing the DEQ ambient noise degradation test) occurs when the wind at the turbines is at or slightly above the turbine cut-in speed and ambient background noise at the appropriate measurement point is low. However, if the Council were to require post-construction noise measurements under those conditions, it is probable that the condition would be impossible to meet because those conditions might seldom occur simultaneously. Months of monitoring might be needed to find actual conditions matching the “worst case.” In addition, because the ambient noise at the measurement point typically changes with wind speed, it would be practically impossible to determine the change in ambient noise using measurements made with varying wind speeds at the turbines. Therefore, the Council finds that post-construction noise measurement is unnecessary for the Stateline facility.

Our analysis of the compliance of Stateline 3 with the DEQ noise standard relies on the correlation of turbine noise to wind speed provided by the turbine manufacturer. The turbine manufacturer, Vestas, warrants that the sound power level of the V47 turbine will not exceed 104 dBA with a wind speed of 33 feet of about 18 mph. The Council, therefore, adopts a condition to require the certificate holder to include verification of compliance with the manufacturer’s sound level warranty in the first annual report following construction of any Stateline 3 turbines. This verification may consist of field measurement or other means of verification satisfactory to the Office of Energy (Condition (120)).

**Stateline 2**

In the Final Order on Amendment #1, the Council concluded that the Stateline 2 facilities complied with the DEQ noise standards, subject to the conditions stated in that order. There has been no change of circumstances that affects the Council’s findings under this standard as stated in the Final Order on Amendment #1.

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Conclusions of Law

The Council finds that noise from Stateline 3 would not exceed the applicable DEQ noise control standards. Conditions (78) and (120) relate to this finding. The Council concludes that the proposed Stateline 3 expansion complies with the DEQ noise standard.

The Council finds that there has been no change of circumstances that would affect the Council’s conclusions regarding Stateline 2. The Council concludes that the Stateline 2 facilities would continue to meet the DEQ noise standards if the requested extension of the construction completion deadline were allowed.

(b) Wetlands

Under ORS 196.810 and the Division of State Lands Removal-Fill rules (OAR Chapter 141, Division 85) a permit is needed if 50 cubic yards or more of material is removed, filled or altered within any “waters of the state.” Under the law, “waters of the state” include wetlands. Exemptions to the permit requirement are given in OAR 141-085-0020. Specifically, the rules do not apply to removal-fill activities for maintenance (OAR 141-085-0020(12)) or to maintenance of farm roads on EFU land (OAR 141-085-0020(5)(b)).

Findings of Fact

FPL surveyed all drainages in the Stateline 3 area in locations proposed for construction activity. FPL has submitted a wetland delineation report.152 As described in the report, the proposed Stateline 3 facilities would include improvements of two existing stream crossings. There would be no impacts to any other wetlands, because the proposed facilities would be located outside of the wetland areas or, in the case of aboveground transmission lines, there would be aerial crossing of wetland areas. Completion of construction of the remaining Stateline 2 facilities would not affect any wetlands.

The report identifies the two existing stream crossings as FS-4 and WA-3. In both locations, construction of Stateline 3 would include improvement of existing farm roads. Both wetlands are spring-fed intermittent streams. In both locations, the existing farm road crossings have already caused some adverse impact to the riparian habitat. Improvement of the existing farm road would provide access to the proposed WAY-A, WAY-B and WAY-C turbine strings and to the proposed substation. FPL has provided details of the two proposed crossings, which would involve a total of 13 cubic yards of new fill material.153 The certificate holder would restore the riparian habitat affected temporary affected during construction (Condition (65)).

The exemption allowed under OAR 141-085-0020(12) for “maintenance” allows “volumes and area of impact...limited to the minimum necessary to restore the serviceability and function of the structure.” The exemption allowed under OAR 141-085-0020(5)(b) for “maintenance of farm roads” allows up to 50 cubic yards of fill. Applying the more specific requirement in this case, a permit would be needed if the proposed improved stream crossings required 50 cubic yards or more of fill. The Division of State Lands has reviewed the amendment request and has confirmed that the proposed improved stream crossings would

152 Request for Amendment #2, Exhibit 21.
153 Request for Amendment #2, Figures 19 and 20.
qualify as “maintenance” and that no permit would be required because the amount of new fill would be less than 50 cubic yards (Condition (118)).

Conclusions of Law

The Council concludes that a removal/fill permit is not required.

(c) Water Rights

Through the provisions of the Ground Water Act of 1955, ORS 537.505 to 537.796, and OAR Chapter 690, the Oregon Water Resources Commission administers the rights of appropriation and use of the ground water resources of the state. Under OAR 345-022-0000(1), the Council must determine whether the proposed expansion complies with these statutes and administrative rules.

Findings of Fact

The construction and operation of the proposed Stateline 3 would not require a new water right. The construction of Stateline 3 would require up to 17 million gallons of water primarily for road compaction, dust suppression and concrete mixing. Most of the water required would be obtained under an existing water right held by the City of Helix (G-5150). The City can supply up to 10 million gallons of water to the project. Because this water is available under an existing water right, no further action or approval from the Department of Water Resources is required. FPL proposes obtaining up to 7 million gallons of water from a source in Washington to meet the remaining need for water during construction.\(^{155}\)

During operation of the facility, water use would be insignificant. ORS 537.545(1)(f) provides that a new water right is not required for industrial and commercial uses of up to 5,000 gallons per day. During operation, a contractor would perform occasional blade washing (Condition (88)). The contractor would purchase water from a private or municipal source with an existing water right. The Water Resources Department has reviewed the amendment request and has concluded that no permit is required.

Stateline 2

In the Final Order on Amendment #1, the Council concluded that the City of Helix would supply all water needed for construction of Stateline 2 and that no new water right was required. There has been no change of circumstances that affects the Council’s findings under this standard as stated in the Final Order on Amendment #1.

Conclusions of Law

Based on the findings above, the Council concludes that, subject to the conditions stated in this order, the proposed use of ground water for the construction and operation of Stateline 3 complies with the Ground Water Act of 1955 and the rules of the Water Resources Department. Conditions (73), (87) and (88) relate to the use of water.

\(^{154}\) Kevin Herkamp, DSL, e-mail dated March 4, 2003.

\(^{155}\) FPL has received authorization from the Washington Department of Ecology for short-term use of up to 10.2 million gallons of water from a private well. Letter, dated January 28, 2003, from Bill Neve, Regional Watermaster.
The Council finds that there has been no change of circumstances that would affect the Council’s conclusions regarding Stateline 2. The Council concludes that no new water right would be required for Stateline 2 if the requested extension of the construction completion deadline were allowed.

(d) Public Health and Safety

Under ORS 469.310 the Council is charged with ensuring that the “siting, construction and operation of energy facilities shall be accomplished in a manner consistent with protection of the public health and safety.” ORS 469.401(2) provides that “the site certificate shall contain conditions for the protection of the public health and safety.”

Findings of Fact

We discuss specific public health and safety standards for wind energy facilities above at page 65.

**Electric and Magnetic Fields**

The proposed facility would include a network of underground and aboveground 34.5-kV electric transmission lines (collector cables) and an aboveground 115-kV or 230-kV transmission line. Electric transmission lines create electric and magnetic fields. The electric field standard is addressed above at page 69, and for the reasons discussed there, the proposed transmission lines would not exceed the Council’s standard of 9 kV per meter at one meter above the ground surface in areas accessible to the public.

The proposed design and construction of underground collector lines for Stateline 3 would be similar to the underground collector lines for Stateline 1 and 2. However, FPL would use lower amp conductors but wider conductor spacing for the Stateline 3 underground collector lines. The estimated magnetic field strength at the ground surface directly above the center conductor would be 84 milli-Gause (mG). For Stateline 1 and 2, the estimated magnetic field strength directly over the underground collector cables was 60 mG. The nearest residence to any Stateline 3 underground collector line is 2,500 feet away. At that distance, the magnetic field exposure would be no higher than background levels.

In addition to new underground collector lines, the proposed Stateline 3 facility would include approximately 17 miles of aboveground 34.5-kV collector lines and 8.5 miles of aboveground 115-kV or 230-kV transmission line. The applicant estimated the magnetic fields that the transmission lines would produce using a model developed by the Bonneville Power Administration. The table below shows the estimated magnetic field strength directly below the lines and at 100 feet left and right of the centerline. The nearest residence to any aboveground 34.5-kV line is approximately 2,200 feet away and the nearest residence to the

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157 The findings regarding electric and magnetic fields in the Final Order on the Application, pages 85-86, are incorporated herein by this reference.
158 The strength of a magnetic field decreases with distance from the source. The magnetic field is down to background levels at a distance of 1,000 feet from a transmission line.
159 Request for Amendment #2, Exhibit 22, Table 1, and response to the Office of Energy’s request (30) for additional information, February 20, 2003.
The strength of a magnetic field is a function of the current in the electric transmission line: the higher the current, the greater the strength of the magnetic field. FPL calculated the magnetic fields based on assumed current levels for each of the transmission lines. For 34.5-kV underground lines, the assumed maximum current was 343 amps per conductor. For 34.5-kV aboveground lines, the assumed maximum current was 1,200 amps per conductor. For the 115-kV line, the assumed maximum current was 1,064 amps per conductor. For the 230-kV line, the assumed maximum current was 535 amps per conductor. The certificate holder would design and operate the transmission lines so that these maximum currents would not be exceeded (Condition 108).

The Council has previously considered the issue of whether exposure to magnetic fields might cause health risks. This issue has been the subject of considerable scientific research and discussion. Based on its review in other cases, the Council has concluded that the credible evidence of a health risk from low levels of exposure to magnetic fields is inconclusive. The Council has not found sufficient information upon which to set health-based limits for exposure to magnetic fields. However, given the uncertainty about possible health consequences, the Council has encouraged applicants to propose low-cost ways to reduce or manage public exposure to magnetic fields from transmission lines under the Council’s jurisdiction. This approach is sometimes referred to as “prudent avoidance.”

Under the 1992 Energy Policy Act, the U.S. Congress authorized the Electric and Magnetic Fields Research and Public Information Dissemination Program. The program led to a report in 1999 by the National Institute of Environmental Health Sciences (NIEHS) on human exposure to extremely low frequency electric and magnetic fields (“ELF-EMF”). The report was based on an assessment of scientific evidence by an international panel of 30 scientists. Using criteria developed by the International Agency for Research on Cancer (IARC), none of the scientists considered the evidence strong enough to label magnetic field exposure as a “known human carcinogen” or even a “probable human carcinogen.” However,
a majority of the scientists concluded that exposure to power-line frequency ELF-EMF is a
“possible” human carcinogen. This decision was based on “limited evidence” of an increased
risk or childhood leukemia with residential exposure and of an increased occurrence of
chronic lymphocytic leukemia associated with occupational exposure. The NIEHS
concluded that there is insufficient evidence of a risk of any other cancers or non-cancer
health outcomes and that the probability that ELF-EMF exposure is “truly a health hazard” is
“small.”

The California Public Utilities Commission commissioned the California Department
of Health Services (DHS) to evaluate the potential health risks of magnetic fields. The final
DHS report, An Evaluation of the Possible Risks from Electric and Magnetic Fields (EMFs)
from Power Lines, internal Wiring, Electrical Occupations, and Appliances, was issued in
June, 2002. In the DHS study, three DHS staff scientists reviewed the scientific evidence, and,
similar to the NIEHS study, used the IARC risk assessment classifications to evaluate the
scientific evidence. The opinion of the DHS reviewers in general assigned a somewhat higher
health risk from electro-magnetic field exposure than the NIEHS panel. Regarding the risks of
childhood and adult leukemia, one of the three DHS reviewers found EMF exposure to be a
“definite hazard.” The other two reviewers rated the risk of childhood leukemia as either a
“probable” or “possible” hazard and the risk of adult leukemia as a “possible” hazard. Unlike
the NIEHS study, the DHS reviewers also assigned a “possible” rating to the risks of adult

It should be noted that epidemiological studies generally have addressed residential or
occupational exposures rather than the intermittent or occasional exposures that might occur
given the location of the proposed Stateline 3 transmission lines. Residences in the Stateline 3
area are at a sufficient distance from any of the underground or aboveground transmission
lines that the magnetic fields produced by the transmission lines would not increase
background exposures at residences. To date, the evidence of a health risk associated with
exposure to magnetic fields from transmission lines is inconclusive. Nevertheless, the NIEHS
and DHS assessments provide support for the Council’s policy of prudent avoidance and site
certificate conditions requiring low-cost measures to reduce or manage public exposure. For
the proposed Stateline 3, the certificate holder would reduce public exposure to magnetic
fields as required by Conditions (108) and (113).

Coordination with the PUC

The Oregon Public Utility Commission Safety and Reliability Section (“PUC”) has
previously requested that the Council ensure that certificate holders coordinate with PUC staff
on the design and specifications of electrical transmission lines and the natural gas pipelines.
The PUC has explained that others in the past have made inadvertent, but costly, mistakes in
the design and specifications of power lines and pipelines that could have easily been
corrected early if the developer had consulted with the PUC’s staff responsible for the safety
codes and standards. The certificate holder would be required to coordination the design of
electrical transmission lines and the natural gas pipelines with the PUC (Condition (110)).

165 Id. at pages 35-36 (emphasis added).
Stateline 2

In the Final Order on Amendment #1, the Council concluded that siting, construction and operation of the proposed Stateline 2 facilities, subject to the conditions stated in that order, would be consistent with the protection of public health and safety. There has been no change of circumstances that affects the Council’s findings under this standard as stated in the Final Order on Amendment #1.

Conclusions of Law

Based on the findings above, the Council concludes that the siting, construction and operation of the proposed Stateline 3 facilities, subject to the conditions stated in this order, are consistent with protection of public health and safety. Conditions (2), (6), (21), (22), (36), (38), (62), (95), (108), (110) and (113) relate to the protection of public health and safety.

The Council finds that there has been no change of circumstances that would affect the Council’s conclusions regarding Stateline 2. The Council concludes that the Stateline 2 facilities would be consistent with the protection of public health and safety if the requested extension of the construction completion deadline were allowed.

2. Requirements That Are Not Under Council Jurisdiction

(a) Federally-Delegated Programs

Under ORS 469.503(3), the Council does not have jurisdiction for determining compliance with statutes and rules for which the federal government has delegated the decision on compliance to a state agency other than the Council. However, the Council may rely on the determinations of compliance and the conditions in the federally-delegated permits issued by these state agencies in deciding whether the proposed facility meets other standards and requirements under its jurisdiction.

Water Quality

The Oregon Department of Environmental Quality (DEQ), Water Quality Program, administers the National Pollutant Discharge Elimination System (NPDES) permit program and regulations regarding stormwater discharge. On November 14, 2002, the certificate holder submitted a 1200-C NPDES permit application and an Erosion and Sediment Control Plan to address handling of stormwater during construction of Stateline 3. DEQ has issued the permit. In addition, DEQ has advised the Office that the certificate holder is exempt from the requirement of an industrial wash-water permit if blade washing is done with high-pressure cold water only, without chemicals, brighteners or cleansers (Condition (88)).

(b) Requirements That Do Not Relate to Siting

Under ORS 469.401(4), the Council does not have jurisdiction for determining compliance with state and local government programs that address design-specific construction or operating standards and practices that do not relate to siting. However, the Council may rely on the determinations of compliance and the conditions in the permits

109 Amy Verley, Pendleton DEQ office, e-mail dated 1/30/03.
issued by these state agencies and local governments in deciding whether the facility meets other standards and requirements under its jurisdiction.

The Council concludes that, for construction and operation of the proposed Stateline 3, the following state and local government programs may apply to the proposed facility. However, these programs are not within the Council's jurisdiction because they address design-specific construction or operating standards and practices not related to siting:

1) Regulations of building, structure design and construction practices by the Oregon Building Codes Division under ORS Chapters 447, 455, 460, 476, 479 and 480 and OAR Chapter 918, Divisions 225, 290, 301, 302, 400, 440, 460, 750, 770 and 780

2) Various programs addressing fire protection and fire safety and the storage, use, handling, and emergency response for hazardous materials and community right to know laws for hazardous materials, administered by the Oregon State Fire Marshal's Office, under ORS Chapters 453, 476 through 479; OAR Chapter 837, Divisions 40, 85 and 90

3) Programs addressing reporting, design and safety standards for electric transmission lines administered by the Oregon Public Utilities Commission, Safety Section under ORS 757.035 and OAR Chapter 860, Divisions 24 and 28

4) Registration requirements for underground facilities administered by the Oregon Public Utilities Commission under ORS 757.542 through 757.562 and OAR Chapter 952

5) Electric Service Supplier certification requirements administered by the Oregon Public Utilities Commission under ORS 756.040, ORS 757.600 through 757.667 and OAR 860-038-0400

6) Regulations on the size and weight of truck loads on state and federal highways administered by the Oregon Department of Transportation under ORS Chapter 818; OAR Chapter 734, Division 82

7) Regulations of domestic water supply systems administered by the Health Division of the Oregon Department of Human Resources under ORS Chapter 448 and OAR Chapter 333, Division 61

8) Conditional use permits for concrete batch plants required and administered by Umatilla County

VII. GENERAL APPLICATION OF CONDITIONS

The conditions referenced in this order include conditions that are specifically required by OAR 345-027-0020 (Mandatory Conditions in Site Certificates), OAR 345-027-0023 (Site Specific Conditions), OAR 345-027-0028 (Monitoring Conditions) or OAR Chapter 345, Division 26 (Construction and Operation Rules for Facilities). The conditions referenced in this order, or added to the site certificate by this order, include conditions based on representations in the request for amendment and the supporting record that the Council deems to be binding commitments made by the certificate holder. Also included are
conditions the Council finds necessary to ensure compliance with the siting standards of OAR Chapter 345, Divisions 22 and 24, or to protect public health and safety.

The references in sections V and VI of this order to specific conditions are included for convenience only. Such references do not relieve the certificate holder from the obligation to comply with all site certificate conditions.

In addition to all other conditions referenced or included in this order, 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 amended site certificate is executed. However, 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.

VIII. GENERAL CONCLUSION

The proposed amendment would enlarge the site of the Stateline Wind Project and would extend the construction completion deadline for Stateline 2. Under OAR 345-027-0070(9), to issue an order approving an amendment that enlarges the site, the Council must consider, within the area added to the site by the amendment, whether the facility complies with all Council standards. To issue an order extending the deadline for completing construction of Stateline 2, the Council must 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 Stateline 2 facility complies with all Council standards. As discussed above at page 22, the Council’s General Standard of Review requires the Council to base its conclusions on a preponderance of the evidence on the record.

With respect to the proposed Stateline 3 expansion of the Stateline Wind Project, the Council finds that a preponderance of the evidence on the record supports the following conclusions:

1. The proposed Stateline 3 facilities comply with the requirements of the Oregon Energy Facility Siting statutes, ORS 469.300 to ORS 469.570 and 469.590 to 469.619.

2. The proposed Stateline 3 facilities comply with the standards adopted by the Council pursuant to ORS 469.501, except that proposed turbine strings BG-B, BG-C and BG-E do not comply with the Fish and Wildlife Habitat Standard, OAR 345-022-0060.

3. The overall public benefits of the Stateline 3 facility including proposed turbine strings BG-B, BG-C and BG-E, subject to the conditions described in this order,

167 However, in making land use findings, the Council applies the applicable local criteria in effect on the date the certificate holder submitted the request for amendment.
outweigh the damage to the resources protected by the standard the facility does not meet (specifically, the damage to the Category 1 habitat resource protected by the Fish and Wildlife Habitat Standard).

4. The facility complies with all other Oregon statutes and administrative rules applicable to the amendment of the site certificate for the Stateline Wind Project and within the Council’s jurisdiction.

With respect to the proposed extension of the deadline for completing construction of Stateline 2, the Council finds that a preponderance of the evidence on the record supports the following conclusions:

1. The Council has not previously granted an extension of the deadlines for beginning or completing construction of Stateline 2.

2. There has not been any change of circumstances that affects a previous Council finding that was required for issuance of a site certificate or amended site certificate.

3. The proposed Stateline 2 facilities comply with the standards adopted by the Council pursuant to ORS 469.501.

Based on the findings of fact, reasoning and conclusions of law in this order and subject to the conditions described in this order, the Council concludes that an amendment of the site certificate for the Stateline Wind Project may be issued. The approved amendment would allow construction of the proposed Stateline 3 facilities and would extend the construction completion deadline for Stateline 2. The approved amendment incorporates the specific changes to the site certificate set forth in this order in Section IV.2 beginning at page 11 above.

In addition to the conditions specified in Section IV.2, the approved amendment would incorporate revisions to the Attachments A (Oregon Wildlife Monitoring Plan) and B (Revegetation Plan) as well as new Attachment C (Resource Impact Avoidance and Mitigation Plan). Under the terms of each of these plans, amendments may be made without amendment of the site certificate. The Council authorizes the Office of Energy to agree to amendments to any of these plans and to mitigation actions that may be necessary subject to the terms of these plans. Such authority would be subject to the requirement that the Office shall notify the Council of all amendments and mitigation actions. The Council retains the authority to approve, reject or modify any amendment of these plans or any mitigation action agreed to by the Office.
IX. ORDER

The Council approves Amendment #2 and the issuance of an amended site certificate for the Stateline Wind Project, subject to the terms and conditions set forth above.

Issued this _ day of June, 2003.

THE OREGON ENERGY FACILITY SITING COUNCIL

By: ________________________________
   Dr. Roslyn Elms-Sutherland
   Chair

Attachments
Attachment A: Oregon Wildlife Monitoring Plan (Revised)
Attachment B: Revegetation Plan (Revised)
Attachment C: Resource Impact Avoidance and Mitigation Plan

Notice of the Right to Appeal

You have the right to appeal this order to the Oregon Supreme Court pursuant to ORS 469.405. To appeal you must file a petition for judicial review with the Supreme Court within 60 days from the day this order was served on you. If this order was personally delivered to you, the date of service is the date you received this order. If this order was mailed to you, the date of service is the date it was mailed, not the day you received it. If you do not file a petition for judicial review within the 60-day time period, you lose your right to appeal.
This plan describes wildlife monitoring the certificate holder shall conduct during operation\(^1\) of the Stateline Wind Project facility in Oregon. 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. This plan addresses the facility as permitted under the Oregon site certificate, as amended.

The Stateline Wind Project facility\(^2\) consists of:

- Stateline 1: no more than 127 wind turbines, four meteorological (met) towers and other related or supporting facilities as described in the Final Order on the site certificate application (September 14, 2001).\(^3\)

- Stateline 2: no more than 60 wind turbines, two met towers and other related or supporting facilities as described in the Final Order on Site Certificate Amendment #1.

- Stateline 3: no more than 279 wind turbines, 13 met towers, a substation, approximately 17 miles of aboveground 34.5-kV transmission line, approximately 8.5 miles of aboveground 115-kV or 230-kV transmission line, and other related or supporting facilities as described in the Final Order on Amendment #2.

Wildlife monitoring is necessary to determine whether operation of the facility results in a net loss of habitat quality. For raptors, this will require that the certificate holder obtain a reasonable estimate of the effect of the project on raptors in the context of local raptor populations.

The certificate holder shall use properly trained personnel to conduct this monitoring, subject to approval by the Office of Energy as to professional qualifications. For all monitoring except FPL’s Wildlife Response and Reporting System (described below), the certificate holder shall hire an independent third party (not employees of the certificate holder) to perform monitoring tasks.

The Oregon Wildlife Monitoring Plan for the Stateline Wind Project includes the following components:

1) Fatality monitoring program involving:

a) Removal trials

b) Searcher efficiency trials

\(^1\) This plan does not address pre-construction wildlife surveys that FPL Energy carried out in support of its application for a site certificate for the Stateline project.

\(^2\) As used herein “facility” includes Stateline 1, 2 and 3.

\(^3\) The Final Order authorized construction of 127 turbines. However, only 126 were actually built. The Final Order described the four Stateline 1 permanent met towers as “guyed masts set in concrete foundations” (Final Order page 12). However, the certificate holder now plans to use unguyed, concrete met towers for both Stateline 1 and 2. Nevertheless, if any permanent guyed met towers are used, the certificate holder shall comply with the provisions in this plan that address guyed met towers.
Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

c) Standardized carcass searches
2) Established monitoring transect searches
3) Raptor nesting surveys
4) Burrowing owl surveys
5) FPL's Stateline Wind Project Wildlife Response and Reporting System

Following is a discussion of the components of the monitoring plan, statistical analysis methods for fatality data and data reporting.

1. Definitions and Methods

Seasons

This plan uses the following dates for defining seasons:

<table>
<thead>
<tr>
<th>Season</th>
<th>Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring Migration</td>
<td>March 16 to May 15</td>
</tr>
<tr>
<td>Summer/Breeding</td>
<td>May 16 to August 15</td>
</tr>
<tr>
<td>Fall Migration</td>
<td>August 16 to October 31</td>
</tr>
<tr>
<td>Winter</td>
<td>November 1 to March 15</td>
</tr>
</tbody>
</table>

Search Plot Selection

The certificate holder shall conduct standardized carcass searches 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 (in general, every other plot is sampled in a monitoring year). Turbine strings will be broken into rectangular search plots that contain two to four turbines each. The edge of plots will be no closer than 63 meters from the nearest turbine or, if guyed meteorological (met) towers are used, no closer than 63 meters from the nearest guyed met tower. The certificate holder shall provide maps of the search plots to the Office of Energy 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 and Sampling Frequency

The certificate holder will begin monitoring in Oregon upon the beginning of operation of the facility. For Stateline 1, the first "monitoring year" commenced January 1, 2002. For Stateline 2, the first monitoring year will commence January 1, 2003. For Stateline 3, the first monitoring year will commence January 1, 2006.

Within each monitoring year for Stateline 1 and 2, the certificate holder will conduct standardized carcass searches at the rates of frequency shown below. Over the course of one monitoring year, the certificate holder would conduct 16 searches. The total number of searches per season is based on applying the rate to the number of months in the season (as defined above).
Oregon Wildlife Monitoring Plan  
[REVISED JUNE 6, 2003]

<table>
<thead>
<tr>
<th>Season</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring Migration</td>
<td>2 searches per month (4 searches)</td>
</tr>
<tr>
<td>Summer/Breeding</td>
<td>1 search per month (3 searches)</td>
</tr>
<tr>
<td>Fall Migration</td>
<td>2 searches per month (5 searches)</td>
</tr>
<tr>
<td>Winter</td>
<td>1 search per month (4 searches)</td>
</tr>
</tbody>
</table>

For Stateline 3, the certificate holder shall conduct 9 searches, beginning approximately March 15. Subsequent searches shall be done approximately the 15th of each month, ending on November 15.

Sample Size for Standardized Carcass Searches

For the standardized carcass searches described below, the sample size is the number of turbines searched per monitoring year. Because the number of turbines per search plot varies from two to four (as described above), the number of search plots will be less than the sample size (total number of turbines searched per year).

The determination of the sample size is based primarily on the expected precision in the fatality estimates for the entire Stateline Wind Project in Oregon and Washington.

Stateline 1 sample size: The certificate holder shall search a minimum of 123 turbines during the first monitoring year, of which at least 63 are in Oregon. The certificate holder shall search a minimum of 123 turbines during the second monitoring year, of which at least 63 are in Oregon. Over the first two monitoring years, all 126 Oregon turbines will be searched for at least 12 months. In addition, if guyed met towers are used, all permanent guyed met towers will be searched during each monitoring year.

Stateline 2 sample size: The certificate holder shall search a minimum of 30 turbines in 2003. The certificate holder shall search a minimum of 15 turbines in 2006. The certificate holder shall select the 15 turbines in consultation with ODFW and the Office of Energy. In addition, if guyed met towers are used, all permanent guyed met towers will be searched during each year of fatality monitoring.

Stateline 3 sample size: The certificate holder shall search 56 turbines in 2006. The certificate holder shall select the turbines in consultation with ODFW and the Office of Energy from the following turbine strings: BG-A, D-A, D-C, D-D, G-A, G-B, SH-A, SH-B, SH-C, V-A, WAY-A, WAY-B and WAY-C. If fewer than 56 turbines in these strings are built by December 31, 2005, then the certificate holder shall search all turbines in these strings that are built.

Duration of Fatality Monitoring

Stateline 1: The certificate holder may terminate fatality monitoring of Stateline 1 turbines on December 31, 2003, subject to the approval of the Office of Energy.

Stateline 2: The certificate holder may terminate the fatality monitoring of Stateline 2 turbines after completing two monitoring years of those turbines, subject to the approval of the Office of Energy.

Stateline 3: The certificate holder may terminate the fatality monitoring of Stateline 3 turbines after completing one monitoring year, subject to the approval of the Office of Energy.
For both Stateline 1 and Stateline 2, the certificate holder shall use a worst-case analysis to resolve any uncertainty in the results based on the first two years of data and to determine whether the first two years of data indicate that mitigation is required.\(^4\) In lieu of approving the termination of the fatality monitoring program for either Stateline 1 or Stateline 2 after two years, the Office of Energy may require additional, targeted monitoring if the first two years of data indicate the potential for unexpected impacts of a type that cannot be resolved appropriately by worst-case analysis and appropriate mitigation.

For Stateline 3, the certificate holder shall use a worst-case analysis to resolve any uncertainty in the results and to determine whether mitigation is required. In lieu of approving the termination of the fatality monitoring program for Stateline 3 after one year, the Office of Energy may require additional, targeted monitoring if the data indicate the potential for unexpected impacts of a type that cannot be resolved appropriately by worst-case analysis and appropriate mitigation.

### 2. Removal Trials

The objective of the removal trials is to estimate the length of time avian and bat carcasses remain in the search area. Carcass removal studies will be conducted during each season in the vicinity of the search plots. Estimates of carcass removal 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 certificate holder shall conduct carcass removal trials within each of the seasons defined above for Stateline 1 and 2 in those years in which the certificate holder performs fatality monitoring. This monitoring plan does not require removal trials for Stateline 3. Planted carcasses will not be placed in the carcass search plots because they might be confused with wind turbine-related fatalities, especially if they have been scavenged. Planted carcasses will be placed in the vicinity of search plots but not so near as to attract scavengers to the search plots themselves. The planted carcasses will be located randomly within the carcass removal trial plots.

Each season, approximately 10 carcasses of birds of two size classes (20 total carcasses) will be distributed in each of two habitat types (grassland/shrub-steppe and cultivated agriculture).\(^5\) The total number of trial carcasses may vary. Small carcasses (e.g., house sparrows, starlings, commercially available game bird chicks) will simulate passerines and large carcasses (e.g., raptor carcasses provided by agencies, commercially available adult game birds or cryptically colored chickens) will simulate large birds such as raptors, game birds and waterfowl. If fresh bat carcasses are available, they may also be used.

The certificate holder shall conduct ten removal trials per monitoring year: two in the spring season, three in summer, two in fall and three in winter.\(^6\) In each trial in the spring and fall, at least five carcasses from each size class (10 total carcasses) will be placed in each of the two habitat types. In each trial in the summer and winter, at least three carcasses from each size class will be distributed.

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\(^4\) The certificate holder shall make this determination separately for Stateline 1 and 2; that is, based on two years of data on the Stateline 1 turbines and, separately, based on two years of data on the Stateline 2 turbines.

\(^5\) This means that approximately 160 trial carcasses would be used in carcass removal trials during one monitoring year.

\(^6\) For Stateline 1 and Stateline 2 monitoring years.
class (6 total carcasses) will be placed in each of the two habitat types. Trials will be spread throughout the year to incorporate the effects of varying weather, climatic conditions, farming practices and scavenger densities.

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 left shoulder), 2) hidden to simulate a crippled bird (e.g., placed beneath a shrub or tuft of grass), and, 3) partially hidden.

It is expected that carcasses will be checked as follows, although actual intervals may vary. Carcasses will be checked for a period of 40 days to determine removal rates. They will be checked every day for the first 4 days, and then on day 7, day 10, day 14, day 20, day 30 and day 40. This schedule may vary depending on weather and coordination with the other survey work. At the end of the 40-day period, the trial carcasses will be removed. Trial carcasses will be marked discreetly (markers to be determined) for recognition by searchers and other personnel. Trial carcasses will be left at the location until the end of the carcass removal trial. The entire carcass may be marked with a substance that fluoresces under a black light as some carcasses may be reduced to feather spots.

Carcass searchers can check carcasses during their regular schedule of searches and additionally on days they are not conducting the searches. Properly trained personnel will conduct the removal trials.

3. 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 certificate holder shall conduct searcher efficiency trials in the same area in which carcass searches occur in both grassland/shrub-steppe and cultivated agriculture habitat types. Trials will be conducted in each season for Stateline 1 and 2 in those years in which the certificate holder performs fatality monitoring. The certificate holder will conduct searcher efficiency trials for Stateline 3 during the spring, summer and fall seasons. Searcher efficiency will be estimated by habitat type and season. Estimates of searcher efficiency will be used to adjust the number of carcasses found, correcting for detection bias.

Each season, approximately 10 carcasses of birds of two size classes (20 total carcasses) will be distributed in each of two habitat types (grassland/shrub-steppe and cultivated agriculture). The certificate holder shall conduct ten searcher efficiency trials per monitoring year for Stateline 1 and 2: two in the spring season, three in summer, two in fall and three in winter. In each trial in the spring and fall, at least five carcasses from each size class (10 total carcasses) will be placed in each of the two habitat types. In each trial in the summer and winter, at least three carcasses from each size class (6 total carcasses) will be placed in each of the two habitat types. For Stateline 3, the certificate holder shall conduct searcher efficiency trials as described in this paragraph, except for the winter season.

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7 This means that approximately 160 trial carcasses would be used in searcher efficiency trials during one monitoring year.
8 For Stateline 1 and Stateline 2 monitoring years.
Personnel conducting searches will not know when trials are conducted; nor will they
know the location of the trial carcasses. 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.

On the day of a standardized carcass search (described below) but before the beginning of
the search, efficiency trial carcasses will be placed at random locations 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
left shoulder), 2) hidden to simulate a crippled bird, and 3) partially hidden. Each carcass will be
discreetly secured at its location to discourage removal by scavengers.

Each non-domestic carcass will be discreetly marked so that it can be identified as an
efficiency trial carcass after it is found. 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.

If new searchers are brought into the search team, additional detection trials will be
conducted to insure that detection rates incorporate searcher differences.

4. Standardized Carcass Searches

The objective of the standardized carcass searches (“fatality monitoring”) is to estimate
the number of bird and bat fatalities that are attributable to facility operation. The goal of bird
and bat fatality monitoring is to obtain a precise estimate of the fatality rate and associated
variances.

On an annual basis, the certificate holder shall report an estimate of fatalities in six
categories: 1) all birds, 2) small birds, 3) large birds, 4) raptors, 5) bats and 6) grassland birds.
The certificate holder shall base these estimates on search data from the entire Stateline Wind
Project in Oregon and Washington. In addition, the certificate holder shall report fatalities of
Washington ground squirrels observed during the carcass searches and shall record and
document detections of Washington ground squirrels (scat, holes and live detections).

The certificate holder 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
whose death appears related to facility operation. 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. Total number of avian and bat carcasses will be estimated by adjusting for
removal and searcher efficiency bias. If the cause of death is not apparent, the mortality will be
attributed to facility operation.

The certificate holder shall conduct two years of fatality monitoring for Stateline 1 area
and two years of fatality monitoring for Stateline 2. For Stateline 3, the certificate holder shall

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9 Years may run concurrently.
conduct three seasons (spring, summer and fall) of fatality monitoring. If analysis of the fatality
data collected after any two monitoring years\textsuperscript{10} indicates that a significant impact on wildlife and
wildlife habitat has occurred, the certificate holder shall implement appropriate mitigation,
subject to the approval of the Office of Energy. Mitigation is discussed in Section 12 below.

Personnel trained in proper search techniques (“the searchers”) will conduct the carcass
searches by walking parallel transects. The searchers will search rectangular search plots with the
long axis of the plot centered on the turbine string. All area within a minimum of 63 meters from
turbines or permanent guyed met towers will be searched. Transects will be initially set at 6
meters apart in the area to be searched. A searcher will walk at a rate of approximately 45 to 60
meters per minute along each transect searching both sides out to three meters for casualties.
Search area and speed may be adjusted by habitat type after evaluation of the first searcher
efficiency trial. It should take approximately 45 to 90 minutes to search each turbine (each search
plot contains multiple turbines), depending on the habitat type.

The searchers will record the condition of each carcass found, using the following
condition categories:

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

All carcasses (avian and bat) found during the standardized carcass searches will be
photographed, recorded and labeled with a unique number. Each carcass will be bagged and
frozen for future reference and possible necropsy. 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 or protected species with the Oregon Department of Fish and
Wildlife (ODFW). The certificate holder shall coordinate collection of federal endangered,
threatened or protected species with the U.S. Fish and Wildlife Service (USFWS). The certificate
holder shall obtain appropriate collection permits from ODFW and USFWS.

The searchers might discover carcasses incidental to formal carcass searches (e.g., while
driving within the project area). If the incidentally discovered carcasses are found at turbines that
are not part of the formal search sample, the searchers will identify, photograph and collect the
carcasses as is done for carcasses within the formal search sample during scheduled searches. If
the incidentally discovered carcasses are within the formal search plots, the searchers will leave
the carcasses undisturbed, unless the carcass is a state or federally threatened or endangered
species. The certificate holder shall coordinate collection of state endangered, threatened or

\textsuperscript{10} After three seasons (spring, summer and fall) for Stateline 3.
protected species with ODFW. The certificate holder shall coordinate collection of federal
endangered, threatened or protected species with the USFWS. The searchers will record the
location of all incidentally discovered carcasses or injured birds on a detailed map of the study
area showing the location of wind turbines and associated facilities such as power lines and met
towers. Any injured native birds found will be carefully captured by a trained Project Biologist
or technician and transported to Blue Mountain Wildlife Center in Pendleton in a timely fashion.
The certificate holder shall follow a protocol for handling injured birds that has been developed
with Lynn Thompkins of Blue Mountain Wildlife.

5. Established Monitoring Transect Surveys

The objective of surveys of established monitoring transects is to determine whether the
operation of the facility results in a loss of habitat quality. A reduction in use by grassland/steppe
avian species near the facility would indicate a loss of habitat quality.

Stateline 1 transects: The certificate holder has established 20 transects
perpendicular to the turbine strings in non-agricultural grassland steppe and CRP
habitats.\textsuperscript{11}

Stateline 2 transects: No additional transects could be established because the
turbine strings are located in cultivated land.

Stateline 3 transects: The certificate holder shall establish six new transects (four
on turbine strings BG-A, BG-B or BG-C, and two on turbine string G-B).\textsuperscript{12}

The transects will be a maximum of 1000 feet (300 meters) long, but, if no alternative
exists, some transects may be shorter due to access problems or a change of habitat type from
non-agricultural habitats to cultivated agricultural habitats. The certificate holder will provide to
the Office of Energy a map or other clear indication of locations where landowners refuse access
and a map of the locations of the established monitoring transects before beginning the
monitoring transect surveys for Stateline 1.

A qualified observer will walk the pre-established transects and record observations of
grasshopper sparrows (singing males and perched birds), long-billed curlews and other
grassland/steppe avian species. The approximate distance along the transect will be recorded for
each detection, and the habitat type will be recorded for each 50 meter (m) segment of the
transect (6 segments).

Three searches will be conducted between mid-April and late June. The searches will
occur at times spread throughout the period, and the same timing of searches will be used for
each monitoring year. Observers will record observations of grassland/steppe avian species
within 50 m on either side of the transect. Numbers of individual birds (if possible to determine)
for each species will be recorded for each transect. Observers will map the locations where

\textsuperscript{11} The original Oregon Wildlife Monitoring Plan (9/14/01) required the certificate holder to survey 24 transects that
had been established before construction of Stateline 1. However, due to changes in project layout between the
initial monitoring plan and the final layout as shown in the site certificate and changes in habitat due to landowner
uses, the number of suitable transects for this survey has been reduced to 20.

\textsuperscript{12} Transects on turbine strings BG-A, BG-B and BG-C were surveyed in 2001 or 2002. In 2003, the certificate
holder shall conduct pre-construction surveys of all six transects that will be used for post-construction surveys.
individual birds are first observed. During each transect search, observers will record detections
of Washington ground squirrels (scat, holes and live detections).

The certificate holder shall conduct a gradient analysis, using regression analysis or other
appropriate statistical methods, to determine the relationship between density of grassland/steppe
avian species and distance from turbines. A “gradient analysis” means an analysis that assesses
whether a significant or a biologically substantial relationship exists between distance from
project structures and abundance or use of the area.

The certificate holder shall conduct post-construction established transect surveys on the
20 Stateline 1 transects in 2002 and 2006. If any Stateline 3 turbines are built, the certificate
holder shall conduct an additional year of transect surveys on the 20 Stateline 1 transects and
shall survey the six Stateline 3 turbines in 2008. The Office of Energy may require a second year
of transect surveys on the Stateline 3 transects if first-year data suggest effects inconsistent with
the results of the Stateline 1 transect surveys.

Based on the results of the Stateline 1 and Stateline 3 transect surveys, the certificate
holder shall determine whether the gradient analysis indicates that the energy facility structures
are causing reduced wildlife use of nearby habitat. If the analysis indicates any displacement of
grassland/steppe avian species has occurred, the certificate holder shall implement appropriate
mitigation, subject to the approval of the Office of Energy. If the gradient analysis suggests that
displacement has occurred but lacks statistical power, the certificate holder shall make the worst-
case assumption that displacement has occurred to the extent demonstrated in available scientific
literature (Leddy et al. 1999) and shall mitigate accordingly. Such mitigation may include the
enhancement of an amount of habitat necessary to support the estimated number of grasshopper
sparrows and other grassland nesting passerines displaced by the wind turbines and the
protection of that enhanced habitat for the life of the facility. The certificate holder shall estimate
the displacement effect and distance using the gradient analysis described above.

The Office of Energy may require additional, targeted surveys if the data from transect
surveys indicate the potential for unexpected impacts of a type that cannot be resolved
appropriately by worst-case analysis and appropriate mitigation.

6. Raptor Nest Surveys

The objectives of raptor nest surveys are to estimate the size of the local breeding
populations of tree-nesting raptor species in the vicinity of the facility and to determine whether
operation of the facility results in a reduction of nesting activity or nesting success in the local
populations of “target raptor species”: Swainson’s hawk, ferruginous hawk, golden eagle and
prairie falcon.

Aerial and ground surveys will be used to gather nest success statistics on active nests,
nests with young and young fledged. The certificate holder will share the data with state and
federal biologists.

During each survey year, the certificate holder shall conduct at least one helicopter
survey and additional surveys as described in this section. All nests will be given identification
numbers, and 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. Locations of
inactive nests will also be recorded as they may become occupied during future years. All new
nests not previously mapped, whether active or inactive, will be given an identification number
and their locations (coordinates) will be recorded. Ground surveys are subject to access.

For Stateline 1, the certificate holder conducted aerial surveys between May 5 and 17,
2002, and between June 8 and 28, 2002. Surveys were conducted within a 5-mile buffer of the
Stateline 1 turbines. In addition, active ferruginous hawk and Swainson’s hawk nests within two
miles of Stateline 1 turbines were surveyed from the ground to determine nesting success.

In 2003, the certificate holder shall conduct an aerial survey within a 2-mile buffer of
Stateline 1 and 2 turbines to determine nest occupancy. In addition, the certificate holder shall
conduct a minimum of one ground survey to determine species, number of young and nesting
success. “Nesting success” means that the young have successfully fledged (the young are
independent of the core nest site). In the ground surveys, the certificate holder shall target
Swainson’s hawk and ferruginous hawk nests and any nests of the target raptor species not
observed during the aerial survey.

In 2006, the certificate holder shall conduct an aerial survey to determine nest occupancy
and a minimum of one ground survey to determine species, number of young and nesting
success. The survey area will be within a 2-mile buffer around Stateline 2 turbines. However, if
any Stateline 3 turbines are built, the survey area will cover a 2-mile buffer around all Stateline
1, 2 and 3 turbines. In the ground surveys, the certificate holder shall target Swainson’s hawk
and ferruginous hawk nests and any nests of the target raptor species not observed during the
aerial survey.

In 2008, if any Stateline 3 turbines are built, the certificate holder shall conduct an aerial
survey within a 2-mile buffer of Stateline 1, 2 and 3 turbines to determine nest occupancy by
ferruginous hawks. In addition, the certificate holder shall conduct a minimum of one ground
survey of ferruginous hawk nests to determine number of young and nesting success.

Given the very low buteo nesting densities in the area, statistical power to detect a
relationship between distance from a 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.

If analysis of the raptor nesting data indicates any reduction in nesting success by the
target raptor species within two miles of the facility, the certificate holder shall implement
appropriate mitigation, subject to the approval of the Office of Energy. At a minimum, if the
surveys reveal that a target raptor species has abandoned a nest or territory within ½ mile of the
facility, or has not fledged any young over any two survey years, the certificate holder shall
assume the abandonment or unsuccessful fledging is the result of the project unless another cause
can be demonstrated conclusively. Based on that assumption, the certificate holder shall
implement appropriate mitigation. In addition, if the data indicate clear evidence of displacement
or disturbance of target raptor nesting species between ½ mile and 2 miles from the facility, the
certificate holder shall implement appropriate mitigation.

For ferruginous hawks, appropriate mitigation may include creation, maintenance and
monitoring of nesting platforms; specifically, eight nesting platforms would be created a
minimum of 2 miles away from turbines for every ferruginous hawk nest assumed or shown to
be affected.
Due to the difficulty in replacing nesting habitat for Swainson’s hawks, appropriate mitigation may include determining the status of the tree structures currently supporting Swainson’s hawks within three miles of the turbines and, with landowner approval, implementing protection measures to retain those structures and to protect existing nest trees. This may include fencing to protect existing trees or spraying black locust trees for insect infestation. It may be appropriate to recruit native tree species.

7. Burrowing Owl Surveys

The objectives of owl surveys are to estimate the size of the local breeding population of burrowing owls in the vicinity of the facility and to determine whether operation of the facility results in a reduction of nesting activity or nesting success in the local burrowing owl population.

Given the expected small sample size of active burrowing owl nests within 1000 feet of the facility, 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. No burrowing owls were observed within 1000 feet of the proposed Stateline 1 turbines during the 2001 spring pre-construction surveys. Therefore, there is no ability to make any statistical or descriptive inferences on burrowing owl displacement or disturbance impacts to burrowing owls in Oregon.

For Stateline 1 and 2 facilities, the certificate holder shall conduct burrowing owl surveys during the breeding season within suitable grassland habitat in association with the fatality monitoring described above in section 4. For each monitoring year, the certificate holder shall conduct a minimum of two surveys for burrowing owls to obtain estimates of burrowing owl nest density near the turbines. For these surveys, the certificate holder shall follow a protocol developed in consultation with ODFW. Taped burrowing owl vocalizations will be played to enhance the ability to detect burrowing owls. Two historic nest sites within the Oregon project area will be checked for use. The burrow and an adjacent 100 meters will be surveyed for sign of activity and alternate nest sites. Based on the results of these surveys after any two years\(^\text{13}\) and data from the standardized carcass searches, the Office of Energy may require the certificate holder to conduct additional burrowing owl nest surveys or other related surveys (e.g., radio-tagging owls) or to provide mitigation. During the burrowing owl surveys, observers shall record and document detections of Washington ground squirrels (scat, holes and live detections).

For Stateline 3 facilities, the certificate holder shall conduct a burrowing owl survey in 2006 for known active or historic burrowing owl nests and any newly discovered nests within 1000 feet of the Stateline 3 wind turbines.

8. Avian Use Surveys

During each standardized carcass search, as described in section 4 above, observers will record birds detected in a ten-minute period at approximately one-third of the turbines within the carcass search plots (e.g., one point count station per carcass search plot which may consist of two to four turbines) using standard variable circular plot point count survey methods. Additional observations of species of concern will be made if observed during the carcass searches, but

\(^{13}\) For Stateline 1 or 2.
collecting this information is secondary to the actual searching for carcasses so the searchers are not
distracted from their main task of finding carcasses.

For Stateline 3, observers shall record observations of birds perching on aboveground
transmission line conductors and support structures in the vicinity of the turbines being searched.
Observers shall document number of perching birds observed, species, location and whether the
perching was on a pole or a conductor. Observers shall report any fatalities observed below or near
transmission lines.

9. FPL’s Stateline Wind Project Wildlife Response and Reporting System

FPL’s Stateline Wind Project Wildlife Response and Reporting System is a monitoring
program set up for searching for and handling avian and bat casualties found by maintenance
personnel. A description of this system and associated data forms used for the Vansycle Ridge
Wind Project are found in FPL’s application for a site certificate (Attachment P-6, Appendices B
and C).

This system has been in place at the Vansycle project since early 2000, and a similar
system is in place for Stateline 1 and Stateline 2. Construction and maintenance personnel will be
trained in the methods. This monitoring program includes both reporting of carcasses discovered
incidental to construction and maintenance operations (“incidental finds”) and reporting of
carcasses discovered under a standardized search protocol for an area within approximately 50
meters of the turbines, measured from the base of the tower (“protocol searches”).

For Stateline 1, a sample of approximately 45 turbines not included in the standardized
carcass searches will be chosen to be included in protocol searches in each Stateline 1
monitoring year. The certificate holder shall select this sample from the overall Stateline Wind
Project in Oregon and Washington, with at least 13 of the sampled turbines located in Oregon.

For Stateline 2, the certificate holder shall select a sample of seven Stateline 2 turbines
not included in the standardized carcass searches to include in protocol searches in each Stateline
2 monitoring year.

For Stateline 3, the certificate holder shall select a sample of approximately 15 percent of
the Stateline 3 turbines that are built by December 31, 2005, and that are not included in the
standardized carcass searches.

All carcasses discovered by maintenance personnel will be photographed and recorded. If
maintenance personnel find carcasses within the search plots for protocol searches, they will
notify a project biologist who will collect the carcasses. If maintenance personnel discover
incidental finds at turbines that are not within search plots for the standardized carcass searches
described in section 4, they will notify a project biologist who will collect the carcasses. If
maintenance personnel discover carcasses within search plots for the standardized carcass
searches described in Section 4, they will leave the carcasses undisturbed, unless the carcass is a
state or federally threatened or endangered or otherwise protected species. The certificate holder
shall coordinate collection of state endangered, threatened or protected species with ODFW. The
certificate holder shall coordinate collection of federal endangered, threatened or protected
species with the USFWS.
10. Statistical Analysis Methods for Fatality Data

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

(1) Observed number of carcasses found during standardized carcass searches for which the cause of death is either unknown or is attributed to the facility.

(2) Searcher efficiency expressed as the proportion of planted carcasses found by searchers

(3) Non-removal rates expressed as the length of time a carcass is expected to remain in the study area and be available for detection by the searchers

Definition of Variables

The following variables are used in the equations below:

c_i the number of carcasses detected at plot i for the study period of interest\(^\text{14}\) 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 63-meter search plot buffer area)

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

s the number of carcasses used in removal trials

s_c the number of carcasses in removal trials that remain in the study area after 40 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 interval between searches in days

\(\hat{F}_i\) the estimated probability that a carcass is both available to be found during a search and is found (i = 1 and 2; two estimators)

m_i the estimated annual average number of fatalities per turbine per year, adjusted for removal and observer detection bias (i = 1 and 2; two estimators)

\(^{14}\) The study period is one year, except for fatality monitoring of Stateline 3 turbines. For Stateline 3, the study period includes only the spring, summer and fall seasons.
Observed Number of Carcasses

The estimated average number of carcasses ($\bar{c}$) observed per turbine (or guyed met tower) is:

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

The final estimate of $\bar{c}$ and its standard error are to be calculated using bootstrapping (Manly et al. 1997\textsuperscript{15}). Bootstrapping is a computer simulation technique that is useful for calculating point estimates, variances and confidence intervals for complicated test statistics. The certificate holder shall calculate the mean of at least 5000 bootstrap estimates. The standard deviation of the bootstrap estimates of $\bar{c}$ is the estimated standard error of $\bar{c}$ (that is, $se(\bar{c})$).

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:

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

This estimator is the maximum likelihood estimator assuming that the removal times follow an exponential distribution and that there is right-censoring of data. Any trial carcasses still remaining at 40 days are collected, yielding censored observations at 40 days. If all trial carcasses are removed before the end of the trial, then $s_c$ is 0, and $\bar{t}$ is just the arithmetic average of the removal times.

The certificate holder shall use bootstrapping to calculate the final estimate of $\bar{t}$, the estimated standard error and 90% confidence limits. At least 5000 bootstrap iterations will be used. The standard deviation of the bootstrap estimates of $\bar{t}$ is the estimated standard error of $\bar{t}$ (that is, $se(\bar{t})$). Removal rates will be estimated by major habitat, carcass size (large and small) and season.

Estimation of Searcher Efficiency

Searcher efficiency rates (that is, the rate of observer detection) are expressed as $p$, the proportion of trial carcasses that are detected by searchers. The standard error (square of variance of mean) and 90% confidence limits will be calculated by bootstrapping. At least 5000 bootstrap iterations will be used. Observer detection rates will be estimated by major habitat, carcass size and season.

Estimation of Total Number of Facility-Related Fatalities

The certificate holder shall provide two estimators for the mean number of fatalities per turbine per year. Both estimators adjust the observed number of fatalities by dividing the number of observed carcasses by an estimate of the probability that a carcass is available to be

picked up during a fatality search (i.e., the probability the carcass is not removed by a scavenger) and is observed (the probability of detection).

The first estimator of total number of annual facility-related fatalities ($m_r$) is calculated by:

$$m_r = \frac{\bar{c}}{\hat{\pi}_1}$$

where

$$\hat{\pi}_1 = \begin{cases} \frac{i \cdot p}{I} & \text{if } I > i \\ p & \text{if } I \leq i \end{cases}$$

This first estimator appears to provide an underestimate of true mortality when the interval between searches is similar to the mean carcass removal time. For this reason, the certificate holder shall calculate the mean number of fatalities per turbine per year\(^{16}\) using a second estimator, as follows:

$$m_2 = \frac{\bar{c}}{\hat{\pi}_2}$$

where $\hat{\pi}_2$ includes adjustments for both observer detection and scavenging bias and assuming that the carcass removal times $t_i$ follow an exponential distribution.

This second estimator does not underestimate true mortality when the mean removal time is similar to or larger than the interval between searches. This estimator will be used when comparisons are made to determine if mitigation should be implemented as described in Section 12.

The certificate holder shall calculate this estimate separately for each of five categories: 1) all birds, 2) small birds, 3) large birds, 4) raptors, 5) bats and 6) grassland birds.\(^{17}\) Estimates will be provided separately for turbines and any permanent guyed met towers. The certificate holder shall calculate the “all birds” estimate and the “small birds” estimate for all species and, separately, for only those species protected by law. Modifications to these estimates will be made to incorporate the varying search efforts by season (monthly in winter and summer, twice monthly in fall and spring). In addition, the certificate holder shall estimate the number of facility-related fatalities separately for turbines that are located on land that does not support grassland steppe or low shrub/shrub steppe habitat and for turbines that are located on land that does support grassland steppe or low shrub/shrub steppe habitat. Additional modifications may be made, subject to approval by the Office of Energy.

\(^{16}\) In the case of Stateline 3, the calculation would be the mean number of fatalities per turbine during the study period (spring, summer and fall seasons). This will also be expressed as the mean number of fatalities per turbine per year for comparison purposes by assuming the Stateline 1 and 2 winter fatality rates apply to the Stateline 3 sampled turbines.

\(^{17}\) Grassland nesting species include grasshopper sparrow, savannah sparrow, vesper sparrow, short-eared owl, burrowing owl, northern harrier, horned lark, western meadowlark, long-billed curlew, ring-necked pheasant, Hungarian partridge, chukar partridge, California quail and any other resident grassland nesting bird species that is found in the area.
The variance of $m$ is difficult to estimate due to the products and ratios of random variables in the equation above. The certificate holder may estimate the variance and confidence intervals using the computer intensive technique of bootstrapping (Manly 1997, Barnard 2000).

11. Data Reporting

The certificate holder will report the monitoring data and analysis to the Council. This report may be included in the annual report required under OAR 345-026-0080 or may be submitted as a separate document at the same time the annual report is submitted. In addition, the certificate holder shall provide to the Council any data or record generated in carrying out this monitoring plan upon request by the Council.

The certificate holder shall notify USFWS and ODFW immediately in the event that any federal or state endangered or threatened species are taken.

The public will have an opportunity to receive information about monitoring results and to offer comment. Within 30 days after receiving the annual report of monitoring results, the Office of Energy will give reasonable public notice and make the report available to the public. The notice will specify a time in which the public may submit comments to the Office. The Technical Advisory Committee established under the Walla Walla County conditional use permit may offer comments about the results of monitoring programs in Oregon.

12. Mitigation

The selection of the mitigation actions that the certificate holder may be required to implement under this plan should allow for flexibility in creating appropriate responses to monitoring results that cannot be known in advance. If mitigation is needed, the certificate holder shall propose appropriate mitigation actions to the Office of Energy and shall carry out mitigation actions approved by the Office of Energy. In addition to mitigation described above, possible mitigation actions include but are not limited to the measures discussed in this section.

Grassland Nesting Species

Grassland nesting species include grasshopper sparrow, savannah sparrow, vesper sparrow, short-eared owl, burrowing owl, northern harrier, horned lark, western meadowlark, long-billed curlew, ring-necked pheasant, Hungarian partridge, chukar partridge, California quail and any other resident grassland nesting bird species that is found in the area. The certificate holder shall determine significant impact to grassland nesting species based on the mortality monitoring program discussed above. The certificate holder shall calculate the average annual fatality rate separately for turbines and, if permanent guyed met towers are used, for permanent guyed met towers. If the average annual fatality rate$^{18}$ is greater than 1.25 fatalities per turbine or guyed met tower per year for all species combined or if the average annual fatality rate is greater than 0.5 fatalities per turbine or guyed met tower per year for a single grassland nesting bird species, then the certificate holder shall assume that a significant impact on habitat has occurred and shall implement appropriate mitigation. The certificate holder shall include in this estimate any grassland nesting species fatality that is observed, even if it is observed during the non-nesting period. The certificate holder shall include in the estimate all carcasses unidentified as to

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$^{18}$ The "average annual fatality rate" is the average of the two annual estimates of fatalities.
species and for which there is no evidence to rule out the carcass as one of the grassland species listed above.

The certificate holder shall determine the need for mitigation for turbine towers and guyed meteorological towers separately. If the analysis of turbine fatality data indicates that mitigation for grassland nesting species is required, the certificate holder shall enhance sufficient habitat to support the number of grassland nesting birds affected. The number of birds affected includes the number of fatalities above the all species threshold (1.25 fatalities/turbine/year) and the number of fatalities above the single species threshold (0.5 fatalities/turbine/year). The certificate holder shall protect that enhanced habitat for the life of the facility. The certificate holder shall propose the amount of habitat enhancement based on expected densities and habitat requirements of these species as described in the literature and studies of the Stateline facility and other wind energy facilities in the Northwest. If the analysis of guyed met tower fatality data indicates that mitigation for grassland nesting species is required, the certificate holder shall implement appropriate mitigation such as 1) enhancing sufficient habitat to support the number of grassland nesting birds affected (determined as above for turbine-related fatalities), 2) moving the guyed met towers associated with high fatalities or 3) changing the design of the met towers to reduce fatality risk.

If the mitigation threshold for grassland nesting species is not met but fatalities of a sensitive species, such as grasshopper sparrow, burrowing owl or long-billed curlew are at a level of concern, the Office of Energy may require the certificate holder to implement mitigation for that species.

Raptors

The certificate holder shall determine significant impact to raptors (excluding burrowing owls, short-eared owls and northern harriers, which are considered under grassland nesting species) based on the fatality monitoring program data and any other raptor fatalities found. If more than an average of two raptor fatalities are found per year, then the certificate holder shall assume that a significant impact on raptor habitat has occurred and shall implement appropriate mitigation.

To mitigate for a significant impact on raptor habitat, the certificate holder shall provide funding to fence draw bottom areas. The certificate holder shall fence draw bottom areas within the facility site or up to 15 miles away within Oregon. The objective of fencing is to retain or establish recruitment of deciduous trees for future raptor nesting. The certificate holder shall include funding for annual monitoring and maintenance of the fencing for the life of the facility. For each raptor fatality above the mitigation threshold, the linear length of fencing, at a minimum, shall be sufficient to fence 1,000 feet of draw bottom that has trees or the potential to grow trees. If no suitable nesting structures are present in the fenced areas, the certificate holder shall plant 10 trees in each fenced area.

If the mitigation threshold is not met but fatalities of a sensitive raptor species, such as ferruginous hawk or Swainson’s hawk are at a level of concern, the Office of Energy may require the certificate holder to implement mitigation for that species.

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The fenced area would be about 50 feet wide for most intermittent streams in the area.
Other Bird Species and Bats

Mitigation measures for grassland nesting birds and for raptors, if implemented, would also benefit other bird species and bats. There is no mitigation threshold for these species. However, if fatalities to these species are higher than expected and are at a level of concern, the Office of Energy may require the certificate holder to implement mitigation for these species.

13. Amendment of the Plan

This Oregon Wildlife Monitoring 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 Office of Energy to agree to amendments to this plan and to mitigation actions that may be required under this plan. The Office of Energy 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 Office.
1. Introduction

The certificate holder is operating a wind power project in Oregon known as the "Stateline Wind Project" or "Stateline Energy Center." This Revegetation Plan addresses only the parts of the project that are located in Oregon, although there are associated wind energy facilities in Washington that are part of the overall project. The turbine strings are spread out along several ridgecrests located approximately six miles southwest of the town of Touchet, Washington. In addition to the turbine strings, additional facilities such as access roads, underground and overhead transmission lines and a substation are part of the project.

In the site certificate, the certificate holder agrees to mitigate impacts associated with the loss of grassland and shrub-steppe habitats and Conservation Reserve Program (CRP) lands. This Revegetation Plan addresses both the revegetation of areas temporarily disturbed by construction of the project and mitigation for permanent loss of habitat by vegetation improvement within Habitat Enhancement Areas. The goal for temporarily disturbed areas (such as road shoulders, underground electric cable trenches and the temporarily disturbed area around tower sites) is to return the disturbed habitat to pre-construction (or better) conditions.

In addition to areas temporarily disturbed during construction of the project, certain areas are permanently affected by the placement of project facilities for the life of the project. These permanently disturbed areas include the location of new or widened roads, the turbine pad areas and the substation area. Some of these areas are located in areas cultivated for winter wheat or other grain crops. No mitigation is proposed for the long-term loss of these agricultural areas (although the landowner is compensated through wind lease payments).

The Oregon portion of the project has three parts:

- Stateline 1: no more than 127 wind turbines and related or supporting facilities as described in the Final Order on the Application.
- Stateline 2: no more than 60 wind turbines and related or supporting facilities as described in the Final Order on Amendment #1.
- Stateline 3: no more than 279 wind turbines, 13 met towers, a substation and other related or supporting facilities as described in the Final Order on Amendment #2.

The tables below show the areas of temporary and permanent disturbance and the affected habitat types for each part of the Oregon facility (excluding agricultural areas rated Category 6):


Revegetation Plan
[REVISED JUNE 6, 2003]

<table>
<thead>
<tr>
<th>Stateline 1</th>
<th>Vegetation Types</th>
<th>Acres of temporary disturbance</th>
<th>Acres of permanent impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Grassland Steppe</td>
<td>0.7</td>
<td>0.5</td>
</tr>
<tr>
<td>3</td>
<td>Grassland Steppe; CRP</td>
<td>77.3</td>
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<tr>
<td>Total Stateline 1</td>
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<table>
<thead>
<tr>
<th>Stateline 2</th>
<th>Vegetation Types</th>
<th>Acres of temporary disturbance</th>
<th>Acres of permanent impact</th>
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<tbody>
<tr>
<td>Category</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Grassland Steppe; CRP</td>
<td>10</td>
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<tr>
<td>4</td>
<td>Grassland</td>
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<tr>
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<table>
<thead>
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<th>Stateline 3</th>
<th>Vegetation Types</th>
<th>Acres of temporary disturbance</th>
<th>Acres of permanent impact</th>
</tr>
</thead>
<tbody>
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<td></td>
<td></td>
</tr>
<tr>
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<td>Grassland Steppe</td>
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<td>Grassland Steppe; Riparian</td>
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<td>Grassland Steppe; CRP</td>
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<td>New CRP Seeded Grassland</td>
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<tr>
<td>Total Stateline 3</td>
<td></td>
<td>153.8</td>
<td>29.2</td>
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</tbody>
</table>

Thus, for Stateline 1, 2 and 3, the certificate holder shall mitigate for permanent impact on a total of approximately 79 acres of grassland steppe and CRP habitats in Oregon. Section 4 describes habitat improvement procedures for degraded habitat that the certificate holder shall revegetate to mitigate for areas of permanent impact. In addition, the certificate holder shall restore the areas of temporary disturbance upon completion of construction of each phase of the project, as shown in the tables. Section 3 below describes revegetation procedures for restoring areas of temporary disturbance.

In order to achieve these habitat mitigation objectives, this plan has been prepared to guide the revegetation efforts. Seed mixes, planting methods and weed control techniques have been developed specifically for the project area through consultations with the Oregon Department of Fish and Wildlife (ODFW), reviews of current literature and site visits by revegetation specialists. The plan also specifies monitoring procedures to evaluate the success of the revegetation efforts, including recommended remediative action should initial revegetation efforts prove unsuccessful in certain areas.

2. Project Area

2.1. Project Description

The Stateline wind power project consists of a number of turbine strings, with Vestas 660 kW wind turbine structures. Each structure is approximately 242 feet (ft.) tall (including the turbine blades), with a rotor diameter of 154 ft. Each turbine is supported on a concrete pad approximately 40 ft. by 40 ft. The turbines are linked by access roads and underground and
aboveground 34.5 kV transmission lines. In addition, the project includes a substation and an 8.5-mile 115-kV or 230-kV transmission line.

Access roads are needed in several areas to transport equipment and personnel to the facilities. In many cases, existing roads are adequate to provide access, but some new roads and expansion of some existing roads are needed. Overhead transmission lines are used to conduct electricity from the turbine strings to a substation and from the substation to existing transmission lines in the Washington.

If the certificate holder constructs all approved Stateline 1, 2 and 3 facilities, the permanent facilities would occupy approximately 165 acres in Oregon. However, a large portion of this total area (approximately 86 acres) is cultivated land.

In addition, areas of temporary disturbance occur during construction of the project. Laydown areas and equipment work areas at the tower sites are needed to construct the turbines. Construction of access roads also requires the temporary disturbance of habitat in addition to permanent disturbance of the roadbed. In addition, construction of powerlines, both above and below ground, temporarily affects habitat. For the underground lines, temporary impacts are similar to pipeline installation, while for the overhead lines, disturbance is primarily limited to the tower bases. Additionally, miscellaneous facilities such as staging areas, parking lots and turnouts are temporarily disturbed during construction. In total, if the certificate holder constructs all approved Stateline 1, 2 and 3 facilities, temporary disturbance would affect approximately 565 acres. However, a large portion of the temporarily disturbed area (approximately 322 acres) is on cultivated land.

2.2. Physiography, Geology, and Soils

The turbine string sites are located on ridgetops that generally run along northwest-southeast lines. Slopes along the strings themselves are gentle, typically ranging from 0° to 10°. slopes down from the ridgetops are variable, generally ranging from 5° to 30°.

Elevations of the turbines strings range from 1,760 ft. above mean sea level to 1,100 ft. Elevations for the access roads and proposed transmission line near Ninemile Canyon range from 1,100 ft. down to 385 ft.

Soils within the project area are primarily basalt-derived loams (NRCS 1994, NRCS 1988). The ridgetops, where the turbines will be located, are typically shallow lithosols. Other areas have deeper soils, which have often been cultivated for small grain production or seeded as grazing lands.

2.3. Climate

The project area averages 10 to 15 inches of precipitation annually, most of which falls from October through March. The average annual air temperature is 50° to 53° Fahrenheit, and the average frost-free period is 135 to 170 days (NRCS 1988). Strong winds are often present along the ridgetops.

2.4. General Vegetation

Potential vegetation communities in the project vicinity are primarily bunchgrass and shrub-steppe associations. On the deeper-soiled habitats, *Agropyron spicatum* (bluebunch
wheatgrass) and Festuca idahoensis (Idaho fescue) are the dominant climax native grasses, and Artemisia tridentata (big sagebrush) is the climax shrub associate. Along some of the ridgetops shallow-soiled lithosol communities are present, dominated by Poa secunda (Sandberg’s bluegrass) and various forb species such as Eriogonum compositum (northern buckwheat) and Phlox hoodii (Hood’s phlox).

Actual vegetation in the general vicinity, however, is heavily disturbed and modified in many places. Much of the area has been cultivated with monoculture crops of wheat and other small grains. Most of the remaining habitat is maintained at an early seral stage due to a number of disturbance factors. Weedy species are prevalent throughout, and extensive habitat modification has taken place. Bromus tectorum (cheatgrass) and other annual grasses are the dominant species on many of the deeper-soiled habitats. Chrysothamnus spp. (rabbitbrushes) are the dominant shrubs in many of the shrub-steppe habitats. The shallow-soiled communities have also been heavily modified over the years.

2.5. Land Use

The project area is privately owned by several agricultural operators. As mentioned above, much of the area is used for cattle grazing and agricultural activities. The cultivated land is used for production of small grain crops such as wheat or barley. The grazed land is either native shrub-steppe or land previously set aside in the federal Conservation Reserve Program. Some of the native habitats on shallow soils receive little or no grazing.

2.6. Environmental Conditions

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

3. Revegetation Procedures (Temporarily Disturbed Areas)

The following methods are recommended for all areas of temporary disturbance in the upland habitats throughout the project area. Section 3.3 addresses restoration of temporarily disturbed riparian habitat.

3.1. Seed Mixture (Temporarily Disturbed Areas)

One seed mixture was developed for use in revegetating all temporarily disturbed upland habitats within the project area (Table 1). Because the project area takes in a variety of different habitats (e.g., deep-soiled habitats, shallow-soiled lithosol communities) it was necessary to use several different species groups, each adapted to a different soil type. The development of a separate species mix for each habitat was considered, but rejected as being impractical in the project area due to the close intermingling of habitat types within the facilities corridors. In order to re-establish plant communities of most value to wildlife, only native species are used. Species
were selected based on their tolerance to xeric (low-moisture) conditions, the availability of their
seed, and a variety of other factors.

3.2. Seed Planting Methods

The choice of methods should be based on site-specific factors such as slope, erosion
potential and the size of the area in need of revegetation. Planting should be done at the
appropriate time of year based on weather conditions and timing of the disturbance. Disturbed,
unseeded ground may require chemical or mechanical weed control before weeds have a chance
to go to seed.

3.2.1 Broadcast Method

1. Obtain the seed from a reputable source to avoid contamination.
2. Broadcast the seed mixture at the given rate.
3. Apply locally obtained, weed free straw at a rate of 2 tons per acre immediately after
   broadcasting the seed.
4. Crimp straw into the ground using a tractor-mounted straw crimper.

3.2.2 Hydroseed Method

1. Obtain the seed from a reputable source to avoid contamination.
2. Broadcast the seed mixture at the given rate.
3. Apply wood cellulose fiber mulch (mixed with a tackifier) at a rate of 1 ton per acre
   immediately after broadcasting the seed.

3.2.3 Drill Method

1. Obtain the seed from a reputable source to avoid contamination.
2. Plant seed mixture at ½ the rate given in Table 1 using a seed drill.
3. Apply locally obtained, weed free straw at a rate of 2 tons per acre immediately after
   broadcasting the seed.
4. Crimp straw into the ground using a tractor-mounted straw crimper.

3.3. Restoration of Riparian Areas

The certificate holder shall seed all temporarily disturbed riparian areas (stream bed
alterations associated with road crossings) with grass species using seed mixtures and seeding
methods appropriate for the site. In addition, at the road crossing located immediately west of the
Stateline 3 substation, the certificate holder shall plant bare root willow shrub stock. The
certificate holder shall plant twenty shrubs along the disturbed stream bank to provide shrub
cover for wildlife and for moderating stream temperatures.
4. Habitat Improvement Procedures (Habitat Enhancement Areas)

4.1. Introduction

To mitigate for permanent loss of habitat due to placement of facilities (e.g. turbines, access roads), the certificate holder shall rehabilitate habitat on a like number of acres located in the vicinity of the project. The total amount of non-agricultural land estimated to be permanently disturbed by the project, and for which mitigation is needed, is approximately 79 acres. For Stateline 1 and 2, the certificate holder has acquired the legal right to create and maintain an enhancement area of 50 acres for the life of the facility. For Stateline 3, the certificate holder shall acquire the legal right to create and maintain the enhancement area of 35 acres for the life of the facility. The habitat enhancement areas are chosen based on a number of factors including:

- the condition of the plant communities (the heavily disturbed habitats are preferred due to the greater potential for improvement);
- accessibility and slope;
- soil type (deeper soils are preferred to aid establishment of desirable grass species);
- distance from the proposed turbine strings (the enhancement areas must be located away from turbine strings to avoid attracting additional avian species to the turbine areas);
- proximity to other functioning wildlife habitat such as the slopes of Vansycle Canyon, native grassland or shrub habitat, CRP grassland; and
- willingness of the landowner to participate in the mitigation activity.

4.2. Habitat Improvement Procedures

The certificate holder shall implement the following measures within the designated enhancement areas. The certificate holder has the ultimate responsibility for implementation and maintenance of these mitigation measures, although other parties may be subcontracted to carry out the procedures.

4.2.1 Fencing

The enhancement areas will be fenced prior to treatment to exclude cattle and other domestic ungulates, if the adjacent land use includes grazing. No domestic grazing will take place within the enhancement areas for the first five years while native vegetation is being established. Once the inspector certifies that all success criteria have been met and predominantly native vegetation is established (see Section 5.2 below), limited domestic grazing may occur. This grazing will be kept to levels that do not significantly degrade the native habitat. It is expected that regular maintenance will be required to keep the fences functioning. Gates will be installed at regular intervals along the perimeter to allow for the regulation of grazing activities. No livestock supporting facilities (such as watering and mineral sites, corrals, etc.) will be allowed in the enhancement areas.

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1 See site certificate conditions (66), (67) and (104).
2 See site certificate condition (112).
4.2.2 Preparation of Habitat

The recommended preparation procedure is to chemically treat the enhancement areas in March or April of the first year to suppress or eliminate weedy species as needed prior to seed set. The goal is to remove competing non-native vegetation from the parcel to assist in the later establishment of desirable species. Depending on seedbed conditions, tilling may be necessary in the fall prior to the spring spraying.

4.2.3 Revegetation

The entire parcel will be seeded using the seed mixture given in Table 2. The recommended procedure is to plant the mixture in October or November at the rate given in Table 2 using a no-till seed drill (five to ten inch row spacing, 1/2 inch planting depth).

4.2.4 Shrub Plantings

The recommended seed mixture contains big sagebrush seeds. However, shrub establishment from seed is often unsuccessful in xeric conditions, such as those found within the project area. Should revegetation monitoring determine that shrub re-establishment within all or part of the habitat improvement parcel has been unsuccessful, shrubs will be planted in those areas.

The certificate holder or designated contractor will obtain containerized (10 cubic inch) big sagebrush from a regional source. The seedlings will be planted within 1 week of delivery, and the unplanted seedlings will be stored in a shaded area and watered as needed. Ten percent of the acres within the parcel will be randomly selected for shrub planting. The seedlings will be planted in clumps of three, with the clumps approximately 20 feet apart (100 clumps per acre). Depending on seasonal moisture during the following spring, irrigation may be necessary to achieve satisfactory establishment. This may be accomplished by watering each clump to saturation once in late May and again in late June.

4.2.5 Maintenance

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

5. Monitoring

5.1. Monitoring Procedures (Temporarily Disturbed Areas)

In the fall of the year following each seeding and continuing annually for five years, a qualified independent botanist or revegetation specialist will examine all reseeded riparian areas and a representative cross-section of the revegetated upland sites and report to the Oregon Office of Energy. Care will be taken to survey areas in all the major habitat types and throughout the geographic extent of the project area. At least 20% of the revegetated acreage will be examined.

In consultation with the ODFW, the certificate holder shall choose reference sites near the revegetated areas to represent the target conditions for the revegetation effort. For each
revegetated area, the certificate holder shall choose a reference site in the immediate vicinity that represents the realistically attainable vegetative conditions for that area. The certificate holder shall choose these reference sites based on factors including land use patterns in the area, soil type, aspect and noxious weed densities. The goal in choosing these reference sites is to identify areas that provide a realistically attainable goal that will determine the success threshold level for a particular revegetated area. It is anticipated that it will be necessary to choose several reference sites to adequately represent all the various habitat conditions within the project area.

The certificate holder shall choose the reference sites during or after field visits by the revegetation monitoring specialist and ODFW personnel. Once the reference sites are chosen, they will be used for comparison during all subsequent monitoring visits, unless some event (such as wildfire) significantly changes habitat conditions so that a particular reference site no longer represents a realistically attainable habitat goal for the associated revegetated area. In that case, the certificate holder shall choose a new reference site.

At each monitoring location, the investigator shall evaluate the following parameters (both within the revegetated area and within the reference site):

- Degree of erosion due to construction activities (high, moderate or low).
- Average stems of desirable vegetation per square foot.

The investigator shall evaluate the revegetated area and the reference site separately to allow for later determination of revegetation success.

5.2. Monitoring Procedures (Habitat Enhancement Areas)

In the fall of the year following the seedings, a qualified independent botanist or revegetation specialist will examine a representative cross-section of plots within the revegetated parcel. These visits will occur yearly for the first five years and then take place every five years for the life of the project (although additional monitoring visits may be performed as noted below). Care will be taken to survey areas in all the major habitat types and throughout the geographic extent of the revegetated parcel. At least 10% of the revegetated acreage will be examined. After each survey, the qualified independent botanist or revegetation specialist will report to the Oregon Office of Energy.

At each plot, the investigator shall evaluate the following parameters:

- Percent survival of the shrub plantings (if applicable).
- Average stems of desirable vegetation per square foot.

In addition to the regular monitoring schedule (every year for the first five years, and then once every five years after that), a qualified investigator shall conduct additional monitoring visits in the habitat enhancement areas if grazing levels are changed significantly. In particular, if domestic grazing is introduced in the parcel or if the grazing regime is changed significantly, the investigator shall monitor the parcel every fall for two years following the grazing change. This is intended to make sure that domestic grazing activities do not significantly degrade habitat quality such that the parcel fails to meet the success criteria defined below.
5.3. Success Criteria (Temporarily Disturbed Areas)

A temporarily disturbed area is successfully revegetated when the average desirable vegetation stem density within the revegetated area is greater than, or equal to, that observed in the comparable reference site.

For riparian areas, the success criterion for willow shrub establishment is survival of 10 of the 20 planted willow shrubs. Revegetation success for seeded grass species is based on a comparison with a nearby riparian reference area (selected by the certificate holder and approved by ODFW). A reseeded riparian area is successfully revegetated when the stem density of desirable species (stems per square foot) in the reseeded area is equal to or greater than the density observed in the reference area.

If success criteria are not met for a site at the time of a monitoring inspection, the investigator may recommend reseeding. In small areas (less than 0.2 acres) where weed encroachment may make native seed establishment impossible, additional reseedings may be optional if erosion from construction activities is moderate or low and total vegetative cover (of native and non-native species together) exceeds 30%.

5.4. Success Criteria (Habitat Enhancement Areas)

The habitat enhancement areas are successfully revegetated when the average stem densities of desirable species are greater than 0.5 stems per square foot. Shrub plantings will be considered successful when at least 25% of the sagebrush seedlings have survived. If success criteria are not met for a site at the time of a monitoring inspection, the investigator may recommend reseeding or replanting.

After predominantly native vegetation has been established in a habitat enhancement area, the investigator will verify, during subsequent visits, that the plant communities within the parcel continue to meet the success criteria described above. In particular, if domestic grazing is allowed within the enhancement area, the investigator shall determine whether stocking levels or length of the grazing season are significantly degrading the native habitat. If all or part of the habitat within the parcel has fallen below the success levels described above, the investigator shall recommend remediative measures, which may include replanting selected areas, lowering stocking levels or restricting grazing in the enhancement area.

6. Amendment of the Plan

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

References


Natural Resources Conservation Service (NRCS). 1988. Soil survey of Umatilla County area, Oregon. USDA
Table 1: Revegetation Seed Mixture (Temporarily Disturbed Areas)

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>lbs/acre PLS*</th>
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<tbody>
<tr>
<td>Secar Bluebunch Wheatgrass</td>
<td><em>Pseudoroegneria spicata ssp. Spicata</em></td>
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<tr>
<td>Sherman Big Bluegrass</td>
<td><em>Poa ampla (secunda)</em></td>
<td>6</td>
</tr>
<tr>
<td>Critana Thickspike Wheatgrass</td>
<td><em>Elymus lanceolatus</em></td>
<td>6</td>
</tr>
<tr>
<td>Sandberg's Bluegrass</td>
<td><em>Poa sandbergii (secunda)</em></td>
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<tr>
<td>Basin Big Sagebrush</td>
<td><em>Artemisia tridentata</em></td>
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<tr>
<td><strong>Total</strong></td>
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</table>

Notes: *PLS (Pure Live Seed)
(The above seed mixture is for use in revegetating all upland areas of temporary ground disturbance within the project area.)

Table 2: Revegetation Seed Mixture (Habitat Enhancement Areas)

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
<th>lbs/acre PLS*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Secar Bluebunch Wheatgrass</td>
<td><em>Pseudoroegneria spicata ssp. Spicata</em></td>
<td>3</td>
</tr>
<tr>
<td>Sherman Big Bluegrass</td>
<td><em>Poa ampla (secunda)</em></td>
<td>3</td>
</tr>
<tr>
<td>Critana Thickspike Wheatgrass</td>
<td><em>Elymus lanceolatus</em></td>
<td>3</td>
</tr>
<tr>
<td>Whitmar Beardless Wheatgrass</td>
<td><em>Pseudoroegneria spicata ssp. Inermis</em></td>
<td>3</td>
</tr>
<tr>
<td>Appar Lewis Blue Flax**</td>
<td><em>Linum perrenne</em></td>
<td>0.5</td>
</tr>
<tr>
<td>Basin Big Sagebrush</td>
<td><em>Artemisia tridentata</em></td>
<td>0.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

Notes: *PLS (Pure Live Seed) **Optional in areas where ongoing or expected application of broad-leaved herbicides to control weedy species would limit the establishment of blue flax
(The above mixture is for use in seeding habitat within the specific habitat enhancement areas set aside as mitigation for permanent project ground disturbance. This mix should not be used to revegetate areas temporarily disturbed by project construction.)
This plan describes measures that the certificate holder shall implement during construction and operation of facilities located in Category 1 habitat associated with the Stateline Wind Project in Oregon. This plan addresses the potential impacts to Category 1 habitat in and around turbine strings BG-B, BG-C and BG-E, as identified in the Final Order on Amendment #2. This plan acknowledges that construction and operation of the facility cannot avoid all impacts to Category 1 habitat within the energy facility site. The plan describes a framework of avoidance and mitigation measures. These measures assure that the certificate holder avoids impact to the resource to the extent possible and provides reasonable mitigation for those impacts that are unavoidable. This plan has been developed in consultation with the Oregon Department of Fish and Wildlife and the Oregon Office of Energy.

The avoidance and mitigation measures described in this plan are designed to offset unavoidable direct and indirect impacts on Category 1 habitat during construction and operation. The overall goal is to achieve a net benefit to the Washington ground squirrel (WGS), an endangered species under Oregon law. The plan has the following five elements:

- Avoidance of direct and indirect habitat impacts during construction
- On-site conservation of WGS habitat for the life of the energy facility
- Monitoring of the existing WGS colony
- Inventory of additional nearby suitable or occupied WGS habitat
- Support for research on the WGS at Boardman, Oregon.

1. Avoidance of Impacts

The objective of this element of the plan is to avoid and minimize potential impacts to the WGS. In the design and construction of the energy facility, the certificate holder shall avoid most of the known locations of WGS natal areas and associated use areas. The certificate holder shall avoid habitat that is of high value for supporting the species currently or in the future. High-value habitats are those areas characterized as areas of deep soil and the bluebunch wheatgrass vegetation community. Avoidance of disturbances in Category 1 habitat during construction and rapid restoration of temporarily disturbed areas is critical to reducing the damage to the resource. The certificate holder shall limit construction activities as much as possible in affected areas and avoid the core of the known WGS colony. The certificate holder shall prohibit vehicular traffic outside of identified construction areas and limit foot traffic to environmental and cultural survey needs and cleanup activities as required.

The certificate holder shall implement the following construction and operation measures:

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2 The “known” WGS colony as used in this plan is based on survey data collected in 2001 through 2002.
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1. The certificate holder shall locate turbines, roads and underground transmission lines at strings BG-B, BG-C and BG-E to avoid Category 1 habitat to the extent possible. Where impact is unavoidable, the certificate holder shall locate these facilities in shallow, rocky soils to the extent possible and avoid deeper soils.

2. The certificate holder shall plan transformer box placement, crane pad locations and underground transmission line routes to reduce the area of Category 1 habitat impacts.

3. The certificate holder shall sequence the stages of construction to reduce habitat impacts.\(^3\)

4. The certificate holder shall locate new access roads to the upwind side of the turbine string to avoid putting roads in deep soil areas.

5. The certificate holder shall provide an environmental inspector during construction. The environmental inspector shall identify authorized construction areas. The construction manager or his representative shall limit contractor activities to those authorized areas so as to reduce additional potential habitat impacts. The certificate holder shall provide contractors with maps showing sensitive habitat and closed areas.

6. The certificate holder shall locate areas of temporary disturbance during construction (laydown and staging areas) outside of Category 1 habitat. The certificate holder shall restore and reseed areas of temporary habitat disturbance according to the Revegetation Plan included in the final order as Attachment B and as revised from time to time. The certificate holder shall use the method of hydro-mulching on top of drilled grass seed instead of the more typical straw crimping method. This method avoids wind-blown straw collecting in undisturbed areas and potentially creating artificial mulch on top of an otherwise open grassland plant community.

7. The certificate holder shall implement general mitigation measures and site-specific restrictions on construction activities described in other site certificate conditions to reduce temporary and permanent impacts to Category 1 habitat at BG-B, BG-C and BG-E.

2. On-Site Conservation Area

Conserving WGS habitat in the area near BG-B, BG-C and BG-E offers a significant benefit to WGS survival. Despite the state listing of the WGS as an endangered species, there is no legal restriction on development by a private landowner of areas determined to be Category 1 habitat essential to the WGS. An on-site conservation easement offers an opportunity that is otherwise unavailable for long-term preservation of known WGS habitat.

FPL Energy Vansycle, LLC, (FPL) has negotiated long-term Conservation Area Agreements for two parcels (360 and 40 acres) of native grassland habitat surrounding the known WGS colonies near BG-B and BG-C. The two parcels are contiguous but owned by

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\(^3\) Normally, a wider area construction zone is needed to allow various contractors to work concurrently on their specific task without interrupting each other. At BG-B, BG-C and BG-E, sequencing the construction activities will minimize the disturbed area.

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separate landowners. Together, both parcels encompass the primary WGS colony and small
active sites plus most of the associated use area as described in the Final Order on Amendment
#2. The proposed Conservation Area Agreements (Parcel #1 and Parcel #2) prohibit the
landowners from increasing livestock grazing beyond recent historical levels and from otherwise
adversely affecting the habitat quality or knowingly disturbing the squirrels.

The conservation areas established under this plan are located on private property. This
plan does not allow access to the conservation areas by the general public or government agency
personnel. Access to the conservation areas must be authorized by the landowner or by the
certificate holder under the terms of a lease with the landowner.

The conservation measures required under the terms of the Conservation Area
Agreements will provide habitat protection to an existing WGS colony and an important use area
that otherwise would be vulnerable to increased farm use or other land use changes. This
protection will allow the WGS to use good quality habitat in a pattern similar to what was
documented before construction, at least outside of the permanent footprint areas and reseeded
areas. The Conservation Area Agreements assure long-term protection of a large block of
category 1 habitat suitable for the WGS and other grassland species for the life of the wind
leases. The purpose of the Conservation Area Agreements is to provide a net benefit, despite the
permanent loss of a relatively small area of category 1 habitat.

The certificate holder shall provide to the Office of Energy fully-executed copies of the
Conservation Area Agreements or other proof satisfactory to the Office before beginning
construction of the Stateline 3 wind turbines at BG-B, BG-C and BG-E as described in the Final
Order on Amendment #2. The certificate holder shall promptly provide fully-executed copies or
other satisfactory proof of any future amendments or superseding future agreements. Any such
amendments or superseding agreements must conform to the terms of this plan.

Parcel #1

Parcel #1 is the 360-acre parcel. The specific terms of the Conservation Area Agreement
for Parcel #1 shall include, in substance, the following:

1. The life of the Conservation Agreement is the length of the wind lease. If the
certificate holder wants to continue wind power generation beyond the current lease
period, the wind lease would be renegotiated, and the Conservation Agreement’s
terms would be extended for the length of the renegotiated wind lease.

2. If the Stateline Wind Project is sold to another operator before retirement of the
facility, the Agreement would remain in effect and transfer to the new operator or the
new operator shall obtain a superseding agreement that conforms to the terms of this
plan. If the landowner sells Parcel #1, the new owner shall be bound by the
Agreement or a superseding agreement that conforms to the terms of this plan.

3. Livestock grazing is optional. The grazing season will commence between November
15 and December 15 and shall end no later than May 5. Livestock shall not be
allowed to access Parcel #1 outside of the grazing season.

4. No more than one Animal Unit per 10 acres of land is permitted. "Animal unit" is
defined as (a) one adult cow or bull, (b) a cow and her calf, or (c) two yearlings. In
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addition, the landowner shall be allowed to graze up to three horses. No other types of domestic livestock are permitted on the Parcel #1. Currently the landowner grazes approximately 710 acres as one contiguous pasture, inclusive of the 360-acre parcel. Should the landowner wish to increase the number of Animal Units per acre for the 710-acre pasture above one animal unit per 10 acres, the landowner would be required to separate the 360-acre Parcel #1 from the remaining acres to ensure the allowed ratio on the 360-acre parcel is met. Fences would be required if the landowner wishes to increase the number of Animal Units per acre on the adjoining property.

5. Existing fences will be maintained in good working order. Fences enclosing Parcel #1 are not necessary unless the landowner wants to exceed more than one Animal Unit per 10 acres permitted for the Parcel (see #4).

6. No watering sites or mineral blocks will be allowed to be placed on the east side of the BG-C string so as to avoid the most sensitive WGS habitat.

7. The landowner agrees to refrain from any other use of the Mitigation Parcel that might detract from its value as habitat for WGS, including but not limited to clearing vegetation, plowing, grading, building barns, stables or similar structures, spraying herbicides and/or pesticides, and human activity beyond what is needed for managing the grazing. The landowner can spray weeds as needed to control starthistle or other noxious weeds to promote good grazing practices.

Parcel #2

Parcel #2 is the 40-acre parcel. The specific terms of the Conservation Area Agreement for Parcel #2 shall include, in substance, the following:

1. The life of the Conservation Agreement is the length of the wind lease. If the certificate holder wants to continue wind power generation beyond the current lease period, the wind lease would be renegotiated, and the Conservation Agreement’s terms would be extended for the length of the renegotiated wind lease.

2. If the Stateline Wind Project is sold to another operator before retirement of the facility, the Agreement would remain in effect and transfer to the new operator or the new operator shall obtain a superseding agreement that conforms to the terms of this plan. If the landowner sells Parcel #2, the new owner shall be bound by the Agreement or a superseding agreement that conforms to the terms of this plan.

3. Current land use practices will be maintained for the duration of the wind lease as defined in the wind lease. Grazing is optional and can be eliminated if the landowner chooses.

4. Animal Units are allowed depending on the seasonal characteristics; there is no annual minimum or maximum. The landowner agrees to not increase the stocking or extend the grazing season beyond what has historically been in place by the family.

5. No newly constructed watering troughs will be allowed on the parcel. Any use of mineral blocks would remain consistent with recent historic use.
6. The landowner agrees to maintain good land-use practices, which have thus far been compatible with a WGS colony, by agreeing to not plow the land for farming and to not build barns, stables or similar structures. The landowner can spray weeds as needed to control starthistle or other noxious weeds to promote good grazing practices.

3. Monitoring of the Existing Colony

The WGS presents a challenge for monitoring because of within- and between-year variability in patterns of WGS landscape use, recruitment, dispersal and natural mortality. Pre- and post-construction population density estimates, though a viable technique, require intensive effort and may be confounded by variable capture/recapture rates or violation of modeling assumptions. Such estimates may fail to reflect changes in patterns of landscape use by the WGS.

The objective of the monitoring element of this plan is to document measurable changes to the overall level of use of the existing population at BG-B and BG-C as characterized during the baseline study results conducted during the spring seasons of 2001, 2002 and 2003. "Level of use" means the overall level of activity and distribution within and adjacent to the turbines in established survey corridors. It does not include an assessment of population dynamics or colony health. Measurable changes, for example, could potentially range from the known colony at BG-C vacating the site to, at the other extreme, a measurable increase in the size and distribution of the colony.

Two years (two squirrel seasons) of baseline data have been collected at the sites using the baseline monitoring protocol, described below. If construction does not begin in 2003 until after the peak squirrel use period (ending May 31), the certificate holder shall conduct a third year of baseline data collection in 2003 using the baseline monitoring protocol to better assess and update the baseline squirrel use.

Operational monitoring data collection will provide an understanding of the species’ response to a change in their environment and ability to adjust to the presence of wind energy facilities. The certificate holder shall conduct operational monitoring in the first, third and fifth years after completion of construction within WGS habitat in the area near BG-B and BG-C. For example, if the certificate holder completes construction in these areas in 2003, the first year of operational monitoring would commence in the spring of 2004. The second monitoring year would be 2006 and the third, 2008. The monitoring schedule may be altered by amendment of this plan, as provided in Section 7 below, if there is a need to monitor consecutive years due to changes in use or other factors.

Baseline Monitoring Protocol

The baseline monitoring protocol is a survey consisting of walking transects within 1,000 feet of the proposed BG-B and BG-C turbines and all related or supporting facilities associated with the BG-B and BG-C strings. The survey is conducted during the WGS activity season (April and May). This survey method is designed to sample the area for presence of the WGS. In

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4 Described in the Request for Amendment #2, Exhibit 14 and a report of 2003 baseline data to be prepared in June 2003.
2003, the survey will exclude areas of steep, west-facing rocky slopes where WGS are not likely to burrow.

This site has been studied extensively for presence of wildlife species of concern. Intensive mapping of all squirrel holes in June 2002 validated the effectiveness of the 164-foot wide transects. For these reasons, this survey method should detect a change from the pre-construction use documented in 2001, 2002 and 2003. It may not be as sensitive to subtle changes or be able to measure changes in numbers of breeding adults, but it is expected to be thorough enough to detect a change in the level of activity characterized in the 2001, 2002 and 2003 surveys.

**Operational Monitoring Protocol**

Operational monitoring will utilize the standard pre-construction data collection methods implemented in 2001, 2002 and 2003. The standard 164-foot wide transects will be walked once in early to mid-April and again in early May within 1,000 feet of the turbine strings on both Parcel #1 and Parcel #2 (measured from the outside edge of the permanent footprint, including access roads). Within the total transect area of about 334 acres near turbine strings BG-B and BG-C, approximately 43 acres have shallow, rocky soil on a steep slope that will not be monitored. Therefore, the monitored area will total about 291 acres.

Data gathered during operational monitoring will include locations of concentrated activity (indicating natal sites), estimated boundary of colony (if possible to determine), notes on sign of predator activity and habitat descriptions such as plant community type and quality. This survey effort will provide a representative sample of the area. It is not a complete survey. Data will be entered into a GIS database and results will be mapped at a scale of 1” = 200’. The certificate holder shall obtain continuous weather data covering the entire monitoring period through July 2008, unless the monitoring schedule is altered as described above. Because WGS populations appear to ebb and flow with vegetation response to weather patterns, the weather data will aid in assessing extremes that may be influencing the WGS population in the monitored area.

4. **Inventory of Nearby Habitat**

The certificate holder shall inventory and map WGS distribution near the BG-E turbine string in 2006 (or the third year after construction, whichever is later) in the area of the historic colony. The inventory areas include all of the suitable habitat and the young Conservation Reserve Program tract within the leased land within 1,000 feet of the BG-E turbine string (measured from the outside edge of the permanent footprint, including access roads).

The certificate holder shall conduct standardized surveys, using the operational monitoring protocol method described in Section 3 above. Transects will be walked by experienced field biologists, approximately 164 feet apart, twice from April 15 through May 20. Data gathered will include locations of concentrated use (indicating natal sites), estimated boundary of colony, notes on sign of predator activity and habitat descriptions such as plant community type and quality. The data will be entered into a GIS database and results will be mapped at a scale of 1” = 200’. The certificate holder shall obtain continuous weather data covering the entire monitoring period. Project personnel will be trained on identification of the species and will report any Washington ground squirrel observations at BG-E to the operations
manager for the duration of the first three years of operation. The data will be included in
monitoring reports prepared for this mitigation plan along with the formal inventory results
collected during the third year after construction.

Data gathered in this inventory effort combined with results of the operational monitoring
effort is intended to benefit the WGS in several ways. It will guide future regulatory decisions by
providing a fuller understanding of the use of available suitable habitat and the extent of WGS
distribution in the proposed development areas. It will aid in gaining insight on natal and
dispersal area use and activity. The data will provide a better understanding of the habitat needs
of the WGS. The data will provide insight to the ability of the WGS to use habitat in proximity to
developments such as wind turbines, roads and underground collector cables and the associated
vehicular traffic from maintenance vehicles. These data may also be useful for assessing the
overall status of the WGS populations throughout their geographic range.

5. Research Support

The certificate holder shall contribute a one-time payment of $10,000 to a masters-level
WGS research project at Boardman, Oregon, before beginning construction in Category I
habitat. Such research efforts indirectly benefit the WGS because they provide information about
the habitat requirements and behaviors of the WGS. This information can guide state agencies in
future regulatory decisions that may affect the survival and recovery of the species.

The certificate holder’s contribution, in conjunction with other funds, will support
telemetry research into adult daily movements of the WGS in the Boardman study area. This
research will refine understanding of day-to-day movements of individual squirrels in a colony
and help determine the amount of room a colony needs to function successfully. The contribution
will also support completion of a 10-year study in colony dynamics. This research seeks to
clarify the evolution of a colony over time. This work will provide insight on why colonies
establish, enlarge and vacate specific locations under natural circumstances. The purpose of this
research is to shed light on the conditions and causes of colony disruption that result in size
reduction or loss of a colony.

6. Data Reporting

The certificate holder shall report the monitoring and inventory data and analysis to the
Oregon Office of Energy. This information may be included in the annual report required under
OAR 345-026-0080 or may be submitted as a separate document when the certificate holder
submits the annual report. In addition, the certificate holder shall provide to the Office any data
or record generated in carrying out this mitigation plan upon request by the Office.

7. Amendment of the Plan

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