BEFORE THE ENERGY FACILITY SITING COUNCIL

OF THE

STATE OF OREGON

IN THE MATTER OF THE REQUEST FOR AMENDMENT #1 OF THE SITE CERTIFICATE FOR THE STATELINE WIND PROJECT	))))	FINAL ORDER ON AMENDMENT #1

May 17, 2002

STATELINE WIND PROJECT

FINAL ORDER ON AMENDMENT #1

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STATELINE WIND PROJECT

FINAL ORDER ON AMENDMENT #1

I. INTRODUCTION

The Energy Facility Siting Council (Council) issues this 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 Stateline, an 83.8-megawatt wind energy facility in Umatilla County, Oregon. FPL began construction on September 17, 2001, and completed construction on December 19, 2001. The facility began commercial operation before December 31, 2001. The Council's Final Order on the site certificate application[1] describes the facility in more detail. FPL requests an amendment (#1) that would allow an expansion of Stateline by adding turbines and increasing the electric generating capacity of the facility. 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.

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 Office of Energy (Office) on January 22, 2002. As required under OAR 345-027-0070, within 15 days after receiving the request, copies of the request were sent to the appropriate officers, agencies and tribes listed in OAR 345-020-0040. The Office requested comments by February 22. Also as required under the rule, the Office sent notice of the amendment request to all persons on the Council's mailing list and on a list of property owners supplied by FPL. On February 5, 2002, the Office notified FPL that the proposed order would be issued by April 5. On April 5, the Office notified FPL that it needed additional time to prepare the proposed order and explained the circumstances justifying the delay, as allowed under OAR 345-027-0070(4).

After issuing the proposed order on April 11, 2002, the Office sent the notice required under OAR 345-027-0070(4). The deadline for public comment or requests for contested case was May 13. The Office received no public comments or contested case requests.

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 all other state statutes, administrative rules and local government ordinances in effect on the date the Council makes its decision.

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[1] Final Order dated September 14, 2001.

III. DESCRIPTION OF THE PROPOSED AMENDMENT

The amendment would allow FPL to expand the existing Stateline facility[2] (refered to in this order as "**Stateline 1**") by the construction[3] of 60 additional turbines and related or supporting facilities in Oregon (referred to in this order as "**Stateline 2**"). The new turbines would increase the electrical generating capacity of the facility by approximately 39.6 megawatts. After the proposed expansion, Stateline would comprise 186[4] turbines in Oregon with a combined electrical generating capacity of approximately 122.8 megawatts. In addition, the amendment would allow the construction of two permanent meteorological (met) towers. After the proposed expansion, the Stateline facility would have a total of six permanent met towers.[5] The proposed expansion would include construction of approximately 6.5 miles of new access roads and improvement of approximately 1.5 miles of existing farm roads.

The proposed Stateline 2 turbines would be Vestas V-47 660-kW turbines, the same as are currently operating at Stateline 1. The new turbines would be located in strings to the southeast of existing Stateline 1 turbine strings along slopes southwest of Vansycle Canyon in Township 6 North, Range 32 East.[6] The turbines would be located on privately-owned land for which the FPL has negotiated wind energy leases. Stateline 2 would permanently occupy approximately 30 acres, and an additional area of approximately 103 acres would be temporarily disturbed during construction.[7] Access for construction and operation would be from North Fork Juniper Canyon Road and Stockman Road.

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. Turbines and turbine towers would be painted a uniform light gray color, similar to the Stateline 1 turbines.

Energy from each new turbine would be transmitted by 34.5 kV underground collector cables connected to an underground collector circuit near string HG-L of the Stateline 1 facilities. That underground collector circuit connects to the substation in Washington that FPL constructed for Stateline 1 (known as the 9-Mile Substation). No overhead transmission would be constructed.

1. Changes to the Site Certificate as Proposed by FPL

FPL proposed the following amendments to the site certificate. Additions are double-underlined and deletions have a strikethrough.

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[2] As described in the Final Order on the site certificate application, pages 9-13.

[3] 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.

[4] The site certificate authorized FPL to construct 127 Stateline 1 turbines. However, FPL elected to build 126 due to site conditions. If all 60 Stateline 2 turbines are built, Stateline would have a total of 186 turbines.

[5] The Final Order on the site certificate application described the four Stateline 1 met towers as "guyed masts set in concrete foundations" (Final Order page 12). However, FPL now plans to use unguyed, concrete met towers for both Stateline 1 and 2.

[6] Two maps of the Stateline 2 location are included in the Request to Amend Site Certificate (Exhibit 3, Figure 1, and Exhibit 4, Figure 2) and are incorporated herein by this reference.

[7] Details of the areas permanently occupied and temporarily disturbed are shown in the Request to Amend Site Certificate, page 5, Tables 1 and 2, incorporated herein by this reference.

At page 2, lines 21-30:

1. The Facility

(a) Major Structures

The Stateline Wind Project ("facility") consists of ~~127~~ 187 Vestas V47-660-kilowatt (KW) wind turbines with a total a nominal electric generating capacity of ~~83.8~~ 123.4 MW (~~127~~ 187 turbines, each with a capacity of 0.66 MW). Each wind turbine is connected to the next by a 34.5-kilovolt (kV) collector system. The wind turbines are grouped in "strings" of ~~5~~ 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 collect the electrical output of each Oregon turbine string. Major facility structures are further as described in the final order.

At page 11, lines 22-26:

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

(a) Design, construct and operate a facility consisting of ~~127~~ 187 Vestas V47-660-kilowatt (kW) wind turbines (App B-2, Table B-3)

(b) Group the turbines in strings of ~~5~~ 4 to 37 turbines, each spaced approximately 250 feet from the next (Table B-3, App B-11)

At page 12, lines 19-27:

(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~~ $872,000 (in ~~2001~~ 2002 dollars) naming the State of Oregon, acting by and through the Council, as beneficiary or payee.

(a) The calculation of ~~2001~~ 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 ~~2001~~ 2002 dollars.

At page 17, lines 20-36:

(67) To mitigate for the permanent elimination of approximately ~~48~~ 49 acres of Category 3 habitat, the certificate holder shall control weeds and enhance habitat on an equal area 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. 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. (App P-44)

(68) To minimize impacts to temporarily disturbed ~~Category 6~~ habitat areas, the certificate holder shall use measures including but not limited to the following (App P-45):

(a) Replacing agricultural topsoil to its pre-construction condition

(b) Using best management practices to prevent loss of topsoil during construction

(c) Reseeding native habitats with a native seed mix that includes at least some seed collected from the area as described for temporarily disturbed habitats in the Revegetation Plan included in the final order as Attachment B

(d) Controlling noxious weeds in areas disturbed by construction activities

At page 19, lines 13-24:

(80) The certificate holder shall submit to the State of Oregon through the Council a bond or letter of credit in the amount of ~~$1,161,120~~ $1,704,240 (in ~~2001~~ 2002 dollars) naming the State of Oregon, acting by and through the Council, as beneficiary or payee (the "retirement fund").

(a) The calculation of ~~2001~~ 2002 dollars shall be made using the Index described in Condition (43).

(b) The certificate holder shall use a form of retirement fund 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 retirement fund shall not be subject to revocation or reduction before retirement of the energy facility.

(e) The certificate holder shall describe the status of the retirement fund in the annual report submitted to the Council under Condition (8).

2. Changes to the Site Certificate Approved Under This Order

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 addition of new turbines to the Stateline facility. The Council approves amendment of the site certificate as described in this section.

At page 1, lines 7-13:

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"), ~~which by this reference is incorporated herein. The Council~~ issued ~~the final order~~ 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 #1]

In interpreting this site certificate, any ambiguity will be clarified by reference to the following, in order of priority: this First Amended Site Certificate~~site certificate~~, the Final Order on Amendment #1, the final order issued on September 14, 2001, and

the record of the proceedings ~~which~~that led to the final order and the Final Order on Amendment #1. [Amendment #1]

At page 1, lines 25-31:

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. 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). [Amendment #1]

At page 2, lines 21-30:

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 ~~with~~ a total a nominal electric generating capacity of ~~83.8~~83.2 MW (~~127~~126 turbines, each with a capacity of 0.66 MW) as described further in the final order.
- 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.

Each wind turbine is connected to the next by a 34.5-kilovolt (kV) collector system. The wind turbines are grouped in "strings" of ~~5~~ 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 collect 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. [Amendment #1]

At page 3, lines 1-8:

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. [Amendment #1]

At page 3, lines 9-19:

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 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 substation to a BPA 115-kV transmission line north of the Walla Walla River and to a PacifiCorp substation just north of Highway 12. The collector system is further as described in the final order and in the Final Order on Amendment #1. [Amendment #1]

At page 3, lines 20-24:

Meteorological Towers

The facility includes six permanent meteorological (met) towers to measure wind conditions. ~~Four permanent met towers are located in Oregon. These towers are guyed masts set in concrete foundations approximately 40 inches in diameter and 8 feet deep. The met towers are 165 feet tall.~~ The met towers may be guyed or unguyed towers. The met towers are ~~further~~otherwise as described in the final order and in the Final Order on Amendment #1. [Amendment #1]

At page 3, lines 30-34:

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 Order on Amendment #1. [Amendment #1]

At page 3, lines 35-39, and page 4, lines 1-2:

IV. CONDITIONS FOR STATELINE 1 REQUIRED BY COUNCIL RULES

This section lists conditions 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) and in OAR Chapter 345, Division 26 (Construction and Operation Rules for Facilities). These conditions should be read together with the additional specific facility conditions ~~recommended~~ in section V to ensure compliance with the siting standards of OAR Chapter 345, Divisions 22 and 24 and to protect the public health and safety. These conditions apply to Stateline 1. [Amendment #1]

At page 9, lines 21-25:

V. SPECIFIC FACILITY CONDITIONS FOR STATELINE 1

The conditions listed in this section include conditions based on representations in the site certificate application and supporting record. The Council deems these representations to be binding commitments made by the applicant. These conditions are required under OAR 345-027-0020(10). These conditions apply to Stateline 1. [Amendment #1]

At page 11, lines 22-26:

(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]

(b) Group the turbines in strings of ~~5~~ 4 to 37 turbines, each spaced approximately 250 feet from the next (Table B-3, App B-11) [Amendment #1]

At page 12, lines 4-12:

(41) If the certificate holder elects to use a bond to meet the requirements of Conditions (43), ~~or~~ (80), or (102), 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]

At page 17, lines 1-3 (Condition(65)):

(e) Restoring temporarily disturbed sites to pre-construction condition or better with native seed mixes as described for temporarily disturbed habitats in the Revegetation Plan included in the final order as Attachment B and as revised from time to time. [Amendment #1]

At page 17, lines 11-19:

(66) To mitigate for the permanent elimination of one-half acre of Category 2 habitat, the certificate holder shall control weeds and enhance habitat of one acre of weed-infested upland habitat with native plants. 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. (App P-44) [Amendment #1]

At page 17, lines 20-28:

(67) To mitigate for the permanent elimination of approximately 48 acres of Category 3 habitat, the certificate holder shall control weeds and enhance habitat on an equal area 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. (App P-44) [Amendment #1]

At page 17, lines 33-35 (Condition (68)):

(c) Reseeding native habitats with a native seed mix that includes at least some seed collected from the area as described for temporarily disturbed habitats in the Revegetation Plan included in the final order as Attachment B and as revised from time to time. [Amendment #1]

At page 19, lines 34-42, and page 20, lines 1-6:

(84) For the purposes of this site certificate, the term "legal description" means a description of location by reference to a map and geographic information system (GIS) data that clearly and specifically identifies the physical location of all parts of the facility, including but not limited to turbine towers, meteorological towers, roads and underground collection cables. Notwithstanding OAR 345-027-0020(2), for the purposes of this site certificate, wind turbine tower locations are analogous to location of permanent rights-of-way for pipelines or transmission lines as described in OAR 345-027-0023(6). The Council approves the corridor described in the final order for construction of turbine strings. Before beginning operation of the facility, the certificate holder shall submit to the Office of Energy a legal description of the location where the certificate holder has built turbine towers and other parts of the facility. Before beginning operation of any turbines that are added to the facility by amendment of the site certificate, the certificate holder shall submit to the Office of Energy a legal description of the location of any additional turbine towers and related or supporting facilities allowed by the amendment. ~~The Office shall append the legal description to the site certificate.~~ The site of the facility is the area identified by ~~that~~ the legal descriptions required by this condition. By means of the legal descriptions, the certificate holder shall provide to the Office of Energy and the Umatilla County Planning Department the actual location of each turbine and all connecting lines. (OAR 345-027-0020(3)) [Amendment #1]

At page 20, lines 21-24:

(88) If the turbine blades need to be washed, the certificate holder shall use no more than 500 gallons of water per turbine, trucked to the site by a contractor and purchased from a source with a valid water right. The certificate holder shall use high-pressure cold water only and shall not use chemicals or additives in the wash water. (App O-2) [Amendment #1]

At page 21, lines 15-18:

(93) The certificate holder shall conduct wildlife monitoring as described in the Oregon Wildlife Monitoring Plan, included in the final order as Attachment A and as revised from time to time. Subject to approval by the Office of Energy as to professional qualifications, the certificate holder shall hire qualified wildlife consultants to carry out the monitoring. (OAR 345-022-0060) [Amendment #1]

At page 21, following line 36:

VI. SPECIFIC FACILITY CONDITIONS FOR STATELINE 2 [This section added by Amendment #1]

The conditions listed in this section include conditions based on representations in the request for Amendment #1 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 2. Conditions (98), (99), (100) and (103) also apply to Stateline 1.

In addition to the conditions listed in this section, all conditions in sections IV and V also apply to Stateline 2, except Conditions (11), (15), (19), (24), (27), (39), (42), (43), (53), (54), (55), (56), (66) and (80).

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, 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.

(98) The certificate holder shall retire the facility if the certificate holder permanently ceases construction or operation of the facility. The certificate holder shall retire the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110. The certificate holder shall pay the actual cost to restore the site to a useful, non-hazardous condition at the time of retirement, notwithstanding the Council's approval in the site certificate of an estimated amount required to restore the site.

(99) Before any transfer of ownership of the facility or ownership of the site certificate holder, the certificate holder shall inform the Office of Energy of the proposed new owners. The requirements of OAR 345-027-0100 apply to any transfer of ownership that requires a transfer of the site certificate.

(100) If the Council finds that the certificate holder has permanently ceased construction or operation of the facility without retiring the facility according to a final retirement plan approved by the Council, as described in OAR 345-027-0110, the Council shall notify the certificate holder and request that the certificate holder submit a proposed final retirement plan to the Office within a

reasonable time not to exceed 90 days. If the certificate holder does not submit a proposed final retirement plan by the specified date, the Council may direct the Office to prepare a proposed a final retirement plan for the Council's approval. Upon the Council's approval of the final retirement plan, the Council may draw on the bond or letter of credit described in section (8) to restore the site to a useful, non-hazardous condition according to the final retirement plan, in addition to any penalties the Council may impose under OAR Chapter 345, Division 29. If the amount of the bond or letter of credit is insufficient to pay the actual cost of retirement, the certificate holder shall pay any additional cost necessary to restore the site to a useful, non-hazardous condition. After completion of site restoration, the Council shall issue an order to terminate the site certificate if the Council finds that the facility has been retired according to the approved final retirement plan.

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 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.

(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 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 $559,920 (in 2002 dollars).

(f) The bond or letter of credit shall not be subject to revocation or reduction, except as allowed by paragraph (e), before retirement of the Stateline 2 site.

3. Conditions That Apply During Construction

(103) To minimize the risk of fire, the certificate holder shall:

(a) Construct turbines, towers and pads of fire retardant materials

(b) Bury electrical cables

(c) Use enclosed, locked pad-mounted transformer structures

(d) Include built-in fire prevention measures in turbines

(e) Not store combustible materials at the Stateline site.

(104) To mitigate for the permanent elimination of approximately 1 acre of Category 3 and 4 habitat, the certificate holder shall enlarge the habitat enhancement area described in Condition (67) by 1 acre (making a total area of 49 acres).

3. Conditions That Must Be Met During Operation

(105) The certificate holder shall enter into an agreement with the landowner of a property identified as 84301 Stockman Road, Helix, Oregon, requiring that the structure remain uninhabited during construction. The certificate holder shall continue the no-occupation agreement during operation for the life of the Stateline 2 facility unless, based on noise studies during operation, the certificate holder demonstrates to the satisfaction of the Office of Energy that turbine noise measured at the property is within the range allowed for a sensitive noise receptor under OAR 340-035-0035.

At page 21, line 37:

~~VI.~~ VII. SUCCESSORS AND ASSIGNS

At page 22, lines 1-7:

~~VII.~~ VIII. SEVERABILITY AND CONSTRUCTION

If any provision of this agreement and certificate is declared by a court to be illegal or in conflict with any law, the validity of the remaining terms and conditions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the agreement and certificate did not contain the particular provision held to be invalid. 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, the conditions contained in this site certificate shall control. [Amendment #1]

At page 22, line 8:

~~VIII.~~ IX. GOVERNING LAW AND FORUM

At page 23, lines 1-7:

~~IX.~~ X. EXECUTION

This site certificate may be executed in counterparts and will become effective upon ~~receipt by the Oregon Office of Energy of a facsimile transmission of the signature page of this site certificate with the signatures of the~~ signature by the Chair of the Energy Facility Siting Council and the ~~notarized signature of the person duly~~ authorized representative of the certificate holder~~to sign on behalf of FPL~~. ~~Such facsimile signature pages shall be replaced as soon as reasonably possible, but no longer than 30 days, with signature pages containing original signatures of the authorized signers.~~ [Amendment #1]

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

1. General Standard of Review

Under OAR 345-022-0000(1), to amend a site certificate, the Council must determine that a preponderance of the evidence on the record supports the following conclusions:

1. The proposed facility complies with the standards adopted by the Council pursuant to ORS 469.501.
2. Except as provided in ORS 469.504 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 applicable to the issuance of a site certificate for the proposed facility.
3. The facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission.

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 have been delegated to another state agency by the federal government. ORS 469.503(3). The Council has no jurisdiction over design or operational issues that do not relate to siting, such as matters 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 non-siting regulations are listed in section V.2(b). The Council may, however, 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.

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 site certificate application, the Council found that FPL had the organizational, managerial and technical expertise to construct and operate the Stateline 1 facilities. Since that time, FPL has built Stateline 1 as described in that order and in compliance with the terms and conditions of the site certificate. In the request for amendment, FPL states that neither FPL nor FPL Energy has had any regulatory citations to report.[8] In constructing and operating the proposed 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 2 as it used for construction of Stateline 1. FPL has no ISO programs, and therefore section (2) does not apply.

[8] 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.

Third-Party Permits (Sections 3 and 4)

The City of Helix will be able to provide all water necessary for construction of the facility.[9] The water right has already been issued, and no further action or approval from the Department of Water Resources is required because municipal water rights may be used for such industrial use.

The construction contractors would obtain certain permits that are typically obtained by and issued to construction contractors, such as building permits and oversize load movement permits. These permits do not relate to siting and are not under Council jurisdiction (see ORS 469.401(4)).

Conclusions of Law

The Council concludes 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 2 facilities in compliance with Council standards and conditions of the site certificate. The Council further concludes that the certificate holder has a reasonable likelihood of entering into a contractual or other arrangement with the City of Helix for access to water under the city's water right (a third-party permit). Conditions (28) and (46) relate to the Council's organizational expertise standard as it applies to Stateline 2.

(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 2 site is located on land zoned for exclusive farm use in Umatilla County. To satisfy the standard, it must be feasible and possible to restore the site to an 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

[9] Request to Amend Site Certificate, Exhibit 6.

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 2 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. However, given the small amounts of such materials used on the site, the soil contamination is unlikely.[10]

Retirement of the Stateline 2 would require dismantling the turbines, towers, pad-mounted transformers, met towers and related aboveground equipment allowed under the amendment. Turbine towers, nacelles and pad-mounted transformers would have salvage value for use or as scrap. All unsalvageable material would be removed and transported 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. The underground collection and communication cables would not require removal because they would be at a depth of three feet or greater (Condition (62)). These cables could be abandoned in place without being a hazard or interfering with agricultural use or other consistent resource 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. Re-vegetation would include the use of 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. Roads could be left in place based on landowner preference, without violating the standard of leaving the site in a useful, non-hazardous condition. 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

Section (2) of the standard 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. For the purpose of providing a fund for the State of Oregon to pay site restoration costs if the certificate holder fails to perform its

[10] 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.

obligation, the Council assumes circumstances under which the restoration cost would be greatest.

In the Final Order on the original site certificate, the Council found the following estimated costs to be reasonable for restoring the areas of permanent disturbance[11]: $5,800 per turbine for turbine demolition, foundation removal, and 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.[12] The Council found it 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. Applying these estimates to the additional turbines and road areas that would be added by the proposed expansion, results in an estimated cost of $466,600.

Cost Estimate for Restoring Areas of Permanent Disturbance

Turbine demolition, foundation removal, grading and reseeding @ $5,800 per turbine	60 turbines	$ 348,000
Access road removal and grading @ $3,200 per acre	28 acres	89,600
Reseeding road areas @ $500 per acre	28 acres	14,000
Reseeding area disturbed during restoration work @ $500 per acre	30 acres	15,000
Total		$ 466,600

If a site restoration remedy were needed when construction is substantially complete but before the certificate holder has restored temporary laydown and staging areas, the cost of site restoration would be greater, because it would include the cost of restoring 103 acres of temporarily disturbed areas. In the Final Order on the site certificate application, the Council found that the cost of removing and regrading temporarily disturbed areas would be similar to the cost of road removal ($3,200 per acre). Assuming equipment operation would disturb an area equal to the restoration area, full site restoration would include reseeding a total of 206 acres at a cost of $500 per acre. The additional cost for restoring the laydown and staging areas would be $432,600, and the total estimated restoration cost for Stateline 2 would be $899,200.

Added Cost Estimate for Restoring Laydown and Staging Areas

Temporary area removal and grading @ $3200 per acre	103 acres	$ 329,600
Reseeding temporary areas @ $500 per acre	103 acres	51,500
Reseeding area disturbed during restoration work @ $500 per acre	103 acres	51,500
Total		$ 432,600

In contrast, if 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.[13] 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

[11] Areas occupied by turbines, turbine pads, met towers and access roads.
[12] The Council found these cost estimates reasonable when it approved the site certificate on September 14, 2001. For the purpose of this amendment request submitted less than six months after issuance of the site certificate, it is reasonable to assume that the estimates are still valid.
[13] Condition (20) requires restoration of temporarily disturbed areas before operation begins.

contingency to the cost of restoring the areas permanently affected by the proposed expansion. The additional estimated cost for the contingency would be $93,320, and the total estimated restoration cost for the expansion area would be $559,920.

These costs must be added to the estimated cost of restoring the Stateline 1 site 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 financial assurance bond or letter of credit for restoring the Stateline 2 site should be $899,200 during construction of Stateline 2. 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 2 site should be $559,920. This 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 are in 2002 dollars and should be adjusted annually as described in Condition (102).

FPL was able, in fact, to obtain letters of credit in the amounts required by the current site certificate. FPL proposes provide a temporary letter of credit during construction of Stateline 2. After construction is complete, FPL proposes to amend or replace the long-term letter of credit required for Stateline 1[14] to include the additional amount needed to restore Stateline 2. A letter First Union National Bank dated February 21, 2002, states that the bank would "reasonably be likely to issue" letters of credit "in an aggregate amount at any one time outstanding of not to exceed $1,000,000 (not including the $1,161,120 letter of credit issued...on December 21, 2001)."

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.

Conclusions of Law

The Council concludes that the Stateline 2 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 concludes that $899,200 (in 2002 dollars) is a reasonable estimate of the cost to restore the proposed Stateline 2 site to a useful, non-hazardous condition if the certificate holder permanently ceases construction or operation of the proposed expansion before restoring the temporarily disturbed areas. The Council further concludes that $559,920 (in 2002 dollars) is a reasonable estimate of the cost to restore the proposed Stateline 2 site to a useful, non-hazardous condition if the certificate holder permanently ceases construction or operation of the proposed expansion after having restored

[14] Conditions (19) and (80) require a bond or letter of credit in the amount of $1,161,120 (in 2001 dollars) during operation of Stateline 1. The amount is adjusted annually based on the Index described in Condition (43).

the temporarily disturbed areas. The Council further concludes 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 (15), (19), (41), (80) and (102) relate to the Council's financial assurance standard as it applies to Stateline 2.

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:

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 2 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 January 22, 2002, the date the amendment request was submitted. 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 site certificate application.[15]

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 2 to be "consistent with all applicable county land use standards, including those found in the Comprehensive Plan and the Development Ordinance."[16] This conclusion was contingent on

[15] The Council identified the "applicable substantive criteria" in the Final Order on the site certificate application, beginning on page 20.
[16] Letter from the Commissioners, February 20, 2002.

incorporation of the County's conditional use permit criteria and other recommended conditions in the final approval of the site certificate amendment. The Commissioners' finding was based on the Umatilla County Planning Department's Staff Findings and Conclusions, dated February 20, 2002 ("Findings").

Based on the analysis below, the Council finds that Stateline 2 would comply with the applicable substantive criteria of Umatilla County and with all directly applicable provisions of the LCDC administrative rules.

Umatilla County Development Code

UCDC Section 152.060 – Conditional Uses Permitted

In its Findings, the County identified the proposed Stateline 2 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 Exclusive Farm Use (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."[17] Further, the ordinance requires a zoning permit, pursuant to § 152.025, following the approval of a conditional use permit.[18]

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 2, 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 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…."

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[17] See discussion on page 28 regarding 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 24 for discussion of § 152.615. See page 26 for discussion of § 152.616.

[18] See page 29 for a discussion of § 152.025.

In its Findings, the Umatilla County Planning Department found that Stateline 2 is "consistent with the purposes of the County's Exclusive Farm Use (EFU) zone which allows for development of a commercial utility facility as a conditional use in the EFU zone."

The Stateline 2 turbine pads, met towers, access roads and underground collector cables would be located on a single privately-owned parcel of land. The facilities would occupy approximately 30 acres of the total parcel area of 2,564 acres. Of the 30 acres that Stateline 2 would occupy, all but about 2 acres is non-irrigated cropland recently used for growing wheat.

The turbines would be spaced approximately 250 feet apart. 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 landowner to minimize any crop impacts. The electrical and communications cables would be located along the strings, typically within 10 feet of the road centerline, and would be buried at a depth of at least 3 feet. See Conditions (37), (44) and (62).

The landowner would be able to conduct farm operations around the turbine strings. The spacing of the towers, height of the turbine blades and depth of the underground cables are such that Stateline 2 would not interfere with the current use of the land for the primary purpose of raising crops. The landowner concurs that the construction and operation of the expansion would not have any significant impact on farming activities.[19] Operation of the facility would have no effect on resource use of the remainder of the affected parcel or on adjacent lands. The certificate holder states that the lease with the landowner requires FPL to make reasonable efforts not to disturb farming and ranching activities on the facility site.[20] See Condition (40). The certificate holder further states that the lease protects the landowner from any increases in property taxes associated with the construction or operation of the facility.[21]

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, approximately 103 acres would be temporarily disturbed during construction. The temporarily disturbed areas would be restored after construction of the Stateline 2 facilities (Conditions (20), (68) and (82)). Trenches would be backfilled within two weeks after trenching and the trenched areas re-vegetated. Topsoil removed during trenching would be separated and returned as topsoil (Condition (62)). Water would be used for dust suppression 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 2 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 15.

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[19] Letter, dated February 27, 2002, from Julie Rugg, Barnett-Rugg Inc., owner of the property on which the expansion facilities would be built.
[20] Request to Amend Site Certificate, page 14.
[21] Request to Amend Site Certificate, page 13.

(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 2 "does not interfere significantly with accepted farming practices as defined in ORS 215.203(2)(c) on adjacent lands devoted to farm uses, nor interfere with other resources operations and practices on adjacent lands, and will not force a significant change in or significantly increase the cost of accepted farming practices on surrounding lands devoted to farm use."

Under ORS 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. The Stateline 2 site and adjacent lands are used for rangeland (cattle grazing) or non-irrigated cultivation of small grain (generally winter wheat) with summer fallow, or they are planted with native grasses under the Conservation Reserve Program. There are no prime agricultural soils within the facility site.

Stateline 2 would have little or no impact on customary farm operations or the cost of accepted farm practices on adjacent lands.[22] During construction, the project might cause temporary off-site impacts to farming due to an increase in construction-related traffic. Once operational, however, Stateline 2 would generate little traffic. The location of facility structures might require changes to cropping patterns in the immediate vicinity of the turbine strings, met towers and access roads, but operation of Stateline 2 would cause no off-site 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 2 would not materially alter the overall land use pattern of the area and that the area would remain in farm use. We considered the cumulative effect of the proposed expansion facilities along with the existing Stateline and Vansycle Ridge facilities.[23] As discussed above, the construction and operation of Stateline 2 are compatible with farming activities, which are the primary use of the land in the area of the proposed facility site. Stateline 2 would create no new lots, parcels or non-farm dwellings to the detriment of agriculture in the area. It would

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[22] As stated above, the lease with the landowner requires FPL to make reasonable efforts not to disturb farming and ranching activities on the facility site and protects the landowner from any increases in property taxes associated with the construction or operation of the facility.

[23] A letter from the affected landowner states that the Vansycle facility does not significantly hinder farm operations, Site Certificate Application, Exhibit K-4

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 2 would permanently occupy 30 acres (or less than 2 percent) of a 2,564-acre parcel. Traffic-related impacts during construction would be temporary. The cumulative impact of Stateline 2 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 can and are likely to continue on the properties on which Stateline 1 and 2 are located and on the surrounding properties. Therefore, Stateline 2 would not be developed to the detriment of farm operations. The proposed Stateline 2, together with the existing wind facilities, is not expected to diminish the number of properties or acres in farm use to the extent or in a manner that would destabilize the pattern of land use in the area. The Council finds, therefore, that the cumulative effect of Stateline 2 together with the existing wind energy facilities in the area would cause no impacts to farm activities on adjacent lands that might materially alter the stability of the land use pattern.

> *(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 agreement between FPL and the landowner adequately addresses the issues otherwise addressed by a covenant not to sue. FPL states that the terms of the lease agreement with the landowner "are identical to" the terms of the leases on the Stateline 1 properties.[24] In the Final Order on the original site certificate, 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 certificate holder expects construction activities to be audible only at the closest residence. The Department of Environmental Quality'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. See discussion of the Oregon Department of Environmental Quality's noise standard at page 60. During construction, the certificate holder would implement dust control and suppression measures (Condition (61)).

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[24] See the Application for Site Certificate, Stateline Wind Project, Attachment K-8.

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 two vehicle access points for Stateline 2. These access points would connect access roads on private property to county roads. The certificate holder will contact the Umatilla County Department of Public Works for any required access permits (see Conditions (2) and (45)).

(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 2 would require no new parking or loading areas.

(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;

Lighting would be limited to warning lights required by the Federal Aviation Administration. See Condition (37).

(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. The turbines would be painted a neutral light gray color to blend into the surrounding landscape.

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

Stateline 2 would require no fencing. It is located in a remote area on private property. The turbine controls and access ladders would be located inside the towers, which will be locked. The towers would be tubular as opposed to lattice construction. See Conditions (37) and (38).

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

Stateline 2 would not affect existing trees, rivers or other standing bodies of water. Areas temporarily disturbed by construction activities would be re-vegetated to minimize erosion. Roads and turbine pads would be graveled immediately following exposures to minimize erosion. See Conditions (30), (61), (64), (65) and (68). 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 40. See discussion of findings regarding wetlands at page 62.

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

Stateline 2 requires no new parking areas.

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 intervening topography, the spacing of the turbines, the neutral color of the turbines and the absence of emissions causing other visual impacts, Stateline 2 would not conflict with scenic values. See discussion of the Council's scenic and aesthetic standard at page 48. In its Findings, the Umatilla County Planning Department found that Stateline 2 "is designed and located to minimize conflicts with scenic values and adjacent farming uses as outlined in policies of the Comprehensive Plan."

For the reasons discussed under UCDC § 152.061, Stateline 2 would not conflict with 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 2 would not conflict with adjacent recreational uses. See discussion of the Council's recreation standard at page 50.

(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 2 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 4,000 feet from the nearest Stateline 2 turbine.[25] All other dwellings in the vicinity are more than a mile away from the nearest turbine.

The anticipated noise impacts of Stateline 2 are addressed in the discussion of the Oregon Department of Environmental Quality's noise standard at page 60. Other detrimental impacts include visual and traffic impacts. Some Stateline 2 turbines may be visible from the

[25] Letter, dated March 5, 2002, from Peter Mostow, counsel for FPL Energy.

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 will apply feasible measures to reduce the visual impact of the proposed facility (Condition (37)). See discussion of the Council's scenic and aesthetic values standard at page 48. See discussion of the Council's public services standard at page 57 for an assessment of the effects of increased traffic.

> *(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 2 would not be located adjacent to any dwellings or to a Mountain Recreational or Forest Residential Zone.

> *(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 2 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 cables would be buried. The Stateline 2 turbines would have built-in fire prevention measures. Combustible materials would not be stored at the facility and only a small amount of combustible material would be used 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. The entire Stateline 2 area lies within the Helix Fire Protection District.[26] The Helix Rural Fire Protection District does not foresee any problems in providing adequate fire protection to the additional wind turbines.[27] See Conditions (31), (33), (34), (58), (68) and (96).

> *(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 2 would take no 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.

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[26] E-mail from Andy Linehan, consultant to FPL Energy, dated March 27, 2002.
[27] Letter from Helix Fire Chief, Request to Amend Site Certificate, Exhibit 6.

Trenches would be backfilled and the trenched areas re-vegetated. Topsoil removed during trenching would be separated and returned as topsoil. Areas used for staging, laydown, turnaround and needed for road construction would be scarified and re-vegetated. 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 2 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 2 would affect no acreage governed by Oregon Department of Forestry regulations. Protection of fish and wildlife resources is addressed below in the discussion of the Council's fish and wildlife habitat standard at page 40 and threatened and endangered species standard at page 45.

(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. See Conditions (44) and (81).

(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 2. Road construction work would, however, be performed under an NPDES 1200-C construction permit and regulated by an erosion control plan and best management practices required by that permit. Further, roads and turbine pads would be covered 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 2, and the substance of those recommendations is incorporated in the conditions that are a part of this order.

<u>*UCDC Section 152.063 – Development Standards*</u>

UCDC § 152.063 contains dimensional and development standards applicable in an EFU zone.[28] 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 2 complies with these setback requirements, to the extent that they

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

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 2 would not require sewage disposal installations or construction of structures, buildings or similar permanent fixtures along streams.

Subsection (F) requires compliance with supplementary regulations found in §§ 152.010 through 152.016 and §§ 152.545 through 152.562 and with the exception standards of §§ 152.570 though 152.577. The supplementary regulations found in §§ 152.010 through 152.016 do not apply to the proposed facility because they address uses that are not part of Stateline 2. UCDC §§ 152.545 through 152.548 address sign regulations. Any signs erected at site will 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 graveled turbine pads will provide sufficient parking along the turbine strings. No other parking or loading areas are needed. The exception standards of UCDC §§ 152.570 through 152.577 do not apply to Stateline 2 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[29]:

> *(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.*
>
> *(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 2 because the proposed facilities exceed 120 square feet in size. The land on which Stateline 2 would be located has not been developed or divided in violation of the Umatilla County Development Code.

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[29] The County did not include Section 152.025 in its statement of the applicable substantive criteria (see Final Order on the site certificate application at page 20). However, we include the section because of a cross-reference in § 152.060, one of the identified applicable substantive criteria.

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 2 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 2.

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 to be met when reviewing nonfarm uses for compatibility with agriculture. For the reasons discussed under UCDC § 152.061 above, Stateline 2 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 2 together with Stateline 1 and the Vansycle Ridge facility will have a visual impact. 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 will apply feasible measures to reduce the visual impact of the proposed facility (Condition (37)).

> *(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 2 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), (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. Temporarily disturbed areas would be re-vegetated and the turbine pads and roads would be graveled promptly. 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 (60), (61) and (68).

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

Stateline 2 would not create "unsightly land uses." The turbine towers would be painted gray 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 2 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. Excavation would be necessary for construction of turbine pads and 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), (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 2 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 48.

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

Stateline 2 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 archeological sites.

FPL assessed tribal cultural areas and archeological sites. See discussion of the Council's historic, cultural and archaeological resources standard at page 56. A qualified cultural resource expert would be on the site during construction of Stateline 2. The certificate holder will notify the Office of Energy, the Oregon State Historic Preservation Officer and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) if previously unidentified cultural resources are discovered during construction. See Conditions (75) and (76).

Directly Applicable State Provisions

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.

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 2 complies with these provisions.

ORS 215.283 identifies the nonfarm uses permitted on EFU-zoned land. The proposed facility must fit within the scope of a use described in ORS 215.283(1), (2) or (3). 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.

The Stateline 2 facilities include the energy facility (wind turbines) and its related or supporting facilities (met towers, access roads and underground collector cables). The energy

facility fits within the scope of ORS 215.283(2)(g), which allows "commercial utility facilities for the purpose of generating power for public use by sale" to be located on EFU-zoned land subject to ORS 215.296 (discussed below at page 36) and any applicable local standards and conditions.

To determine whether a related or supporting facility is allowed on EFU-zoned land, the Council must decide if the specific related or supporting facility is more properly characterized as part of the same use as the energy facility or as a separate use. If the related or supporting facilities are characterized as a part of the energy facility, they also would fall within the scope of ORS 215.283(2)(g). However, if they are characterized as separate uses, they would be evaluated under a different subsection of ORS 215.283 applicable to that use.[30] Thus, various components of a proposed facility may be subject to different standards depending upon the subsection of ORS 215.283 under which the use is permitted.

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 or characterized as a separate 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 this test to the related or supporting facilities that are part of Stateline 2.

Underground Collector Cables

The system of underground electrical collector cables is necessary for the operation of the facility and has no independent utility apart from the operation of the turbines for the purpose of generating power for public use by sale. Accordingly, it is reasonable to characterize the collector cables as part of the energy facility for the purpose of compliance with ORS 215.283.

Met Towers

The two Stateline 2 met towers would occupy a total of approximately 20 square feet and would be located within the immediate vicinity of the turbine strings. Although met towers are not directly related 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.[31] The data from the met towers would be accessible only by the certificate holder. There is no evidence that information generated in the immediate vicinity of the

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[30] In the Final Order on the site certificate application, the Council found that the entire Stateline 1 facility (including the related or supporting facilities) was a "power generation facility" and allowable on agricultural lands under "ORS 215.283(2)(f)" subject to the standards in OAR 660-033-0130(5) and (22). *See* Final Order, page 33. Intervening legislation renumbered former ORS 215.283(2)(f) to what is now ORS 215.283(2)(g). The Council noted that the access roads could be evaluated separately under ORS 215.283(3), subject to the standards in OAR 660-033-0130(13). However, the Council assumed that a Goal 3 exception would be required under that rule. Reasoning that a Goal 3 exception would be required in either case, the Council did not decide whether the access roads should be evaluated as separate uses under under ORS 215.283(3). *See* Final Order, page 34, footnote 12. As discussed below, the roads are allowable under OAR 660-033-0130(13) without a Goal 3 exception.

[31] E-mail from Andy Linehan, date April 5, 2002.

Stateline 2 wind turbines would be of use to anyone other than the certificate holder. The met towers would be removed when the facility is retired. Thus, it is reasonable to characterize the met towers as being part of the principal use (the energy facility).[32]

Access Roads

The proposed new access roads and improvements to existing farm roads are not an accessory use under the *Dierking* test. Although access roads may be necessary to the operation of the energy facility, they have independent utility. They can be used by the affected landowner for farm-related operations and uses. At the option of the landowner, the access roads may remain in use after the energy facility is retired. Because of their independent utility, the roads are reasonably characterized as a separate use. Based on this analysis, we evaluated the access roads as a separate use under ORS 215.283.

Specifically, under ORS 215.283(3), roads and "transportation facilities" are allowed subject to the following conditions:

> *(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 (a) or (b), as applicable. The Stateline 2 access roads appear to be uses identified by LCDC rule and therefore specifically allowed under ORS 215.283(3)(b).

LCDC Rules Applicable to the Principal Use

As described above, the principal use is the energy facility, including those components that may be considered part of the energy facility under the *Dierking* test. The applicable subsection of ORS 215.283 is (2)(g), which allows "commercial utility facilities for the purpose of generating power for public use by sale" on agricultural land. OAR 660-033-0120 (Table 1) lists that 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).[33]

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[32] The met towers could be evaluated as a separate use under ORS 215.283(1)(d) ("utility facility necessary for public service"). In that case, the meteorological towers would be subject to the requirements of ORS 215.275, which identifies factors to establish that a utility facility, or component thereof, is necessary for public service. The met towers comply with ORS 215.275 based on their locational dependence. *See* ORS 215.275(2)(b). To serve their intended purpose, met towers must be located in the immediate vicinity of the turbine strings. There are no urban or nonresource lands on which the met towers could be located and still serve their purpose. *See* ORS 215.275(2)(c). Thus, the meteorological towers could be allowed as a separate use under ORS 215.275(1)(d).

[33] See the discussion of Table 1 in the Final Order on the site certificate application at page 33.

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:*
>
> *(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 criteria in this rule are similar to the criteria in UCDC § 152.061(B) that are discussed at page 23. For the reasons explained in that discussion, OAR 660-033-0130(5) is satisfied.

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.*[34]

An exception is not required under OAR 330-033-0130(22) unless the "power generation facility" precludes more than 20 acres from use as a commercial agricultural enterprise.[35] The Stateline 2 energy facility together with the met towers and underground collector cables would permanently occupy about two acres. Such facilities for Stateline 1 and Stateline 2 combined would permanently occupy about six acres.[36] Under this analysis, less than 20 acres would be precluded from use as a commercial agricultural enterprise. Therefore, no Goal 3 exception is required. Under this analysis, the access roads are not part of the principal use (the "power generation facility") but are evaluated 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.

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" and references the minimum standards found in OAR 660-033-0130(13).

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

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[34] The 20-acre threshold in subsection (22) applies to non-high-value farmland. As discussed under the Council's soil protection standard at page 36, the soils in the Stateline 2 area are not prime agricultural soils. A 12-acre threshold would apply under OAR 660-033-0130(17) if the affected area were high value farmland.

[35] 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.

[36] The entire Stateline 1 and 2 area is on agricultural land (EFU). According to Table B-1 of the site certificate application, the Stateline 1 turbines and met towers occupy four acres of land. According to Table 1 of the Request to Amend Site Certificate, the Stateline 2 turbines and met towers would occupy two acres. Thus, the total acreage occupied by the Stateline 1 and 2 energy facilities is six acres. The underground collector cables would not preclude use of the overlying land for agricultural purposes, and so the area of the collector cables is not included in this analysis.

(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 2 access roads are "transportation improvements" allowed under OAR 660-012-0065.[37] Under OAR 660-012-0065(3)(a), "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, which is a use conditionally allowed by ORS 215.283(2)(g) as described above. Therefore, the construction and improvement of the Stateline 2 access roads do not require an exception to Goal 3.

Under ORS 215.283(3)(b), quoted above at page 34, roads and transportation facilities 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.

These requirements are the same as those included in OAR 660-033-0130(5). They are similar to the criteria in UCDC § 152.061(B) that are discussed at page 23. For the reasons explained in that discussion, the proposed access roads for Stateline 2 would satisfy ORS 215.296.

Conclusions of Law

The Council concludes that the proposed Stateline 2 facilities comply with applicable substantive criteria and with the Land Conservation and Development Commission administrative rules and goals and land use statutes directly applicable to the facility under ORS 197.646(3). This conclusion is subject to the conditions stated in this order. Conditions (2), (20), (31), (33), (34), (37), (38), (40), (44), (58), (60), (61), (62), (64), (65), (75), (76), (81), (82), (96) and (103) relate to the Council's land use standard as it applies to Stateline 2.

(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 chemical factors such as salt deposition from cooling towers, land application of liquid effluent, and chemical spills.

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[37] OAR 660-012-0035 addresses "Transportation System Plans" and is not relevant to the proposed Stateline 2 access roads.

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 2 are erosion and compaction.

Of the 133 acres that would be temporarily or permanently disturbed by Stateline 2, approximately 120 acres are in agricultural use.[38] 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. The soil types in the area of the proposed expansion are soils within the Ritzville General Soil Unit. This soil type has a moderate to high risk of erosion from wind and water. According to the Natural Resources Conservation Service, non-irrigated Ritzville soils are not prime agricultural soils.

A wind energy facility has no cooling tower or effluent, and therefore the deposition of salts or chemicals, land application of effluent and chemical spills are not potential impacts from construction or operation. During operation, small amounts of chemicals such as lubricating oils and cleaners for the turbines and pesticides for weed control would be used at the facility. All hazardous materials would be stored and used in compliance with applicable local, state and federal law. See Condition (32).

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 spoils until the cables are laid, trenches are backfilled and the area has been re-vegetated. 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.

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

Conclusions of Law

The Council concludes that the design, construction and operation of the proposed Stateline 2 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 (60), (61), (62), (68) and (92) relate to the Council's soil protection standard as it applies to Stateline 2.

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[38] Request to Amend Site Certificate, Tables 3 and 4, page 31.

(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

The proposed Stateline 2 would not be located within any protected area designated under OAR 345-022-0040(1). The Stateline 2 area lies to the south of Stateline 1 turbine strings HG-K, HG-L and HG-M. The analysis area for Stateline 1 was the area within 20 miles from the site boundary. Stateline 2 would extend the analysis area by approximately 2 miles to the south. Within that expanded analysis area, there are no protected areas in addition to those already addressed in the Final Order on the site certificate application. In that order, the Council concluded that construction and operation of Stateline 1 were not likely to cause significant adverse impact to any protected area.

Noise

The nearest protected area, McNary National Wildlife Refuge (MNWR), is in Washington. It is approximately 12 miles from the nearest Stateline 1 turbine. The nearest potential protected area, the Wallula Habitat Management Unit (WHMU), is 5 miles from the nearest Stateline 1 turbine. The proposed Stateline 2 turbines would be located farther from these areas, and there are Stateline 1 turbines located between the Stateline 2 expansion area and both the MNWR and the WHMU. The other identified protected areas and potential protected areas are at a greater distance from Stateline 2.[39] Because of distance and the intervening Stateline 1 turbines, the noise from construction or operation of Stateline 2 would be inaudible. There would be no significant noise impact on any protected area or potential future protected area.

Traffic

The construction traffic related to Stateline 2 is expected to be similar to the traffic related to construction of Stateline 1 in daily volume and types of vehicles. The traffic impact should be somewhat less due to the smaller number of turbines that would be built. The anticipated increase in traffic because of project construction would be small in comparison to the current volume. The increase would not require highway improvements near the protected areas or potential protected areas. Traffic impact during operation would be negligible.

Visual Impact

The visual impact of Stateline 2 on protected areas is likely to be insignificant. The nearest protected areas are 12 to 15 miles from the closest Stateline 1 turbines, and potential protected areas are all at least 5 miles away. In the Final Order on the site certificate application, the Council found that Stateline 1 would not cause a significant visual impact to protected areas at these distances. All proposed Stateline 2 turbines are at a greater distance from the protected areas.

Conclusions of Law

The Council concludes that the proposed Stateline 2 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 2, 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 the Council's protected areas standard as it applies to Stateline 2.

(d) 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.

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[39] Final Order on the site certificate application, page 47.

Findings of Fact

Mitigation Goals and Standards

OAR 635-415-0025 defines six categories of habitat in order of their value to wildlife. The rule establishes mitigation goals and corresponding implementation standards for each habitat category. The Council's Final Order on the site certificate application describes the habitat categories, goals and standards at page 49, and that description is incorporated herein by reference.

Habitat in the Analysis Area

The certificate holder contracted with an expert, Karen Kronner, of Northwest Wildlife Consultants, Inc., to conduct a habitat assessment during the fall season of 2001 within 1,000 feet of the Stateline 2 facilities. The results of that assessment are included in a report entitled "Wildlife Habitat Assessment, Stateline 2 Expansion Area."[40]

All of the proposed turbines would be located on land currently being farmed for wheat. Most of the length of new access roads and underground collector cables also would be on currently cultivated farmland. Within the analysis area, there are several patches of non-cropland habitat. One collector cable route in the northwest portion of the Stateline 2 area would cross a narrow, dry grassland draw composed mostly of weedy non-native species, identified as Category 4. The underground cable would continue northward into non-native Conservation Reserve Program (CRP) grassland (Category 3), parallel to an existing collector route that is part of Stateline 1. In the same general area, two small areas of upland tree habitat, identified as Category 1 habitat, exist near a proposed new access road that is close to the southern end of Stateline 1 turbine strings HG-J and HG-K.[41]

In the southern part of the Stateline 2 area, slightly more than one acre of Category 3 and Category 4 grassland would be disturbed along existing roads that would be upgraded for safety reasons. A small area of trees, identified as Category 1, exists approximately 130 feet from an existing road that would be improved during construction. The road runs through a developed area containing a house, outbuildings and shade trees (Category 6) and grassland areas (Category 3).

Potential Impacts from Construction and Operation of the Facility

Tables 3 and 4 of the amendment request, incorporated here by reference, list the estimated area of temporary and permanent disturbance by habitat category and vegetation type. Figure 4, included as Exhibit 9 of the amendment request, incorporated here by reference, shows the habitat categories in the Stateline 2 area, as identified by the certificate holder. The Oregon Department of Fish and Wildlife (ODFW) concurs with the certificate holder's classification of the habitat in the Stateline 2 area.

No Category 1 or 2 habitat would be directly disturbed by the Stateline 2, either temporarily during construction or permanently by the location of turbine towers, roads or other structures of the facility. However, construction activity could cause an indirect impact on habitat quality if, for example, construction noise and vehicle traffic interfered with nesting

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[40] The report was included in the Request to Amend Site Certificate as Exhibit 10. Subsequently, FPL submitted a revised report, dated February 11, 2002.

[41] Both areas were discussed in the Final Order on the site certificate application at page 50.

of sensitive species. Construction related noise and traffic would be limited to an estimated 6-month construction period. Indirect impact from operation of the facility could affect habitat quality.

Approximately 10 acres of Category 3 habitat, one acre of Category 4 habitat and 92 acres of Category 6 habitat (developed cropland) would be temporarily affected during construction. Approximately two acres, combined, of Category 3 and 4 grassland habitat and 28 acres of Category 6 cropland habitat would be permanently affected by the location of Stateline 2 facilities.

The certificate holder has identified seven potential raptor nesting areas within one mile of the nearest Stateline 2 facility.[42] The closest, approximately 130 feet from an access road, supports Swainson's hawks, as well as common tree-nesting passerines and possibly roosting bats. A great horned owl nesting site is located between proposed turbine strings SB and SC, less than 1,000 feet from an access road.[43] A ferruginous hawk nest was identified approximately 695 feet from an access road near the north end of the Stateline 2 area. Nearby is a great horned owl nest, about 465 feet from the access road. Another Swainson's hawk nest and a common raven nest are approximately 300 feet from the end of the proposed access road in the same general area. A red-tailed hawk nest was identified in Vansycle Canyon, approximately 4,224 feet from the nearest proposed turbine. No trees would be removed or directly affected by construction or operation of Stateline 2.

No special habitats that might attract wildlife, such as cliffs or ponds, have been identified in the Stateline 2 area. Bats utilizing habitat in Vansycle Canyon may forage and are likely to pass through the uplands of the project during summer and the fall migration period. Potential impacts from construction, operation and retirement of the facility are expected to be similar to the impacts expected for the Stateline 1 facilities, as described in the Final Order for the site certificate application, pages 51-54.

Mitigation

The certificate holder would avoid direct impact to all Category 1 and 2 habitat in the Stateline 2 area and would avoid indirect impacts during construction by scheduling construction to avoid activity near Category 1 habitat during the nesting season. All raptor nesting sites would be monitored for two years after construction (Condition (93)). 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 quantity or quality, further mitigation may be required.

Approximately 10 acres of mostly CRP grassland habitat identified as Category 3 would be affected during construction; less than one acre of Category 3 grassland habitat would be permanently affected. Category 3 CRP land is essential or important habitat for wildlife species including but not limited to the Grasshopper sparrow and Swainson's hawk.

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[42] As shown on a map in Exhibit 10 of the amendment request. All but one of the indicated nest sites were identifed as raptor nests. The site labeled "CORA" (common raven) is a nesting structure that could be used by a raptor species.

[43] This tree is in the bottom of a drainage, not in direct line of sight from the access road. The nest was checked on March 18, 2002 and it was found to be empty. It is unlikely that the tree will be used by a great horned owl in the 2002 breeding season. (Supplemental information, e-mail communication, March 19, 2002)

Fatalities of these species 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. The applicant proposes to employ general mitigation measures during construction as described in Condition (63) and (65). 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 quantity or quality, further mitigation may be required.

Construction and operation of the facility would directly affect a small amount (approximately 2 acres) of Category 4 grassland habitat. In addition to the general mitigation measures described in Conditions (63) and (65), the certificate holder proposes to add one acre to the habitat enhancement area required under Condition (67) for Stateline 1. This additional one acre is proposed mitigation for permanent impacts to "slightly over one acre" of Category 3 and 4 grassland habitat.

The proposed Stateline 2 facility would permanently eliminate approximately 28 acres of Category 6 dryland agricultural habitat and would temporarily disturb another 92 acres during construction. The certificate holder would minimize impacts to the temporarily disturbed areas by mitigation measures described in Condition (68). Construction and operation of Stateline 2 is not expected to have significant indirect impacts on the quality of this habitat.

Under Council rules, a certificate holder shall retire a facility according to an approved final retirement plan (OAR 345-027-0020(9)). Under OAR 345-027-0110, a retirement plan must receive Council approval before retirement and termination of the site certificate. In the retirement plan, the certificate holder must include information on how to minimize impacts to fish, wildlife and the environment during the retirement process (OAR 345-027-0110(3)). The anticipated actions 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 described above. It is likely that the activities to restore the site at retirement would temporarily disturb additional area similar in amount to the area temporarily disturbed during construction. However, completion of retirement would restore habitat in areas formerly occupied by facility structures or roads.

Oregon Wildlife Monitoring Plan

To assure that the operation of Stateline 2 complies with the Council's fish and wildlife habitat standard, the Council concludes that a site certificate condition should require the certificate holder to conduct wildlife monitoring (Condition (93)). The overall objectives for monitoring the Stateline facility, including both Stateline 1 and Stateline 2, 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 is described in the *Oregon Wildlife Monitoring Plan (Revised)*, Attachment A, which is

incorporated in this order.[44] The requirement of monitoring during the operation of the Stateline 1 and Stateline 2 facilities is a necessary part of finding compliance with the fish and wildlife standard. The impacts of operation cannot be evaluated without the data that adequate monitoring would provide. Based on that evaluation, additional mitigation of impacts may become necessary to assure 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 shall mitigate for the loss of habitat quality by measures approved by the Office of Energy (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 Stateline 2 wind turbines on previously cultivated land and by structural design, the proposed facility avoids impacts to wildlife and to essential and important habitat to the extent reasonably possible (Condition (52)).

- Construction: Construction of the proposed Stateline 2 turbines and related or supporting facilities avoids direct impact to all Category 1 and 2 habitat in the analysis area.

  Construction would have a direct impact on approximately 11 acres of Category 3 habitat but would permanently remove less than one acre. Construction of the facility would have a direct impact on less than two acres of Category 4 habitat and would permanently remove less than one acre. To compensate for the loss of Category 3 and 4 habitat, the certificate holder would provide habitat enhancement on 1 acre of weed-infested land contiguous to the enhancement area for Stateline 1 (Condition (104)). The proposed enhancement would meet the requirement of "in-kind, in-proximity" mitigation. This would achieve the goal of no net loss of habitat quantity or quality required for Categories 3 and 4 with respect to permanent elimination of habitat.

  Construction would have a direct impact on approximately 120 acres of Category 6 habitat, of which approximately 28 acres would be permanently removed. As proposed, the Stateline 2 facilities would minimize the impact to Category 6 habitat.

  The certificate holder would mitigate for indirect impacts to wildlife and wildlife habitat, as described in Conditions (63), (65) and (101).

- Operation: The certificate holder would mitigate for indirect impacts to wildlife and wildlife habitat, as described in Conditions (89), (90) and (91). Operational

[44] This order includes revision of the *Oregon Wildlife Monitoring Plan* that was included in the Final Order on the site certificate application and incorporated by reference in the site certificate issued September 14, 2001. The revised monitoring plan addresses both Stateline 1 and Stateline 2 facilities. The plan may be revised from time to time, as provided in Section 13 of the plan.

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 quantity or quality, further mitigation may be required.

- Retirement: The site would be restored according to a retirement plan as required by OAR 345-027-0110. Site restoration would restore habitat in areas formerly occupied by facility and in areas temporarily disturbed during retirement. The retirement plan would assure compliance with the standard of "no net loss of habitat quantity or quality" with respect to essential or important habitat.

Conclusions of Law

The Council concludes that the design, construction, operation and retirement of the proposed Stateline 2 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), (101) and (104) relate to the Council's fish and wildlife habitat standard as it applies to Stateline 2.

(e) 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 certificate holder concluded that it is very unlikely that there are any threatened or endangered plant populations in the Stateline 2 area.[45] This conclusion was based on a habitat assessment[46] performed by Karen Kronner, Northwest Wildlife Consultants, Inc., a winter field check by Randall Krichbaum, Eagle Cap Consulting Inc., and a technical report on rare plants in the Stateline area prepared by Eagle Cap in August 2001. The Office of Energy received no comments from the Oregon Department of Agriculture regarding the certificate holder's amendment request. There is no applicable protection and conservation program adopted under ORS 564.105(3).

In the Final Order on the site certificate application, the Council described the studies and analyses that have been done for plant species for the Stateline area.[47] The Stateline 2 area is in the same general area as Stateline 1, and topography, soil type and climate are similar. For Stateline 1, no state-listed plant species were found during field surveys, but one threatened plant species, Laurence's milk-vetch (*Astragalus collinus*), and two candidate species, hepatic monkeyflower (*Mimulus jungermanniodies*) and Columbia yellow-cress (*Rorippa columbiae*), were mentioned as potentially occurring in the Stateline 1 analysis area.

According to Kronner's habitat assessment report:

> Since 1995, nearby areas have been studied by FPL for wildlife species of concern, wildlife habitat, and rare plants during the permitting process for the Stateline wind project. One underground electrical route is planned through an area surveyed during the spring season of in 2001 for the original Stateline project. Site-specific sensitive wildlife species and rare plant surveys have not been conducted within other portions of the Stateline 2 Expansion area during the appropriate seasonal period. Instead, a fall season habitat assessment was recently conducted to determine the habitat's suitability to support sensitive species and to rate the habitat types.

All of the proposed Stateline 2 turbines and most of the access roads and underground collector lines are located in cultivated agricultural land. The underground collector line at the north end of the proposed expansion runs through Conservation Reserve Program (CRP) land. However, this line is within the Stateline 1 analysis area and has been surveyed for rare plant species. Several of the access roads and underground collector lines cross non-cultivated areas. According to Krichbaum's memorandum, these non-cultivated areas "provide only marginal habitat for…the species of concern considered for the overall Stateline project." According to Krichbaum, Columbia yellow-cress and hepatic monkeyflower require moist conditions not present in the Stateline 2 area. Although occurrence of Lawrence's milk-vetch could not be "definitively determined" without a spring field survey, Krichbaum considered it "extremely unlikely to occur" in the Stateline 2 area because the potential habitat is degraded due to past disturbance and domination by non-native species and noxious weeds. Krichbaum notes that the Stateline 2 area lacks suitable habitat for rosy balsamroot (*Balsamorhiza rosea*), which is the only rare species documented to occur in the general Stateline area.

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[45] Supplemental information dated March 14, 2002, including a memorandum from Randall Krichbaum, Eagle Cap Consulting, dated December 21, 2001.

[46] The report was included in the Request to Amend Site Certificate as Exhibit 10. Subsequently, FPL submitted a revised report, dated February 11, 2002.

[47] Final Order on the site certificate application, page 57.

Based on the field study and analysis described above, the Council finds that Stateline 2 is not likely to cause a significant reduction in the likelihood of survival or recovery of any threatened or endangered plant species.

Threatened and Endangered Species - Wildlife

The certificate holder surveyed all non-cultivated land in the Stateline 2 area in the fall of 2001. The amendment request includes a habitat assessment report performed by Karen Kronner, Northwest Wildlife Consultants, Inc.[48] In addition, other studies have been done on wildlife species in the general Stateline area.[49] The Oregon Department of Fish and Wildlife has reviewed the amendment request and concurs with the certificate holder regarding the potential for occurrence of threatened and endangered species in the Stateline 2 area.

Based on the analysis done for Stateline 1, there are only two threatened or endangered wildlife species that might potentially be affected by the Stateline facilities. The Washington ground squirrel is a state endangered and federal candidate species that occupies 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. For the reasons discussed below, the Council finds that Stateline 2 is not likely to cause a significant reduction in the likelihood of survival or recovery of threatened or endangered wildlife species.

Washington Ground Squirrel

No habitat suitable for Washington ground squirrels exists in cultivated land, which predominates in the Stateline 2 area. The certificate holder surveyed the Category 3 CRP habitat at the north end of Stateline 2 before construction of Stateline 1 in 2001. Possible ground squirrel holes were located in one area near the route of an underground collector line for Stateline 1, but the area was fenced and avoided during construction. This area lies more than 1,000 feet from the nearest proposed ground-disturbing activity for Stateline 2. The fall 2001 survey of all non-cultivated land within 1,000 feet of the proposed Stateline 2 facilities detected no evidence of the presence of Washington ground squirrels. The mitigation actions described in Conditions (63), (65) and (69) would reduce the risk of potential impacts to the Washington ground squirrel.

Bald Eagle

During surveys in 1995, one bald eagle was observed in Washington approximately three miles north of the nearest part of the Stateline 1 facilities, and another was observed at least seven miles southwest of the nearest Stateline 1 facilities. Bald eagles may fly through the general Stateline area during migration. Potential impacts to bald eagles from the proposed Stateline 2 include injuries or fatality from collisions with turbines during construction or operation. The mitigation actions described in Conditions (52) and (70) would reduce the risk of potential impacts to 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)).

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[48] The report was included in the Request to Amend Site Certificate as Exhibit 10. Subsequently, FPL submitted a revised report, dated February 11, 2002.

[49] Described in the Final Order on the site certificate application, page 58.

Conclusions of Law

The Council concludes that no conservation program applies and that the design, construction, operation and retirement of the proposed Stateline 2 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), (63), (65), (69), (70), (93) and (94) relate to the Council's threatened and endangered species standard as it applies to Stateline 2.

(f) 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

The presence of a large number of wind turbines within the agricultural landscape of northern Umatilla County has a visual impact. The wind turbines can be seen from many vantage points. At night, aircraft warning lights are visible, marking the location of the turbine strings. According to the Umatilla County Planning Department, public opinion is divided. Some are disturbed by the visual impact of the wind facility, while others find it unobjectionable.

Under the scenic and aesthetic values standard, the Council does not attempt to reconcile conflicting opinion about the general visual impact of the facility. Instead, the standard is narrowly focused 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 2 site occupies an area of approximately 3 square miles. Within that area, 60 wind turbine towers and tower pad areas and approximately 8 miles of new or improved access roads would cover a total of about 30 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 uniformly painted a neutral light gray color. All turbine towers would be of the same type and appearance as the Stateline 1 turbines. In

addition, two 50-meter meteorological towers would be built. Lighting required by the Federal Aviation Administration (FAA) would make the facility visible at night.[50]

Land Planning Authorities

The analysis area for Stateline 2 is generally coextensive with the analysis area for Stateline 1 but extends approximately two miles to the south. There are no land planning authorities within the extended analysis area other than those identified in the Final Order on the site certificate application. Therefore, there are no additional "significant or important" scenic values applicable to Stateline 2 that have not already been identified and addressed in the Final Order on the site certificate application.

County Plans

The Council has previously reviewed the county land use plans for Umatilla County, Oregon, and Walla Walla, Benton and Franklin counties in Washington.[51] 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 turbines, and even farther from Stateline 2, 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 visible Stateline 1 turbines are estimated to be seven miles away. In the Final Order on the site certificate application, the Council found that the "value" of Wallula Gap was as a scenic area "to look upon" rather than as a vantage point "to look from." The presence of the wind facility seven miles away would not cause a significant adverse impact to that identified scenic value. The proposed Stateline 2 turbines would be at an even greater distance from Wallula Gap.

The Council standard refers only to important scenic resources identified in "land use plans." Nevertheless, in the Final Order on the site certificate application, the Council addressed two other scenic resources that were identified in a Umatilla County Technical Report 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 at that distance the visual impact of the facility would be insignificant. The proposed Stateline 2 turbines would also lie at least 16 miles distant from these two scenic areas. If visible at all, the visual impact of the Stateline 2 turbines would be insignificant.

Municipalities

Helix is the closest municipality to the proposed facility at a distance of about 8 miles. However, intervening ridgelines would block the view of the proposed Stateline 2 area. None of the municipalities within the analysis area in Oregon has designated scenic or aesthetic values in their local land use plans. For the same reasons discussed in the Final Order on the site certificate application, construction and operation of the proposed Stateline 2 would not

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[50] At night, the required lights are red-colored, which reduces visual impact. The FAA requires white flashing lights in the daytime.

[51] The findings under the scenic and aesthetic values standard as discussed in the Final Order on the site certificate application, pages 60-61, are incorporated herein by this reference.

likely result in significant adverse impact to scenic and aesthetic values identified as significant or important in land use plans of any Washington municipality within the analysis area.

Confederated Tribes of the Umatilla Indian Reservation

The land use plan for the CTUIR does not identify significant or important scenic or aesthetic values.

State Land Management Plans

For the same reasons discussed in the Final Order on the site certificate application, construction and operation of Stateline 2 would not likely result in significant adverse impact to scenic and aesthetic values associated with the Lewis and Clark Highway Interpretive Project in Washington.

Federal Management Plans

A portion of the Umatilla National Forest falls within the analysis area. The Umatilla National Forest has designated viewsheds, scenic areas and wild and scenic rivers within the National Forest. However, viewsheds are in scenic corridors that are distant from Stateline 2 and unlikely to have a line of sight to the proposed new turbines.

Conclusions of Law

The Council concludes that the design, construction, operation and retirement of the proposed Stateline 2 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 for the site or its vicinity. Condition (37) relates to the Council's scenic and aesthetic values standard as it applies to Stateline 2.

(g) 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 Order on the site certificate application, the Council concluded that Stateline 1 would not likely result in significant adverse impact to important recreational opportunities in the analysis area. The analysis area for Stateline 2 is coextensive with the analysis area for Stateline 1 but extends approximately two miles to the south. There are no additional important recreational opportunities within the extended analysis area that have not already been considered by the Council.[52] For the same reasons discussed in the Final Order on the site certificate application, the Stateline 2 is not likely to result in a significant adverse impact to important recreational opportunities in the analysis area, taking into consideration the factors listed in the Council's standard.

Conclusions of Law

The Council concludes that the design, construction and operation of the proposed Stateline 2 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 the Council's recreation standard. 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).

(h) 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 2 turbines would be located on private property with limited access to the public. The nearest occupied dwelling would be approximately 4,000 feet away from any turbine. The design of the Stateline 2 turbines would be the same as the design of the Stateline 1 turbines. 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 certificate

[52] The findings under the recreation standard as discussed in the Final Order on the site certificate application, pages 65-66, are incorporated herein by this reference.

holder would inspect turbine blades on a regular basis for signs of wear or potential failure (Condition (95)).

Conclusions of Law

The Council concludes that the certificate holder can design, construct and operate the proposed Stateline 2 facilities to exclude members of the public from close proximity to the turbine blades and electrical equipment. The Council further concludes that the certificate holder can design, construct and operate the proposed Stateline 2 facilities 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. These conclusions take into account mitigation and are subject to the conditions stated in this order. Conditions (36), (38), (95) and (103) relate to the Council's public health and safety standards for wind energy facilities as they apply to Stateline 2.

(i) Siting Standards for Wind Energy Facilities

OAR 345-024-0015

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

(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 2 wind turbines would be similar in overall appearance to the existing Stateline 1 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 2 would have only those signs required for facility operation and safety.

The certificate holder proposes to use 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 proposes to use existing roads where feasible and to construct approximately 6.5 miles of new roads for access to Stateline 2. Road construction would be designed to minimize erosion and prevent the introduction of invasive weeds where soil is disturbed during construction. See Condition (44).

Electric transmission lines for Stateline 2 would consist of underground 34.5-kV collector cables that follow road rights-of-way where possible. Collector cable routes would be combined where cables run close to one another. The collector system for Stateline 2 would connect to an existing underground circuit that is part of Stateline 1. Power from Stateline 2 would be transmitted through the Stateline 1 circuit to an existing substation in Washington. Stateline 2 would have no overhead transmission structures.

To avoid creating artificial habitat for raptors or their 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)). The certificate holder would avoid creating perching opportunities on towers or related structures.

Conclusions of Law

The Council concludes that the certificate holder, taking into account mitigation and subject to the conditions stated in this order, can design and construct the Stateline 2 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), (64), (65) and (103) relate to the Council's siting standards for wind energy facilities as they apply to Stateline 2.

(j) 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

The 34.5-kV electrical cable collector system will be installed underground, at a depth of 3 to 5 feet. No occupied structures are located within 200 feet of any of the proposed collector cables. FPL would construct the underground system for Stateline 2 using the same construction and physical characteristics as the existing Stateline 1 system. In the Final Order on the site certificate 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.[53] The certificate holder proposes to follow the same design and construct methods for the collector system for Stateline 2.

Conclusions of Law

The Council concludes that the certificate holder can design, construct and operate the proposed Stateline 2 collector system 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 concludes that the certificate holder can design, construct and operate the

[53] The findings under the siting standards for transmission lines in the Final Order on the site certificate application, pages 78-79, are incorporated herein by this reference.

Stateline 2 collector 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) and (62) relate to the Council's siting standards for transmission lines as they apply to Stateline 2.

4. Standards Not Applicable to Site Certificate Eligibility

Under ORS 469.501(4)[54], 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.

(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.

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[54] 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.

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 site certificate application included site characterization and assessment of seismic, geologic and soil hazards in the Stateline 1 area.[55]

The entire Stateline 2 site is no more than approximately three miles from the Stateline 1 site. The Stateline 2 site is similar in topography, soil type, surface soil conditions and regional geology. Subsurface conditions are likely to be comparable. In the amendment request, the certificate holder notes traces of what may be an inactive fault underlying proposed turbines S-22 through S-38.[56] 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.

The certificate holder proposes to follow the same design and construction procedures for Stateline 2 as the Council approved for Stateline 1. In particular:

> The design of the turbines will follow the Oregon Building Code and by amendment, the Uniform Building Code, 1997 edition. Appropriate design modifications will be made if either Soil Type SC or SD are encountered. Provisions similar to those cited in the original application will be used to protect the environment and to provide for human safety. These provisions include the evaluation of stability by the designer for turbine foundations located within 50 feet of slopes steeper than 30°. Construction procedures will be similar to those described in the original application. Foundations for the turbines will be inspected after excavation and before construction to confirm that geologic conditions are appropriate for supporting the turbine during gravity, seismic, and wind loading.[57]

The Oregon Department of Geology and Mineral Industries (DOGAMI) reviewed the amendment request. DOGAMI raised no issues regarding the structural standard and proposed no new site certificate conditions

Proposed Conditions

Conditions (49), (50), (51), (59) and (61) relate to the Council's structural standard as it applies to Stateline 2. The Council concludes that the design and construction of Stateline 2 should be subject to those conditions.

(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:

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[55] The findings under the structural standard in the Final Order on the site certificate application, pages 37-40, are incorporated herein by this reference.
[56] See Request for Amendment, Exhibit 4, Figure 2.
[57] Request for Amendment, page 26.

(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 Confederated Tribes of the Umatilla Indian Reservation (CTUIR) conducted cultural resources inventory survey of the Stateline 2 area.[58] The survey identified five historic sites and two historic isolated artifacts. The proposed Stateline 2 facilities would directly affect only one of these resources. Road construction would remove the site identified as 6-32-26/1-02, an historic dump site. After further investigation, the CTUIR has determined that none of the artifacts in the site could be proven to be older than 50 years. Therefore, the CTUIR concluded that this site is not eligible for inclusion in the National Register of Historic Places.[59] The certificate holder has agreed to coordinate with the CTUIR to flag all other sites. The State Historic Preservation Officer (SHPO) reviewed the amendment request and found no significant issues.

Proposed Conditions

Conditions (75) and (76) relate to the Council's historic, cultural and archaeological standard as it relates to Stateline 2. The Council concludes that the design, construction, operation and retirement of Stateline 2 should be subject to those conditions.

(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.

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[58] Request to Amend Site Certificate, Exhibit 7.

[59] Letter from Manfred Jaehnig, Ph.D., dated March 13, 2002, included in supplemental material submitted March 14, 2002.

(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 site certificate 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.[60] Construction of Stateline 1 did not, in fact, cause any adverse impact to local communities that has been reported to the Office of Energy. Construction and operation of Stateline 2, as discussed below, is expected to have no greater impact on the ability of local communities to provide these services.

During construction of Stateline 2, the impact on sewers and sewage treatment would be minimal (portable toilets would be used). The certificate holder estimates water use during construction of Stateline 2 would be less than half that needed during construction of Stateline 1. 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 2 would generate relatively little solid waste that would require off-site disposal. The certificate holder estimates that traffic safety impacts of Stateline 2 construction would be much less than estimated for Stateline 1, not only because fewer turbines would be built but also because much of the equipment and material required for construction of Stateline 2 has been stockpiled at the Stateline 1 site.

The certificate holder estimates that construction of Stateline 2 would bring approximately 200 temporary new residents into the local area, which is less than half the estimated temporary new residents for Stateline 1. Therefore, the impact to the ability of communities to provide housing, police and fire protection, health care and schools for temporary residents is expected to be less for Stateline 2.

The certificate holder estimates that the addition of 60 Stateline 2 turbines to the existing Stateline facility would not increase the estimated number of operations staff. Therefore, the impacts from operation of Stateline 2 are not expected to be significantly different than the impacts from operation of Stateline 1. The Helix Rural Fire protection district anticipates no problems in providing adequate fire protection to Stateline 2.[61]

Proposed Conditions

Conditions (31), (32), (33), (35), (45), (48), (58), (60), (61), (73), (77), (81), (85), (87), (88) and (96) relate to the Council's public services standard as it applies to Stateline 2. The

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[60] The findings under the socio-economic impacts standard in the Final Order on the site certificate application, pages 66-75, are incorporated herein by this reference.
[61] Request to Amend Site Certificate, Exhibit 6.

Council concludes that the construction and operation of Stateline 2 should be subject to those conditions.

(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 for the site certificate 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.[62] Solid waste and wastewater generated by construction, operation and retirement of Stateline 2 are likely to be similar in type and somewhat less in volume. The certificate holder has agreed to meet the same conditions regarding waste minimization for both Stateline 1 and 2.

Proposed Conditions

Conditions (32), (71), (72), (73), (74), (83), (86) and (98) relate to the Council's waste minimization standard as it applies to Stateline 2. The Council concludes that the design, construction, operation and retirement of Stateline 2 should be subject to those conditions.

V. 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

[62] The findings under the waste minimization standard in the Final Order on the site certificate application, pages 76-77, are incorporated herein by this reference.

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 IV 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 the public health and safety.

(a) Noise

Findings of Fact

The Final Order on the site certificate application quoted the applicable portion of the DEQ noise control regulation, OAR 340-035-0035, and described the "ambient degradation" and "Table 8 test" elements of that regulation.[63] The noise control regulation applies to noise generated during operation of the proposed facility. Noise that originates from construction activities is exempt from the DEQ noise standards. OAR 340-035-0035(5)(g). However, to reduce noise impacts on nearby residences during construction of the energy facility, FPL would confine the noisiest construction activities to the daylight hours (Condition (78)).

To comply with the DEQ noise regulation, new noise sources must meet both the "ambient degradation" and "Table 8" tests based on noise levels at the nearest "noise sensitive property." For Stateline 2, the nearest noise sensitive property is a residence that is approximately 4,000 feet from the nearest proposed Stateline 2 turbine.[64] See Condition (105). This property is also the nearest noise sensitive property for Stateline 1. At this location, FPL measured background L_{50} noise levels[65] ranging from 21.3 dBA (at a wind speed of 1.1 mph) to 49.6 dBA (at a wind speed of 12.2 mph) to 60 dBA (at an unknown wind speed). Background noise would include wind, operation of farm equipment and other local noise sources.

"Table 8" Test

Wind turbines produce noise from rotation of the turbine blades. Generally, turbine noise increases with wind speed. In the site certificate application for Stateline 1, FPL provided a statistical correlation of turbine noise to wind speed over the range wind speeds (7.9 to 56 mph) within which the turbines operate. At wind speeds above 56 mph, the turbine blades feather to avoid damage to the turbines. Following the same analysis the Council applied for Stateline 1, we assume that maximum turbine noise would occur at a wind speed of 56 mph. The "Table 8" test must be met based on the maximum turbine noise; that is, turbine noise at a wind speed of 56 mph must not exceed the levels specified in Table 8.

The applicable noise limit from Table 8 is the L_{50} nighttime noise level of 50 dBA. For Stateline 1, the Council found that the predicted L_{50} noise level at the nearest receptor would not exceed 47.5 dBA at a wind speed of 56 mph.

FPL calculated total noise emissions for the wind energy facility by reference to specifications provided by the equipment manufacturer. FPL then calculated turbine noise

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[63] The findings regarding the noise control regulation in the Final Order on the site certificate application, pages 80-82, are incorporated herein by this reference.
[64] This residence is also approximately 2,000 feet from the nearest Stateline 1 turbine.
[65] The L_{50} noise level is the noise level exceeded 50 percent of the time.

levels at the nearest receptor at the maximum wind speed of 56 mph. Based on FPL's calculation, the L_{50} noise level from Stateline 1 at the nearest receptor would not exceed 47.5 dBA. This noise sensitive property is approximately 4,000 feet from the nearest Stateline 2 turbine; that is, it is approximately twice as far from Stateline 2 as it is from Stateline 1. At this distance, FPL estimates the noise level from Stateline 2 would not exceed 44.5 dBA at a wind speed of 56 mph. FPL estimates the cumulative noise level from Stateline 1 and 2 would not exceed 49.3 dBA.[66] Thus, the maximum estimated turbine noise does not exceed the level specified by Table 8. Based on this analysis, the Council finds that Stateline 2 would meet the Table 8 test.

Ambient Degradation Test

Our analysis of the ambient degradation test[67] assumes that if the facility meets the test under worst case conditions, it meets the test under all conditions. We assume that the worst case would be during low wind speed conditions when the ambient noise level is expected to be the lowest but when there is sufficient wind speed to produce noise from the operation of the wind turbines. The wind turbine start speed is 3.5 m/s (7.9 mph). Therefore, we assume that maximum ambient degradation would occur at a wind speed of 7.9 mph. The analysis is based on ambient L_{50} noise data provided by FPL.

For Stateline 1, the Council found that the predicted turbine noise at the nearest receptor would be 37.8 dBA at a wind speed of 7.9 mph. To meet the ambient degradation test under worst case conditions, the turbine noise expected to occur at a wind speed of 7.9 mph must not increase the ambient noise level by more than 10 dBA in any one hour. The Council reasoned that the facility would meet the ambient degradation test if background noise at the nearest receptor were always greater than 28.3 dBA at a wind speed of 7.9 mph. That is, when the background noise level is 28.3 dBA, the addition of the predicted wind turbine noise of 37.8 dBA at 7.9 mph would result in total ambient noise of 38.3 dBA[68], a 10 dBA increase. If the background noise level exceeds 28.3 dBA, the addition of 37.8 dBA would result in less than a 10 dBA increase, and therefore the facility would meet the ambient degradation test. For the reasons discussed in the Final Order on the site certificate application, the Council found it reasonable to assume that wind-generated background noise at 7.9 mph would exceed 28.3 dBA under most realistic circumstances.

For Stateline 2, FPL estimates that the predicted sound level at the nearest receptor would be approximately 30 dBA.[69] This sound level is significantly less than the predicted level of 37.8 dBA from Stateline 1. If the higher sound level of Stateline 1 would not exceed the limit under the ambient degradation test, it is reasonable to conclude that the lower sound

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[66] According to Mark Bastasch, FPL's noise engineer: "Geometric divergence from a point source results in a 6 dBA reduction per doubling of distance, resulting in a level of 41.5 from Stateline 2. The cumulative level (47.5 plus 41.5) would be 48.5 dBA. Geometric divergence from a line source conservatively yields a 3 dBA reduction per doubling of distance, resulting in a level of 44.5 from Stateline 2. The cumulative level (47.5 plus 44.5) would be 49.3 dBA. Under either scenario, the L50 noise limit of 50 dBA is not exceeded." (E-mail from Andy Linehan, dated April 4, 2002.)

[67] Noise generated or indirectly caused by the new noise source, measured at the nearest noise sensitive property, must not increase the ambient statistical noise levels, L_{10} or L_{50}, by more than 10 decibels in any one hour.

[68] Decibels are measured on a logarithmic scale.

[69] E-mail from Andy Linehan, dated April 4, 2002.

level from Stateline 2 also would not exceed that limit. Based on this analysis, the Council finds that Stateline 2 would meet the ambient degradation test.

Conclusions of Law

The Council concludes that noise from Stateline 2 would not exceed the applicable DEQ noise control standards. Conditions (78) and (105) relate to the noise standards as they apply to Stateline 2.

(b) Wetlands

Under ORS 196.810 and the Division of State Lands Removal-Fill rules (OAR 141-85-005 through 141-85-090) 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.

Findings of Fact

The certificate holder surveyed all drainages in the Stateline 2 area in locations proposed for construction activity. Although Figure 2 (Request to Amend Site Certificate, Exhibit 4) shows a stream in map section 26 with a new access road and underground cable crossing, field investigation showed no evidence of stream characteristics or hydrology.[70] For purposes of the removal-fill determination, the certificate holder represented that it intended to avoid the one potential water of the state (ES-7). We base the conclusion that no removal or fill permit is required on avoidance of any potential water of the state.

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.

Findings of Fact

The construction and operation of the proposed Stateline 2 will not require a new water right. The City of Helix has agreed to meet the certificate holder's water requirements under it's municipal water right.[71] The certificate holder estimates that 7,000 to 30,000 gallons of water per day will be needed during construction of Stateline 2. During operation of the facility, water use would be insignificant. A new water right is not required for industrial and commercial uses of up to 5,000 gallons per day. ORS 537.545(1)(f). 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

[70] "Potential Stream Crossings for the Stateline 2 Expansion Project," memorandum from Peter Pellegrin, CH2M HILL, enclosed in letter from Andy Linehan, dated April 4, 2002.
[71] Letter from Mayor Harry Schuening, dated January 8, 2002, included in the request for amendment, Exhibit 5.

right. The Water Resources Department has reviewed the amendment request and has concluded that no permit is required.

Conclusions of Law

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 2 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.

(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..." State law further provides that "the site certificate shall contain conditions for the protection of the public health and safety...." ORS 469.401(2).

Findings of Fact

We discuss specific public health and safety standards for wind energy facilities above at page 51.

Electric and Magnetic Fields

The proposed facility would include a network of 34.5-kV electric transmission lines (collector cables). Electric transmission lines create electric and magnetic fields. The Council's electric field standard is addressed above at page 54, and for the reasons discussed there, the proposed transmission line would not exceed the standard. In the Final Order on the site certificate application, the Council addressed the issue of public exposure to magnetic fields and the Council's policy of "prudent avoidance." The proposed design and construction of the underground collector system are the same for Stateline 2 as for Stateline 1. For the same reasons discussed in the Final Order on the site certificate application, the proposed underground transmission system does not present a significant risk to public health and safety.[72]

Conclusions of Law

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

[72] The findings regarding electric and magnetic fields in the Final Order on the site certificate application, pages 85-86, are incorporated herein by this reference.

2. Requirements That Are Not Under Council Jurisdiction

(a) Federally-Delegated Programs

The Council does not have jurisdiction for determining compliance with statutes and rules for which the decision on compliance has been delegated by the federal government to a state agency other than the Council. ORS 469.503(3). 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 April 19, 2002, the certificate holder submitted a 1200-C NPDES permit application and Erosion and Sediment Control Plan to address handling of stormwater during construction of Stateline 2. In earlier correspondence, DEQ stated that it anticipated no problem in issuing the permit after receipt of the application. 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 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 2, the following state and local government programs may apply to the proposed facility but are not within the Council's jurisdiction because the programs 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 regarding potability 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

VI. GENERAL APPLICATION OF CONDITIONS

The Conditions referenced or included in this order 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 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, and to protect the public health and safety.

The references in sections IV and V 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.[73] However, 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. ORS 469.401(2).

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

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[73] 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.

VII. GENERAL CONCLUSION

The proposed amendment would enlarge the site of the Stateline Wind Project. Under OAR 345-027-0070, to issue an order approving the amendment, the Council must consider, within the area added to the site by the amendment, whether the facility complies with all Council standards. In accordance with ORS 469.503, in order to issue an amended site certificate, the Council must determine that the preponderance of the evidence on the record supports the following conclusions:

1) The proposed facility complies with the standards adopted by the Council pursuant to ORS 469.501.
2) Except as provided in ORS 469.504 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 applicable to the issuance of a site certificate for the proposed facility.
3) The facility complies with the statewide planning goals adopted by the Land Conservation and Development Commission.

Based on the findings of fact, reasoning and conclusions of law in this order, the Council concludes that these requirements are met.

VIII. PROPOSED ORDER

The Council approves Amendment #1 and issues an amended site certificate, subject to the terms and conditions set forth above, to FPL for the Stateline Wind Project.

Issued this 17th day of May, 2002.

THE OREGON ENERGY FACILITY SITING COUNCIL

By: _____
Karen H. Green, Chair

Attachments

Attachment A: *Oregon Wildlife Monitoring Plan (Revised)*

Attachment B: *Revegetation Plan (Revised)*

Stateline Wind Project: Oregon Wildlife Monitoring Plan
[REVISED MAY 17, 2002]

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: including 126 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: including 60 wind turbines, two met towers and other related or supporting facilities as described in the Final Order on Site Certificate Amendment #1.

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
    c) Standardized carcass searches
2) Established monitoring transect searches
3) Raptor nesting surveys
4) Burrowing owl surveys

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[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 both Stateline 1 and Stateline 2.
[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.

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:

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

Search 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, shall select search plots based on a systematic sampling design (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 upon the first day of the month following the beginning of commercial operation of the Stateline 2 facility and will conclude twelve months later (for example, if commercial operation begins January 15, 2002, the monitoring year will commence on February 1, 2002, and conclude on January 31, 2003). Subsequent monitoring years will follow the same schedule (for example, monitoring year two would begin February 1, 2003).

Within each monitoring year, 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).

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

Sample Size 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 during the first monitoring year. The certificate holder shall search a minimum of 30 turbines during the second monitoring year. Over the first two monitoring years for Stateline 2, each of the 60 Stateline 2 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.

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.

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.

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.

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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.

The certificate holder shall conduct carcass removal trials within each of the seasons defined above. 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 (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.

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[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.

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. 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).[7] The certificate holder shall conduct ten searcher efficiency trials per monitoring year: two in the spring season, three in summer, two in fall and three in winter.[8] 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.

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.

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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.

On an annual basis, the certificate holder shall report an estimate of fatalities in five categories: 1) all birds, 2) small birds, 3) large birds, 4) raptors and 5) bats. 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.[9] If analysis of the fatality data collected after any two monitoring years 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,

[9] Years may run concurrently.

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 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 shall establish 24 transects perpendicular to the turbine strings in non-agricultural grassland steppe and CRP habitats.[10]
>
> Stateline 2 transects: No additional transects are needed because the turbine strings are located in cultivated land.

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.

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[10] The certificate holder shall use the same established monitoring transects that FPL used for pre-construction surveys and shall use the same survey methodology. However, some transects proposed in the initial monitoring plan are no longer appropriate because of 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 grass seedbed preparation. Further amendment of this monitoring plan, as allowed under Section 13, will be needed to address the elimination of these transects.

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 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 will conduct post-construction established transect surveys for two years in the Stateline 1 area (2002 and 2003). Based on the results of these surveys after two years, the certificate holder shall determine whether the gradient analysis indicates that project structures are causing reduced wildlife use of habitat near the project (including Stateline 1 and Stateline 2). 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 first two years of data from Stateline 1 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. The certificate holder will conduct two years of post-construction raptor nest surveys for Stateline 1 and two years of post-construction raptor nest surveys for Stateline 2.[11]

During each monitoring year, the certificate holder will conduct a minimum of two helicopter surveys, one in May and one in June, 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.

For Stateline 1, the certificate holder shall conduct the aerial surveys within the site of the facility and a 5-mile buffer around the Oregon and Washington turbines to determine nest occupancy. For Stateline 2, the certificate holder shall conduct the aerial surveys within the Stateline 2 site and a 5-mile buffer around the Stateline 2 turbines to determine nest occupancy. Determining nest *occupancy* will likely require two visits to each nest (i.e., the two helicopter surveys). For occupied nests of the target raptor species (listed above) within 2 miles of the facility, the certificate holder shall determine nesting *success* by a minimum of one ground visit 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).

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 collected after any two monitoring years[12] 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-year period, 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,

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[11] Years may run concurrently. That is, the first year of raptor nest surveys for Stateline 2 would occur in 2003. The second year of raptor nest surveys for Stateline 2 may occur in 2004 or 2005, at the option of the certificate holder.
[12] For Stateline 1 or 2.

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.

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[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).

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 collecting this information is secondary to the actual searching for carcasses so the searchers are not distracted from their main task of finding carcasses.

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

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[13] For Stateline 1 or 2.

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. 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.

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 probable facility-related.

(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 turbine (i) for the period of study for which the cause of death is either unknown or is probable facility-related.

k the number of turbines searched

s the number of carcasses used in removal trials

t_i the time 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

N the total number of turbines in the facility

I the interval between searches in days

Observed Number of Carcasses

The estimated average number of carcasses ($\bar{c}$) observed per turbine (or guyed met tower) is:

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

The estimated variance in the average number of carcasses is calculated using the usual sample variance formula:

$$v(\bar{c}) = \frac{1}{k}\left[\frac{\sum_{i=1}^{k}(c_i - \bar{c})^2}{k-1}\right]$$

The total number of carcasses observed ($\hat{C}$) is calculated by:

$$\hat{C} = k * \bar{c}$$

with variance:

$$v(\hat{C}) = k^2 * v(\bar{c})$$

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:

$$\bar{t} = \frac{\sum_{i=1}^{s} t_i}{s}$$

The sample variance $v(\bar{t})$ is calculated using the formula:

$$v(\bar{t}) = \frac{1}{s}\left[\frac{\sum_{i=1}^{s}(t_i - \bar{t})^2}{s-1}\right]$$

If a significant number of birds are remaining in the study area at the end of 40 days, then the average length of time ($\bar{t}$) will be estimated by statistical methods appropriate for censored data (Shumway *et al.* 1989). Removal rates will be estimated by major habitat, carcass size and season.

Estimation of Searcher Efficiency

Searcher efficiency is expressed as p. The variance of searcher efficiency is calculated by the formula:

$$v(p) = \frac{p(1-p)}{d}$$

Carcass detection rates will be estimated by major habitat, carcass size and season.

Estimation of Total Number of Facility-Related Fatalities

The estimated total number of facility-related fatalities (m) for the period of study (e.g., one year) is calculated by:

$$m = \frac{N * I * \hat{C}}{k * \bar{t} * p}$$

The certificate holder shall calculate this estimate separately for each of five categories: 1) all birds, 2) small birds, 3) large birds, 4) raptors and 5) bats. 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.

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 fatality 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[14] 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 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

[14] The "average annual fatality rate" is the average of the two annual estimates of fatalities.

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[15] 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 Swainsons's hawk are at a level of concern, the Office of Energy may require the certificate holder to implement mitigation for that species.

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.

[15] The fenced area would be about 50 feet wide for most intermittent streams in the area.

Stateline Wind Project: Revegetation Plan
[REVISED MAY 17, 2002]

1. Introduction

FPL Energy Vansycle, LLC is operating a wind power project in Oregon and Washington known as the "Stateline Wind Project" or "Stateline Energy Center." The turbine strings are spread out along several ridgecrests located approximately six miles (mi.) 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 SEPA Environmental Impact Statement (EIS) on the Washington portion of the project (October 2000) and in the Energy Facility Application for a Site Certificate (September 2001) for the Oregon portion of the project, FPL Energy agreed to mitigate impacts associated with the loss of native shrub-steppe habitats and Conservation Reserve Program (CRP) lands. 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 area under tower bases, 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).

For the Washington portion of the project, the SEPA EIS (Section 2.6.3.9, Mitigation) specifies that approximately 50 acres (ac.) of grassland steppe and low shrub/scrub steppe habitats require mitigation. The Oregon portion of the project has two parts:

- Stateline 1: including 127 wind turbines and related or supporting facilities as described in the Final Order on the site certificate application (September 14, 2001).

- Stateline 2: including 60 wind turbines and related or supporting facilities as described in the Final Order on Amendment #1.

For Stateline 1, about 49 ac., combined, of Category 2, 3 and 4 habitat has been permanently disturbed and requires mitigation. For Stateline 2, slightly more than 1 ac., combined, of Category 3 and 4 habitat would be permanently disturbed. Thus, a total of approximately 100 ac. of permanent impact to grassland steppe and low shrub/scrub steppe habitats in both states require mitigation.

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 affected agencies, 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 a 34.5 kV underground transmission line.

In addition to the turbine strings, 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 in some locations new roads are being constructed, or existing roads are being upgraded. Overhead transmission lines are used to conduct electricity from the project substation to existing transmission lines in the area.

Permanent structures occupy approximately 186 total ac. (99 ac. in Washington and, in Oregon, 58 ac. for Stateline 1 and 29 ac. for Stateline 2). Other facilities that permanently disturb habitat include turnaround areas, substation sites, and transmission line pole bases. Only a portion of this total area affects shrub-steppe habitats; the remainder of the area 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, temporary disturbance affects 121 ac. in Washington, in Oregon, 117 ac. for Stateline 1 and 103 ac. for Stateline 2. A portion of the temporarily disturbed area is on land cultivated in wheat or other grains.

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°. The proposed transmission line in Washington running from the project site north through Ninemile Canyon also traverses relatively gently-sloping ground, although the sides of Ninemile Canyon are steep in places.

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. 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 shrub 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 to be used for all areas of temporary ground and/or vegetation disturbance in the upland habitats throughout the project area. Because no disturbance to wetland habitats is expected, no wetland revegetation methods have been specified.

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 on page B-8). 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 conditions, the availability of their seed, and a variety of other factors.

3.2. Seed Planting Methods

The following planting methods should be used within the project area. 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 in March-April (for disturbance that occurs during the winter and spring), and/or in October-November (for disturbance that occurs in the summer and fall). Disturbed, unseeded ground may require chemical or mechanical weed control in May or June, 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.

4. Habitat Improvement Procedures (Habitat Enhancement Areas)

4.1. Introduction

In order to mitigate for permanent loss of habitat due to placement of facilities (*e.g.* turbines, access roads), FPL Energy has agreed to 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 proposed, is 100 ac. One parcel of land of similar size will be selected for habitat improvement (alternately, one parcel in Oregon and one in Washington may be chosen). The habitat improvement parcel(s) will be 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 parcel[s] must be located away from turbine strings to avoid attracting additional avian species to the turbine areas); and
- willingness of the landowner to participate in the mitigation activity.

4.2. Habitat Improvement Procedures

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

4.2.1 Fencing

The parcel will be fenced prior to treatment to exclude cattle and other domestic ungulates. No domestic grazing will take place within the parcel for the first five years while native vegetation is being established. Once the inspector certifies that all success criteria have been met for the parcel, 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.

4.2.2 Preparation of Habitat

The parcel will be chemically treated in March or April of the first year to suppress or eliminate weedy species prior to seed set. The goal will be to remove competing non-native vegetation from the parcel to assist in the later establishment of desirable species.

4.2.3 Revegetation

The entire parcel will be seeded using the seed mixture given in Table 2 on page B-8. The mixture will be planted 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.

FPL Energy, or designated contractor, will obtain containerized (10 cubic inch) big sagebrush and antelope bitterbrush from a regional source. Seventy-five percent of the seedlings will be sagebrush and twenty-five percent will be bitterbrush. 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 August or September of the year following each seeding, and continuing for five years, a qualified independent botanist or revegetation specialist will examine a representative cross-section of the revegetated 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.

At each site, the investigator shall evaluate the following parameters:

- Percent cover for the following four classes: native forbs and grasses; non-native forbs and grasses; shrubs; bare ground and rock.
- Degree of erosion due to construction activities (high, moderate, or low).

5.2. Monitoring Procedures (Habitat Enhancement Areas)

In August or September 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. 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 cover for the following four classes: native forbs and grasses; non-native forbs and grasses; shrubs; bare ground and rock.
- Percent survival of the shrub plantings (if applicable).

5.3. Success Criteria

All areas, both the temporarily disturbed areas and the habitat enhancement areas, (except the lithosol plant communities) will be deemed successfully revegetated when total cover of all vegetation exceeds 30%, and at least 25% of the ground surface is covered by native species. For the lithosol communities, where total vegetative cover under natural conditions is typically less than 30%, an area will be deemed successfully revegetated when at least 25% of the total vegetative cover is composed of native species. Shrub plantings will be considered successful when at least 25% of the sagebrush or bitterbrush seedlings have survived.

In the event that success criteria are not met for a site, the investigator may recommend reseeding or replanting of those areas. In certain instances, the revegetation area may be small enough that weed encroachment may make native seed establishment impossible. In these areas, additional reseedings will not be recommended if erosion from construction activities is moderate or low, and vegetative cover of non-native species exceeds 30%. The exemption described in this paragraph does not apply to the habitat improvement parcel, where native species establishment is the primary goal.

After predominantly native vegetation has been established in the habitat improvement parcel, 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 parcel, the investigator will verify that stocking levels are not high enough to significantly degrade the native habitat. Should the investigator discover that all or part of the habitat within the parcel has fallen below the success levels described above, remediative measures may be recommended. These may include replanting of selected areas, or lowering of stocking levels within the parcel.

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). 1994. Umatilla County area, Oregon: hydric soils list (Draft copy). USDA Natural Resources Conservation Service, Pendleton, Oregon. 22 pp.

Natural Resources Conservation Service (NRCS). 1988. Soil survey of Umatilla County area, Oregon. USDA Natural Resources Conservation Service, Pendleton, Oregon. 388 pp.

Table 1: Revegetation Seed Mixture (Temporarily Disturbed Areas)

Common Name	Scientific Name	lbs/acre PLS*
Secar Bluebunch Wheatgrass	*Pseudoroegneria spicata* ssp. *Spicata*	6
Sherman Big Bluegrass	*Poa ampla (secunda)*	6
Critana Thickspike Wheatgrass	*Elymus lanceolatus*	6
Whitmar Beardless Wheatgrass	*Pseudoroegneria spicata* ssp. *Inermis*	6
Sandberg's Bluegrass	*Poa sandbergii (secunda)*	0.4
Basin Big Sagebrush	*Artemisia tridentata*	0.4
Total		**24.8**

*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)

Common Name	Scientific Name	lbs/acre PLS*
Secar Bluebunch Wheatgrass	*Pseudoroegneria spicata* ssp. *Spicata*	3
Sherman Big Bluegrass	*Poa ampla (secunda)*	3
Critana Thickspike Wheatgrass	*Elymus lanceolatus*	3
Whitmar Beardless Wheatgrass	*Pseudoroegneria spicata* ssp. *Inermis*	3
Appar Lewis Blue Flax**	*Linum perrene*	0.5
Basin Big Sagebrush	*Artemisia tridentata*	0.5
Total		**13**

*Notes: *PLS (Pure Live Seed) **Optional in areas where ongoing or expected application of broad-leafed 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 improvement parcel[s] set aside as mitigation for permanent project ground disturbance. This mix should not be used to revegetate areas temporarily disturbed by project construction.)