BEFORE THE ENERGY FACILITY SITING COUNCIL

OF THE

STATE OF OREGON

IN THE MATTER OF THE APPLICATION FOR A SITE CERTIFICATE FOR THE STATELINE WIND PROJECT	))))	FINAL ORDER

The Oregon Energy Facility Siting Council

September 14, 2001

STATELINE WIND PROJECT

FINAL ORDER

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STATELINE WIND PROJECT

FINAL ORDER

I. INTRODUCTION

The Energy Facility Siting Council (Council) issues this order in accordance with ORS 469.370. This order addresses the application for a site certificate for the construction and operation of a proposed wind energy facility in Umatilla County near Helix, Oregon. The applicant is FPL Energy Vansycle LLC (FPL). The applicant has named the proposed facility the "Stateline Wind Project."

Under ORS 469.320 in effect at the time the application was submitted, an applicant for an electric generating power plant with a nominal electric generating capacity of 25 megawatts or more of wind power from a single energy generation area must obtain a site certificate from the Council before beginning construction.[1]

The Council issues this order based on its review of the application, the Office of Energy's proposed order, the contested case proceeding and the hearing officer's recommendation.

It is the public policy of the State of Oregon that "the siting, construction and operation of energy facilities shall be accomplished in a manner consistent with protection of the public health and safety and in compliance with the energy policy and air, water, solid waste, land use and other environmental protection policies of this state." ORS 469.310.

To issue a site certificate for a proposed facility, the Council must determine that "the facility complies with the standards adopted by the Council pursuant to ORS 469.501 or the overall public benefits of the facility outweigh the damage to the resources protected by the standards that facility does not meet." ORS 469.503(1). The Council, further, must decide whether the proposed facility complies with all other applicable Oregon statutes and administrative rules identified in the project order, excluding requirements governing design or operational issues that do not relate to siting and compliance with requirements of federally delegated programs. ORS 469.401(4) and 469.503(3). In addition, the Council must include in the site certificate "conditions for the protection of the public health and safety, for the time for completion of construction, and to ensure compliance with the standards, statutes and rules described in ORS 469.501 and ORS 469.503." ORS 469.401(2).

A site certificate issued by the Council binds the state and all counties and cities and political subdivisions of Oregon. Once the Council issues the site certificate, the responsible state agency or local government must issue any necessary permits that are addressed in the site certificate without further proceedings. ORS 469.401(3).

In accordance with ORS 469.370(1), the Office of Energy ("Office") issues a draft proposed order on an application. Following the issuance of that draft, the Council must conduct at least one public hearing in the affected area. At the hearing, the Council takes

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[1] The Oregon Legislature amended ORS 469.320 in HB 3788, which became effective in June 2001. Under Section 7, paragraph 9, of that law "an electric power generating plant with an average electric generating capacity of less than 35 megawatts produced from wind energy at a single energy facility…may elect to obtain a site certificate." The election is final upon submission of an application for a site certificate.

public comment on the application and draft proposed order. ORS 469.370(2). Any issues that may be the basis for a contested case hearing must be raised by the public hearing comment deadline or they are waived and may not be considered in a contested case. ORS 469.370(3).

After the public hearing and the Council's first reading of the draft proposed order, the Office issues a proposed order recommending approval or rejection of the application. The Office issues a public notice of the proposed order that includes notice that the Council will conduct a contested case hearing on the application. The notice specifies a deadline for requests to participate as a party in the contested case and the date for the initial prehearing conference. ORS 469.370(4). Only those who appeared in person or in writing at the public hearing on the application may become parties to the contested case and only those issues that were raised on the record of the public hearing may be considered in the contested case. ORS 469.370(5).

After the conclusion of the contested case, the Council issues a final order, which either approves or rejects the application based on the standards adopted under ORS 469.501 and any additional state statutes, rules or local government ordinances determined to be applicable to the proposed facility by the project order. ORS 469.370(7).

The Council's final order is subject to judicial review by the Oregon Supreme Court. Only a party to the contested case may request judicial review, and the only issues that are subject to judicial review are those raised by parties to the contested case. A petition for judicial review must be filed with the Supreme Court within 60 days after the date of service of the Council's final order. ORS 469.403.

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

II. PROCEDURAL HISTORY

The Office received a request for expedited review from FPL Energy, Inc., on April 27, 2000, for the proposed "State Line Wind Project." After reviewing the request, the Office of Energy determined that the request satisfied the requirements of OAR 345-015-0300(2). Therefore, an expedited review was granted under the Council rules. The Office notified FPL of its determination on May 9, 2000.

On July 28, 2000, the Council appointed the Umatilla County Board of Commissioners as a special advisory group for review of the application in accordance with ORS 469.480(1).

On January 11, 2001, FPL Energy Vansycle LLC (FPL) submitted an application for a site certificate for the proposed Stateline Wind Project.

On March 9, 2001, the Council appointed John Burgess as its hearing officer for the public hearing and contested case hearing for the proposed Stateline Wind Project.

On April 24, 2001, the Office issued a project order specifying the applicable state statutes and rules, applicable state and local permits, and information and issues to be addressed in the application for the Stateline Wind Project.

On May 11, 2001, the Office declared the application complete. The Office issued public notice of filing of the application and of a public information meeting to be held May

22, 2001, as allowed under OAR 345-015-0190(10). The Office sent the notice by mail to all individuals on the special mailing lists for the Stateline project and to the property owners listed in Exhibit F of the application. The Office arranged for publication of the notice in the *East Oregonian* newspaper, a newspaper of general circulation available in the vicinity of the proposed facility. The Office also issued a notice of filing to reviewing agencies and requested their written comments and recommendations as required under OAR 345-015-0200.

On May 16, 2001, the Office received a supplement to the application, containing FPL's responses to requests for additional information and additional information submitted by FPL during the completeness review.

On May 31, 2001, the Office sent a notice of filing of the application to all individuals on the Council's general mailing list.

On June 1, 2001, FPL notified the Office of Energy that a colony of Washington ground squirrels had been identified on the proposed site. On June 18, 2001, FPL announced that the proposed number of turbines would be reduced from 151 to 125, due to the presence of the state-listed endangered species.

On July 2, 2001, the Office of Energy issued a draft proposed order and gave notice of the public hearing as required under OAR 345-015-0210 and 345-015-0220 by mail and by publication in the *East Oregonian* newspaper on July 1.

On July 19, 2001, the Office of Energy received a draft letter from Andrew Linehan, Senior Project Manager for CH2M HILL, consultants for the applicant. The draft letter proposed adding two turbines to the proposed facility, re-routing an underground collection line and adding a turbine string access road and laydown area. These proposed changes increased the total number of proposed turbines from 125 to 127, increased the capacity of the facility from 82.5 megawatts to 83.8 megawatts and enlarged the total area covered by facility structures and roads. The proposed changes affected the Office of Energy's recommended findings regarding habitat mitigation and the estimated cost of restoring the site.

On July 23, 2001, the Office of Energy held a public hearing in Helix, Oregon. Attorney John Burgess presided as hearing officer. The public comments received at the hearing are described below. At the public hearing, the applicant submitted a final version of the draft letter described above, and the Office of Energy accepted the letter as an amendment of the site certificate application in accordance with OAR 345-021-0090. Copies of the draft letter were made available to the public at the hearing, as well as copies of a revised Oregon Wildlife Monitoring Plan (Draft Proposed Order Attachment A) and a list of corrections and changes in the draft proposed order.

On August 3, 2001, the Council reviewed the Office of Energy's draft proposed order at a first reading. The Office of Energy described recommended corrections and changes to the draft proposed order, including a summary of the public hearing testimony set forth below.[2] The Office reported that the proposed order would reflect additional changes to accommodate the applicant's amendment of the application on July 23 as described above.

[2] The Office documented these changes in a written report entitled "Stateline Wind Project: Corrections and Changes in the Draft Proposed Order as of 8/1/01" delivered to the Council at the meeting.

Those changes would include changes in the facility description, estimated restoration costs, description of affected habitat and description of enhancement areas required as habitat mitigation and the addition of a condition related to construction of an underground collector cable across the streambed in Vansycle Canyon. During the discussion at the meeting, the Council requested that the Office modify parts of the analysis of the land use standard, and the Office recommended language changes to the Oregon Wildlife Monitoring Plan or related conditions to clarify that monitoring of the facility includes the meteorological towers and that wildlife consultants hired to conduct the monitoring should have Office approval as to qualifications. The Council expressed concern about the potential displacement effect of facility construction and operation on the Washington ground squirrel and the need for additional data collection.

On August 9, 2001, the Office issued a proposed order and notice of contested case. Ken Thompson requested party status but withdrew his request. Randy Knop and the Laborers' International Union of North America (LIUNA), Local 121, requested party status. The Office of Energy submitted to the hearing officer a memorandum in opposition to granting party status to Mr. Knop and LIUNA. The applicant also submitted a memorandum in opposition to granting party status. However, on August 27, the hearing officer granted party status to LIUNA and limited party status to Mr. Knop. The hearing officer ruled that the contested case hearing would be limited to the "issues on fire protection" raised by Knop's testimony at the public hearing. A pre-hearing conference was held on August 28 and continued on August 31 and September 4. As a result of the pre-hearing conference and further discussion between attorneys for the petitioners, FPL Energy and the Office of Energy, all parties agreed to a stipulated settlement of the contested case proceeding. The stipulation constitutes an informal disposition of the contested case and is incorporated by reference in this order, as required under ORS 183.415(5)(b). The hearing officer entered an order admitting the stipulation of the parties into the record and terminating the contested case proceeding based on that stipulation. This order contains the revised language agreed to by the parties in Conditions (33), (34), (58) (renumbered from (57) in the proposed order) and (96) (renumbered from (95) in the proposed order).

1. The Public Hearing

(a) Comments Unfavorable to the Proposed Facility

At the public hearing, two people testified against the proposed facility. Randy Knop, speaking on behalf of the Laborers' International Union of North America, opposed issuance of a site certificate on the grounds that FPL's local employment estimate of 30 percent for construction of the facility "does not adequately consider the economic hardship…[of] unemployed workers." Knop also questioned the ability of local "fire suppression organizations" to meet the demands of the project while continuing to meet the needs of local communities. He recommended that the Council require FPL "to provide on site fire response services with area fire suppression companies or establish themselves as the first responder fire authority for all work and activities associated with construction." Knop submitted his comments to the hearing officer in writing.

Ken Thompson testified on his own behalf and also submitted his comments to the hearing officer in writing. Thompson's comments addressed several concerns. Thompson began his testimony by commenting that the Vansycle Wind Project and the Stateline wind

turbines in Washington have caused a "dramatic change" in previously unencumbered scenic views in the area, particularly from Umapine, Milton-Freewater and Highway 11. He noted that the Umatilla County Development Code (UCDC) requires commercial utility facilities to "minimize conflicts with scenic values…by requiring buffers and/or screens." He specifically objected to the proposed white color of the turbine towers because it would not blend with the surrounding landscape.

Thompson commented that the calculation of the footprint of the proposed facility should include the "three dimensional aspects of this proposed energy facility." By including the height of the wind turbines, Thompson estimated "a 99+ noncontiguous acre footprint" for the proposed facility. Thompson commented that "the County and State is willing to grant a conditional use permit" for the proposed facility but "would not allow even one new farm or non-farm dwelling" within the same area.

Thompson "strongly contested" what he considered a misinterpretation of UCDC § 152.061(C) in the draft proposed order. That local land use ordinance requires that a proposed use "does not materially alter the stability of the overall land use pattern of the area." Thompson believed that the draft proposed order wrongly concluded that this requirement applied only to non-farm dwellings. Thompson commented that "the Stateline Wind Project, in combination with the Vansycle Project, dramatically alters the 'predominant use'" of the Exclusive Farm Use zone. He supported his comment with data on the relative assessed value and gross revenue of wind facilities compared with the value of the land under farm use. As further support, he noted that many local property owners want wind turbines on their property, that the wind turbines are a "predominant" visual feature, that the "national press" has discussed the area as the "largest 'Wind Farm' in America" without mentioning farm use and that tourists come to the area to see the "Wind Farm" and not to see "the 8,000-acre farming parcel." Thompson recommended that the county create a new land use zone or an "overlay zone" to address wind resource development.

Thompson commented that there should be "just compensation for the County" for the development of wind power. In particular, he commented that the community should be compensated "for any land use Goal 3 exceptions granted." Thompson disagreed that a Goal 3 exception is warranted. Thompson commented on what he considered a lack of adequate study of the socio-economic impacts of the proposed facility compared with the study of impacts on wildlife and plants. He recommended that FPL provide a socioeconomic study "comparable in scope, content and size" to the project's "Avian Study" before construction begins.

Thompson commented that FPL would "extract value" and "export the electricity" from the wind resource "without adding any significant value to [the] community's socioeconomic structure, infrastructure or quality of life." He estimated the property tax rate for the proposed facility would be $9.72 per $1,000 of assessed value. He noted that the Vansycle wind project has a small number of employees compared to other businesses in the county.

Thompson commented that FPL should be required to restore the site to its "original natural condition." In particular, he commented that removal of turbine pad foundations to a depth of 3 feet would create a barrier to wheat plant roots, which "can reach up to a depth of 10 feet." He recommended that the Council require complete removal of the foundations.

Thompson proposed a "countywide tax on all energy production regardless of facility." The tax would be based on kilowatt-hours of production. Revenues would be "equally divided between the school district that the site lies within, the nearest incorporated community if the project lies outside the city taxing limits, and the county for road maintenance or police protection."

(b) Comments Favorable to the Proposed Facility

Five people testified in favor of the proposed facility. Sonja Ling, representing the Renewable Northwest Project, commented in support of the proposed Stateline project as a "great project" that would come online "at a crucial time in this region." Ling compared the benefits of a wind project to gas-fired plants, which emit carbon dioxide and "acid-rain precursors." Ling commented that carbon dioxide is "the principal cause of global warming" that would adversely affect the community's quality of life. She recommended consideration of the clean air and water benefits of wind power.

Monty Hixson testified on his own behalf. He identified himself as a local contractor working on the Stateline project. He said he hired local people and bought local products. He commented that he and Clayton Livingston (another contractor on the Stateline project) were professional fire-fighters certified for wild fire. He said that there were sufficient water trucks on the project. He said he thinks the wind towers are "beautiful."

Ray McPherson testified on his own behalf. He identified himself as a laborer on the Stateline project. He testified that most of the people he works with on the project are local residents and that they make "a very livable wage." He commented that the workers "respect the environmental aspects." He commented that he hopes the project is expedited so that the project can be completed on the Oregon side. He commented that the project is a "good thing" and is "clean energy." He said the construction is "generating a lot of money for [the] community."

Harry Schuening, mayor of Helix, commented that the city does not receive any money from the project because it is outside the incorporated city limits. He said that "if there are any more" turbines put in, something should be done to help the smaller communities. He stated his appreciation to the Council for holding the public hearing in Helix.

Clayton Livingston testified on his on behalf. He identified himself as an excavation contractor working on the Stateline Wind Project. He said that he lives near the area. He testified that the project should be sited. He commented that all the contractors working there who have equipment are paying personal property taxes to Umatilla County. He commented that he is in favor of the project "because it is not a nuclear power plant that we are putting up in our back yard."

(c) Changes in the Draft Proposed Order as a Result of the Public Comments

The Office of Energy considered the concerns expressed at the public hearing. The comments unfavorable to the proposed facility relate generally to the Council's land use and socio-economic standards. However, at the Council's first reading on August 2, 2001, the Office of Energy recommended no changes to its recommended conclusions on those standards.

In response to the comment regarding UCDC § 152.061(C), the Office proposed a change to the language beginning at page 20, line 3, of the draft proposed order. The purpose of the change was to clarify that the land use analysis applies the requirement that the proposed use "not materially alter the stability of the overall land use pattern of the area." The analysis does not propose a finding that this requirement applies only to non-farm dwellings. As the Office stated in the draft proposed order, the Office recommended that the Council find that "operation of the facility would not cause impacts to farm activities on adjacent lands that might materially alter the stability of the land use pattern." The draft proposed order discussed the factual basis for this finding throughout the land use analysis but particularly in the discussion of compatibility with farm uses under UCDC § 152.061(A) and (B) at pages 18 and 19.

In its proposed order, the Office included the change in the discussion of UCDC § 152.061(C) as well as other changes and corrections to the draft proposed order described by the Office at the August 2 Council meeting. The Office included further changes requested by the Council at that meeting.

III. GENERAL FINDINGS OF FACT

1. Description of the Proposed Facility

(a) Project Overview

FPL proposes to construct and operate a wind energy facility in Oregon and Washington with an overall capacity of about 283 megawatts (MW), of which about 84 MW would be built in Oregon. The entire project is anticipated to provide approximately 93 average megawatts (aMW) of energy. The project would be constructed on privately-owned land in Umatilla County, Oregon, and Walla Walla County, Washington. The project would connect to the regional transmission grid at two places, both in Washington: to the existing Bonneville Power Administration (BPA) 115-kilovolt (kV) Franklin-Walla Walla line at a point approximately 3 miles north of the Walla Walla River and to an existing PacifiCorp 230-kV line approximately 1 mile south of the Walla Walla River. A project substation would be constructed in Washington.

FPL proposes to locate the project's wind turbines and other facilities on private agricultural land, subject to wind energy leases with the landowners. The wind energy leases allow the FPL to construct and operate wind generation facilities for a defined term in exchange for financial compensation to the landowner. Landowners can continue their farm operations in and around the wind turbines and other wind generation facilities.

The proposed facility is assumed to have a useful life of 25 to 30 years. However, it is likely that the facility would be upgraded over time with new and possibly more efficient equipment. The leases with landowners each have a term of at least 30 years but, in addition, have provisions allowing FPL to extend the lease upon the expiration of the primary term. Generally, such extension provisions cover an additional period of at least 20 years. Therefore, the proposed facility could have a useful life longer than 30 years.

The Washington portion of the project was not subject to a state-level review. However, on November 15, 2000, Walla Walla County granted a conditional use permit to the

project, following a Washington state environmental policy act process. Construction began in Washington in January 2001.

(b) The Oregon Energy Facility

The Oregon portion of the proposed project would consist of 127 Vestas V47-660-kilowatt (KW) wind turbines with a total a nominal electric generating capacity of 83.8 MW (127 turbines, each with a capacity of 0.66 MW). Each wind turbine would be connected to the next by a 34.5-kilovolt (kV) collector system. The wind turbines would be grouped in "strings" of 5 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 would collect the electrical output of each Oregon turbine string.

Wind turbines consist of two main components: the turbine tower and the nacelle. The nacelle is the portion of the wind turbine mounted at the top of the tower that houses the wind turbine itself, the rotor and blades, hub and gearbox. The Vestas V47-660-kW wind turbines are almost identical to the wind turbines in use at the existing Vansycle Wind Facility several miles to the southeast of the proposed facility.

The Vestas V47-660-kW wind turbines operate at wind speeds of from 6 to 56 miles per hour (mph) at a relatively constant speed of about 28.5 revolutions per minute. The turbines operate on a variable pitch principle in which the rotor blades rotate to keep them at the optimum angle to maximize output for all wind speeds. At speeds exceeding 56 mph, the blades feather (rotate slightly on their axis) and the rotor stops turning. The Vestas V47-660-kW wind turbines can sustain wind speeds exceeding 100 mph without damage. The turbines are equipped with a wind vane that signals wind direction changes to an electronic controller. Within the electronic controller, there is a yaw mechanism, which uses electrical motors to turn the nacelle and rotor so that the turbine faces into the wind. The proposed Vestas turbines have built-in fire prevention measures that allow the turbines to shut down automatically before mechanical problems create excess heat or sparks.

The diameter of the circle covered by the rotors is approximately 154 feet (that is, each blade is approximately 77 feet long). The three turbine blades are composed of laminated fiberglass. Together, the blades and nacelle weigh approximately 34 tons.

Turbine towers would be approximately 165 feet tall at the turbine hub. The towers would be smooth, hollow steel structures, approximately 14 feet in diameter at the base and weighing approximately 48 tons each. The towers would be painted a neutral light gray color. Tower access would be through a locked door at the base of the tower. A controller cabinet would be located at the base inside the tower. A ladder within the tower would provide access to the nacelle for turbine maintenance.

(c) Related or Supporting Facilities

FPL proposes to construct or use the following related or supporting facilities in Oregon:

- Access roads to reach each turbine for construction and maintenance
- Underground collector cables linking each turbine to the others in its string and ultimately to the substation in Washington

- Meteorological towers
- A satellite operations and maintenance building

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 proposed facility site. From the county roads, a web of private farm roads provides access to most of the ridges upon which the facility would be located. Permanent access roads would be constructed along the length of each turbine string and connecting each turbine string to the next.

Existing roads would be improved and some new gravel roads constructed to provide access to the wind turbine locations during construction and for operations and maintenance. Approximately 4.3 miles of existing farm roads in Oregon would be improved. Roads would be located to minimize disturbance and maximize transportation efficiency and to avoid sensitive resources and unsuitable topography. Existing county roads and private farm roads would be used to the maximum extent feasible. Some existing private farm roads would be improved by widening, grading and graveling. Typical existing farm roads are 8 to 12 feet wide. These would be widened to up to 20 feet wide with an additional 5 feet of permanently disturbed area on either side of the road for shoulder (and an additional 10 feet on either side temporarily disturbed during construction). Improved farm roads would be graded and graveled to provide an all-weather surface. Where necessary, existing cattle guards would be replaced with wider cattle guards to accommodate the wider roads. Farm road improvements would be coordinated with landowners to minimize crop impacts and to assure that the final road provides useful access, where possible, to the landowners' fields.

In areas where farm roads do not provide access to wind turbine locations and along the length of turbine strings, new gravel roads would be constructed. Approximately 12.2 miles of new access roads would be built in Oregon. Generally, these new roads would be up to 20 feet wide (with an average of an additional 5 feet of permanently disturbed area on either side and an additional 10 feet of temporarily disturbed area on either side).

Collector System

The proposed wind turbines generate power at 690 volts. A transformer adjacent to each tower would transform the power to 34.5 kV. Each transformer would be located on a transformer pad approximately 8.5 feet by 8.5 feet square and 12 inches thick constructed approximately 5 feet from the tower pad. From there, power would be transmitted via underground 34.5-kV electric cables buried directly in the soil approximately 3 to 4 feet below the ground surface in a trench up to 5 feet wide. In some cases, trenches would 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 would be no aboveground 34.5-kV transmission lines in Oregon.

In areas where collector lines from several turbine strings follow the same alignment, multiple sets of cables would be installed within each trench where possible. Underground cabling would link the facility's turbines to a substation located in Washington. Overhead transmission lines, located entirely within Washington, would connect the substation to an

existing BPA 115-kV transmission line north of the Walla Walla River and to an existing PacifiCorp substation just north of Highway 12.

The underground 34.5-kV collector lines would be located parallel to facility roads along each of the turbine strings. Typically, the lines would be within 10 feet of the road centerline. The total length of collector line trenches would be approximately 17 miles. FPL's leases with landowners authorize the 34.5 kV collector line system. The entire collector system in Oregon would be underground, and surface activities such as farming could occur over it.

Meteorological Towers

FPL would erect meteorological (met) towers to measure wind conditions. Met towers usually have one or two anemometers to record wind speed at one or more elevations. Instrumentation records data on a data-recording chip that is collected manually, usually on a monthly basis. A 12-volt source provides power to operate the data recorder.

Four permanent met towers would be installed in Oregon during construction of the facility. Permanent met towers would be guyed masts set in concrete foundations approximately 40 inches in diameter and 8 feet deep. The met towers would be 165 feet tall. Met towers would be constructed near the upwind end of turbine strings.

Satellite O&M Building

The primary operation and maintenance (O&M) facility would be constructed on Hatch Grade Road in Washington. FPL proposes to use an existing Quonset hut as a satellite O&M facility. This structure is located along Butler Grade Road south of Gardena and just south of the state line in Oregon. It is currently owned by Thomas Campbell, who has agreed to let FPL use the Quonset hut for storing equipment and vehicles. No chemicals or fuels would be stored there. No structural or exterior changes would be made to the existing building. Low-impact exterior lighting would be installed.

(d) Laydown and Staging Areas

During tower construction and turbine installation, temporary laydown or staging areas would be required. These are areas where tower sections, nacelles and other wind turbine components would be temporarily stored as each wind turbine string is constructed. Four 8-acre laydown/staging areas, three 2-acre laydown/staging areas and approximately eleven 1-acre staging areas would be required, generally one or two for each turbine string. These staging areas also would be used for parking construction vehicles, construction employees' personal vehicles and other construction equipment.

At each turbine location, an area of approximately 1,400 square feet would be required to place turbine blades and other turbine components and to station a construction crane as each tower is erected. At the end of most turbine strings (except where a turbine string is adjacent to a through road), an area approximately 200 feet in diameter (or approximately 0.75 acres) would be needed to allow construction equipment to turn around. Construction of meteorological towers would require a 200-square-foot staging area for each tower, plus (where existing roads do not provide access) up to 300 linear feet of temporary access for construction equipment. After completion of construction, laydown areas would be graded

and reseeded to wheat or native grasses as necessary to restore the area to its original condition.

2. Location of the Proposed Facility

The proposed 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. There are very few trees and no forests in the immediate area. The predominant forms of vegetation are agricultural crops and native grasses.

The proposed energy facility and its related or supporting facilities would occupy and permanently disturb about 60 acres of land. The facility is located on land that is zoned for exclusive farm use, most of which is either planted with dry-land wheat or grazing crops or is planted with native grasses under the CRP program. In addition to the permanently disturbed areas, about 117 acres of land would be temporarily disturbed during construction.

Specific individual turbine locations would be within 300-foot wide corridors centered on the turbine locations depicted in Figures B-3 (three maps dated June 15, 2001) of the application and Figures 1 through 4 (dated July 20, 2001) attached to the letter from Andrew Linehan and received by the Office of Energy on July 23. A minimum distance of 250 feet would separate individual turbines. Figures B-2, B-3 and C-1 of the application and Figures 1 through 4 (attached to the letter from Andrew Linehan and received by the Office of Energy on July 23), incorporated herein by this reference, show the location of the proposed facility.

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

1. General Standard of Review

Under ORS 469.503 and OAR 345-022-0000(1), the Council must determine, before issuing a site certificate, 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.

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, Managerial and Technical Expertise

OAR 345-022-0010:

(1) To issue a site certificate, the Council must find that the applicant has the organizational, managerial and technical expertise to construct and operate the proposed facility. To conclude that the applicant has the organizational, managerial and technical expertise to construct and operate the proposed facility, the Council must find that the applicant has a reasonable probability of successful construction and operation of the proposed facility considering the experience of the applicant, the availability of technical expertise to the applicant, and the past performance of the applicant in constructing and operating other facilities, including, but not limited to, the number and severity of regulatory citations, in constructing or operating a facility, type of equipment, or process similar to the proposed facility.

(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 may 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

The applicant is FPL Energy Vansycle LLC (FPL), a Florida limited liability company formed in 1998 to construct, own and operate the Stateline Wind Project in Washington and

Oregon of which the proposed facility is a part. The applicant is a wholly-owned subsidiary of ESI Energy LLC (ESI). ESI is a holding company for subsidiaries involved in wind, geothermal, solar, cogeneration and waste-to-energy projects. ESI is a wholly-owned subsidiary of FPL Energy LLC (FPL Energy). In addition to managing ESI and its renewable power subsidiaries, FPL Energy manages other holding companies and subsidiaries involved in clean fuel generation and other segments of the energy market. FPL Energy is one of several non-regulated affiliates of FPL Group. FPL Group's regulated side includes Florida Power & Light Company, a utility operating in Florida and Georgia.

FPL has and would continue to have full access to the resources, expertise and personnel of FPL Energy (Condition (28)). FPL Energy is a major independent power producer with an overall project portfolio of over 4,000 MW in the United States, South America and the United Kingdom. FPL Energy actively manages most of its projects and has experience in all phases of development, construction and operation of energy facilities. According to the applicant, FPL Energy is the largest developer and producer of wind power in the United States. FPL Energy has developed and operated about 20 different wind power projects totaling over 1,000 MW. The projects range in size from 5 MW to 112 MW and are located in California, Iowa, Oregon, Texas, Wisconsin and Northern Ireland. FPL Energy, through its subsidiary ESI Vansycle GP, Inc., developed the 24.9-MW Vansycle Ridge Wind Project (Vansycle project) that has been operating in Umatilla County since December 1998. According to the applicant, in all of its wind projects, most of which have been operating for 5 to 10 years, FPL Energy has not received a single regulatory citation or violation, including violations during construction.

FPL's key personnel for the development, construction and operation of the proposed facility have experience in developing, constructing and operating wind power projects. Many of the team members were involved with the Vansycle project. FPL would serve as overall general construction contractor but would contract for necessary services to build the proposed wind energy facility. FPL proposes to select contractors based on price competitiveness, quality of previous work, capability of key personnel, ability to devote key personnel to the project, references (including past work with the applicant), financial capability and environmental record. After construction, FPL would operate the facility.

Vestas, a Danish wind turbine manufacturer, would supply the turbines for the facility. Vestas is the world's leading manufacturer of wind turbines. The V47-660-kW turbine selected for the facility has a record of efficient, safe and reliable operation in projects around the world. FPL Energy has operated thirty-eight of these turbines for two years at the Vansycle project.

Third-Party Permits

The applicant is leasing land from the owners of the property at the facility site.

The City of Helix has agreed to provide all water necessary for construction of the facility. 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 City of Helix has enough water available under its water right to fully meet facility construction and operation needs. FPL anticipates that no water would be needed during operation of the facility.

The construction contractor 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 FPL, subject to the conditions stated in this order, has demonstrated that it has the organizational, managerial and technical expertise to construct and operate the proposed facility. The Council further concludes that FPL 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 managerial and technical expertise standard.

(b) Financial Assurance

OAR 345-022-0050:

To issue a site certificate, the Council must find that the applicant has a reasonable likelihood of obtaining a bond or comparable security, satisfactory to the Council, in an amount adequate to restore the site to a useful, non-hazardous condition if the certificate holder either begins but does not complete construction of the facility or permanently closes the facility before establishing the financial mechanism or instrument described in OAR 345-027-0020(9).

Findings of Fact

Estimated Cost of Site Restoration

The financial assurance standard is meant to provide a site restoration remedy if either of the two conditions stated in the rule occurs; that is, if:

(a) The certificate holder begins but does not complete construction of the facility; or

(b) The certificate holder permanently closes the facility before establishing the financial mechanism or instrument described in OAR 345-027-0020(9).

The cost of site restoration may not be same in each case. For example, in Case (a), if the certificate holder halts construction at a time when construction is substantially complete but before restoring (grading and re-seeding) temporary laydown and staging areas, the cost of restoration may be greater than it might be in Case (b) in which the certificate holder closes the facility after completing construction and restoration of all temporarily disturbed areas.

Based on a facility having 125 turbines as proposed in the filed application, FPL estimated that the cost of restoring the site would be $935,000 in 2001 dollars. FPL based this estimate on the assumption that the scrap or salvage value of the turbines, towers and transformers would be equal to the cost of dismantling and removing this equipment. To confirm this assumption, FPL provided letters from three contractors experienced in wind-farm demolition.

Based on bids received, FPL estimated a cost of $5,800 per turbine for demolition and removal of the structures, removal of foundations to a depth of at least three feet and restoring the turbine pad sites, including grading, topsoil replacement and reseeding with appropriate vegetation. We applied the cost per turbine to a facility having 127 turbines, based on the amendment of the application (letter from Andrew Linehan, received July 23), to produce a revised estimate of $736,600 for turbine removal.

FPL estimated the cost of access road removal to be $3,200 per acre. We applied this cost to the amended estimate of the acres of new roads and improved protions of existing roads.[3] The revised estimate for 55 acres is $176,000.

FPL assumed equipment operation in the course of the turbine pad demolition and road removal would disturb an additional area equal in size to the affected area. Accordingly, the revised estimate for the cost of reseeding 110 acres of land at $500 per acre results in a cost of $55,000 for reseeding.

In total, the estimated the cost of site restoration is $967,600 (in 2001 dollars):

Turbine demolition, foundation removal, grading and reseeding	$736,600
Access road removal, grading	176,000
Reseeding road areas	55,000
Total	$967,600

The Council finds this estimate to be within the range of accuracy for estimates of this type.[4]

FPL did not include in its calculation an estimated cost of site remediation; that is, the removal of potentially hazardous materials (motor oils, chemicals and solvents) and associated soil restoration. No fuel or chemicals would be stored at the energy facility site (Condition (31)). 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 Council finds that the total estimated restoration cost would cover cleanup of leaks or spills.

As noted above, the disturbance of the site could be greater if the certificate holder halts construction at a time when construction is substantially complete but before restoring temporary laydown and staging areas. In that case, an additional 117 acres could potentially need restoration.[5] Assuming the cost of restoring the temporarily disturbed areas would be the same as restoring the road removal areas ($3,200/acre), restoration of these areas would cost

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[3] Permanently disturbed area for roads shown in the application, revised Table B-1 (e-mail from Andrew Linehan received August 7, 2001).

[4] Note that the financial assurance provided by OAR 345-027-0020(9) requires adequate funds to restore the site to a useful, non-hazardous condition *throughout the life of the facility*. Because events over the course of 30 years cannot be predicted, a 20-percent contingency would protect the state from uncertainties in the estimate as well as unforeseen additional costs. Adding a 20-percent contingency to FPL's estimate, the total site restoration cost would be $1,161,120 (in 2001 dollars).

[5] Temporarily disturbed area shown in the application, revised Table B-2 (e-mail from Andrew Linehan received August 7, 2001).

$374,400. Assuming equipment operation would disturb an area equal to the affected area, reseeding 234 acres at a cost of $500 per acre would result in a cost of $117,000. Accordingly, the estimated amount to restore the site in this case would be $1,459,000 (in 2001 dollars).

Bond or Comparable Security

The Council finds that the value of the financial assurance bond should include the amount needed to restore the site if the certificate holder halts construction at a time when construction is substantially complete but before restoring temporary laydown and staging areas. The Council finds that the amount necessary is $1,459,000 (in 2001 dollars).

FPL proposes to secure a performance bond from the American Home Assurance Company to restore the site to a useful, nonhazardous condition. The bond would be inflation-adjusted on an annual basis according to the Gross Domestic Product Implicit Price Deflator Index. The bond would remain in place until the facility is retired. That is, FPL proposes that this bond would meet not only the financial assurance standard but also the need for a financial mechanism or instrument as described in OAR 345-027-0020(9). In the alternative, FPL may obtain a letter of credit in the same amount in a form acceptable to the Council.

A letter from American Home Assurance Company dated June 28, 2001 (Attachment M-2), based on a facility having 125 turbines as proposed in the filed application, states that approval of a bond in the amount of $1,392,800 would be "very likely" based on FPL's financial status and credit record, subject to "normal underwriting factors." The revised estimate of restoration costs would increase this amount by less than 5 percent.

Full completion of construction would include restoration of the temporarily disturbed areas, and so the long-term financial instrument would not include the estimated cost of restoring temporarily disturbed areas. However, for the purpose of the financial mechanism or instrument required under OAR 345-027-0020(9) to assure the availability of adequate funds throughout the life of the facility to restore the site, the Council finds that FPL's estimate should be increased by a 20-percent contingency. Thus, the estimated site restoration cost would be $1,161,120 (in 2001 dollars).

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 require a site certificate 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 $1,459,000 (2001 dollars) is a reasonable estimate of the cost to restore the site to a useful, non-hazardous condition if the certificate holder either begins but does not complete construction of the facility or permanently closes the facility before establishing the financial mechanism or instrument described in OAR 345-027-0020(9). The Council further concludes that the FPL, subject to the conditions stated in this

order, has demonstrated a reasonable likelihood of obtaining financial resources, satisfactory to the Council, in an amount adequate to restore the site to a useful, non-hazardous condition.

Conditions (15), (19), (41), (43) and (80) relate to the Council's financial assurance standard.

3. Standards about the Site and Structures

(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 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 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 land use analysis must begin with identification of the "applicable substantive criteria" as defined under OAR 345-022-0030(3). On July 28, 2000, the Council appointed the Board of Commissioners of Umatilla County as a special advisory group for this application. In a letter dated February 7, 2001, the Commissioners endorsed the list of substantive criteria provided to the Office by Dennis Olson, Director of Umatilla County's Department of Resource Services and Development, in a letter dated May 24, 2000, (App[6] Attachment K-3). Olson reaffirmed the list of criteria in a letter dated January 26, 2001, and further clarified the applicable criteria in a letter dated February 6, 2001.

The recommended substantive criteria for the proposed facility are:

- Umatilla County Development Code (UCDC) § 152.060
- UCDC § 152.061
- UCDC § 152.616
- UCDC § 152.615
- As an additional condition of approval, the applicant should notify the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) cultural resources staff when construction is beginning. The applicant's construction team

[6] Throughout this document, references to the site certificate application are to the application as modified by the supplement and later revisions, abbreviated as "App." Page, figure and attachment references include the application exhibit letter. Thus, "Attachment K-3" refers to an attachment within Exhibit K of the application.

should immediately contact CTUIR and the Oregon Office of Historic Preservation if any cultural resources are found.

- Additional federal, state or local standards must be met before construction can begin on the project. These include approval from the Federal Aviation Administration, approval for culvert installation in a riparian area from the U.S. Army Corps of Engineers and/or the Oregon Division of State Lands, Department of Environmental Quality NPDES permit for stormwater discharges, and local zoning and building permits. In addition, the applicant will need to work with DEQ to meet noise standards particularly for noise related to turbine operation.
- Umatilla County Comprehensive Plan Energy Conservation element and Open Space, Scenic and Historic Areas, and Natural Resources element.[7]

The proposed facility would lie entirely on land within the land use jurisdiction of Umatilla County. The energy facility (wind turbine strings) and its related or supporting facilities, as well as staging areas needed during construction, would be on privately-owned land zoned as Exclusive Farm Use (App Attachment K-1). The facility would be subject to the provisions of the Umatilla County Comprehensive Plan and the land use ordinances in the Umatilla County Development Code (UCDC) in effect on the date FPL submitted the application (January 11, 2001). 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.

We analyze each requirement below. The Council finds that the proposed facility complies with the applicable substantive criteria of Umatilla County. However, the Council finds that the proposed facility would not comply with one provision of the LCDC administrative rules directly applicable to the facility under ORS 197.646(3). The amended administrative rule pertains to protection of agricultural lands and implements Statewide Planning Goal 3 (Agricultural Lands). For reasons discussed below, the Council finds that the proposed facility meets the standards for an exception to the goal under OAR 345-022-0030(4)(c).

Umatilla County Development Code

UCDC Section 152.060 – Conditional Uses Permitted

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,

[7] The referenced sections of the Umatilla County Comprehensive Plan were attached to Dennis Olson's letter of May 24, 2000, but he did not directly address them in his analysis of local land use requirements. In the application, FPL addressed the Agricultural Plan element and the Open Space, Scenic and Historic Areas, and Natural Resources element. The policies expressed in the comprehensive plan do not contain specific substantive criteria. However, we include a discussion of the relevant policies in this section.

and §§ 152.610 through 152.616." Further, the ordinance requires a zoning permit, pursuant to § 152.025, following the approval of a conditional use permit.

One of the cross-referenced ordinances, UCDC § 152.611 provides as follows:

> ***
>
> *(B) In permitting a new conditional use or the alteration of an existing conditional use, the Hearings Officer may impose conditions which the Hearings Officer considers necessary to protect the best interests of the surrounding area or the county as a whole;*
>
> ***
>
> *(D) The county may require the applicant to furnish the county with a performance bond or such other form of assurance that the county deems necessary to guarantee development in accordance with the standards established and conditions attached in granting a conditional use.*

These provisions give the County the authority to impose conditions in order to minimize or avoid off-site effects of a proposed use. Umatilla County has recommended certain conditions for the proposed facility, 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;*

The turbines and other structures that comprise the facility would be located on small portions of very large landholdings. The facility footprint would permanently disturb about 58 noncontiguous acres on properties comprising approximately 8,000 acres. Of the acreage that the facility footprint would permanently disturb, FPL has identified only about 10 acres as agricultural non-irrigated cropland and about 22 acres as former cropland (now enrolled in the Conservation Reserve Program).[8] There are no prime agricultural soils within the facility site. Landowners use the facility site and its vicinity for small grain (generally winter wheat) with summer fallow or rangeland (cattle grazing).

The turbines would be spaced approximately 250 feet apart. The tower pads would have a surface area of up to 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. Farm road improvements (new construction and improvements to existing roads) would be coordinated with landowners in an effort to minimize any crop impacts and assure, where possible, that the final road locations provide useful access to the landowners' fields. 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 (2), (44) and (62).

[8] Application, Table P-10, and Table 1 in the letter from Andrew Linehan received July 23.

The leases with the landowners require FPL to make reasonable efforts not to disturb farming and ranching activities on the facility site and to control soil erosion and growth of invasive weeds associated with the facility (App K-6 and Attachment K-9). See Condition (40). The leases also protect the landowners from any increases in property taxes associated with the construction or operation of the facilities on their properties.

FPL expects construction to take approximately 6 months. Construction activities would be compatible with farm use and should not affect resource use of the remainder of the parcel or adjacent lands (Condition (40)). In addition to the area permanently occupied by the facility, approximately 117 acres would be temporarily disturbed during construction. The temporarily disturbed areas would be restored before facility operation begins (Conditions (20), (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)). Areas used for staging, laydown, turnaround and needed for road construction would be graded and re-vegetated (Condition (68)). 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)).

Landowners would be able to conduct grazing and farm operations up to, and between, the turbine strings. Experience with the Vansycle project nearby indicates that landowners may need to modify plowing and harvesting patterns in the immediate vicinity of the turbine pads and roads. However, the spacing of the towers, height of the turbine blades and depth of the underground cables are such that the facility would otherwise be compatible with farm uses. Operation of the facility would not have any effect on resource use of the remainder of the affected parcels or on adjacent lands.

When the facility 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 standard at page 40.

> *(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.*

The facility 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. The facility would have little or no impact on farm operations or the cost of accepted farm practices on adjacent lands. During construction, the project might cause temporary off-site impacts to farming due to an increase in construction-related traffic. Once operational, however, the facility would generate little traffic. The location of facility structures might require changes to cropping patterns in the immediate vicinity of the turbine strings and other aboveground facilities, but facility operations would not cause 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.

We applied this criterion to the proposed facility, including the turbine towers, pad areas and access roads. Operation of the facility would not cause impacts to farm activities on adjacent lands that might materially alter the stability of the land use pattern. As discussed above with regard to UCDC § 152.061(A) and (B), the area occupied by the proposed facility and the operation of the facility are compatible with farming activities, which are the primary use of the land in the area of the proposed facility site. The proposed facility would not create any new lots, parcels or non-farm dwellings to the detriment of agriculture in the area. It would not alter the parcel size or primary use of the properties on which the facility would be located or on other properties in the area similarly situated. The cumulative impact of the proposed facility together with the existing Vansycle Wind Facility nearby are not likely to make it more difficult for existing types of farms in the area to continue operations. The proposed facility is not expected to diminish opportunities for expansion of farming activities, leasing farm property or acquiring water rights. The proposed energy facility would not be developed in lieu of farm operations. Farming activities could continue on the properties on which the turbines would be located and on the surrounding properties. The proposed facility 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 proposed road improvements would enhance access for farm operations on the affected properties. Any traffic-related impacts during construction would be temporary.

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

A covenant not to sue is unnecessary because the lease agreements between FPL and the landowners adequately address the issues otherwise addressed by a covenant not to sue.

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;

The relevant scenic resources are located several miles from the facility site. See discussion of the Council's protected area standard at page 45 and scenic and aesthetic values standard at page 59. Considering the intervening topography, the spacing of the turbines, the neutral color of the turbines and the absence of emissions causing other visual impacts, the facility would not conflict with scenic values. For the reasons noted above, the facility would not conflict with adjacent farm uses. There are no adjacent forest uses. All of the adjacent land is privately owned. The recreational uses on those properties consist primarily of pheasant hunting, which landowners permit seasonally in some areas. With the exception of temporary impacts of noise and traffic associated with construction, the facility would not

conflict with adjacent recreational uses. See discussion of the Council's recreation standard at page 64.

(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;

The facility would not be located close to any dwellings or adjacent to a recreational residential zone. The closest dwelling is located approximately 2,000 feet from one turbine string. The remaining strings are at least 5,000 feet from the nearest dwelling. See discussion of the Oregon Department of Environmental Quality's noise standard at page 79. Measures to blend the facility with the surrounding landscape would reduce the visual impact of the proposed facility (Condition (37)). See discussion of the Council's scenic and aesthetic values standard at page 59. See discussion of the Council's socio-economic impact standard at page 66 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;

The facility would not be located adjacent to any dwellings or to a Mountain Recreational or Forest Residential Zone. The closest dwelling is approximately 2,000 feet from the proposed facility, and other dwellings are at least 5,000 feet away.

(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;

The proposed facility is not located in a forested area. It would not constitute an unnecessary fire hazard. The towers and pads would be constructed of fire retardant materials and cables would be buried. The proposed turbines would have built-in fire prevention measures, including automatic shutdown before mechanical problems create excess heat or sparks. Combustible materials would not be stored at the facility and only a small amount of combustible material would be used during facility construction and operation. The certificate holder would implement fire response and prevention measures at the facility related to staff training, equipment and coordination with local fire departments. See Conditions (31), (96) and (58).

(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;

The facility would not take any timberland out of production and would maintain the overall stability and land use patterns in the area as described in the discussion of UCDC

§ 152.061. The location and spacing of the turbine pads would not preclude or significantly impair farm use, which is the prevailing land use pattern in the area. Electric transmission and communications cables would be buried and at a depth that would not interfere with farm use. The certificate holder would implement mitigation measures to minimize soil disturbance during construction. Construction would be subject to an NPDES 1200-C construction permit and regulated by the erosion control plan and best management practices required by that permit. Trenches would be backfilled 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) and (62).

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

This criterion is not applicable because the proposed facility 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 the proposed facility would not affect any acreage governed by Oregon Department of Forestry regulations. Protection of fish and wildlife resources is discussed below with respect to UCDC § 152.616(T)(10) and in the discussion of the Council's fish and wildlife habitat standard at page 48.

(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 the proposed facility. 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.

The County's planning director indicated that the County would likely require conditions deemed necessary by the Oregon Department of Fish and Wildlife to protect fish and wildlife resources and conditions concerning the eventual decommissioning of the facility (Letter from Dennis Olson dated May 24, 2000, App Attachment K-3). The certificate holder would avoid, minimize and mitigate impacts to fish and wildlife and their habitat. See discussion of the Council's fish and wildlife habitat standard at page 48 and threatened and endangered species standard at page 56. Upon retirement of the facility, structures would be

removed to a depth of three feet below the ground surface and soil surfaces would be reseeded. See discussion of the Council's retirement standard at page 40.

In a "Staff Findings and Conclusions" document, dated January 31, 2001, County staff recommended other conditions essential to its finding that the project would meet the County criteria for a conditional use permit. The conditions listed in sections VI and VII of this order substantially incorporate those recommended conditions.

UCDC Section 152.615 – Additional Restrictions

UCDC § 152.615 gives the County the authority to impose conditions in order to minimize or avoid off-site effects of 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;*

Construction activities are expected 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 (App X-8). Operational noise levels would be within the applicable noise limits. See discussion of the Oregon Department of Environmental Quality's noise standard at page 79. During construction, the certificate holder would implement dust control and suppression measures (Condition (61)). Construction activities would not cause vibration, glare or odor. Facility operations would not cause vibration, air pollution, glare or odor.

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

This provision does not apply to the proposed facility.

(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 several vehicle access points created by the proposed project. These access points would connect access roads on private property to county roads. For each such access point, FPL would need to obtain a permit from the Umatilla County Department of Public Works.

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

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

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

The facility would not require new parking or loading areas. UCDC §§ 152.560 through 152.562 address parking and loading. In his letter of February 6, 2001, Dennis Olson, in reference to these code sections, stated: "The satellite O&M building is an existing farm building with adequate parking for its intended use."

(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 and security lights at the satellite O&M building. 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;

Fencing would not be needed at the facility site. The proposed facility is located in a remote area. 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;

The facility would not affect existing trees, rivers or other standing bodies of water. The proposed facility would make improvements to an existing road at its crossing with an intermittent stream and would include an underground crossing of a streambed. However, the improvements would involve an insignificant amount of fill. See discussion of impacts to wetlands at page 83. 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 Condition (61). The leases require FPL to implement measures to control soil erosion and weeds (App Attachment K-9). 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 48.

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

The proposed facility does not include new parking areas. As discussed above regarding subsection (F), adequate parking is available at the satellite O&M building.

UCDC Section 152.063 – Development Standards

UCDC § 152.063 contains dimensional and development standards applicable in an EFU zone. Subsections (A) through (C) of the ordinance establish setback requirements. 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 the proposed facility 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 special advisory group did not identify this ordinance as one of the applicable substantive criteria. According to Dennis Olson's letter of February 6, 2001:

> There is no indication that any project facility or activity will be located where setbacks would be a potential problem. There are no active aggregate mining operations near the project. There are no stream setback issues. Any other development standards required or of concern are addressed within the conditional use permit criteria.

The supplementary regulations found in §§ 152.010 through 152.016 do not apply to the proposed facility. 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)). Any signs at the O&M building would be "Type 3" signs as described in § 152.546, which are exempt from the requirements of § 152.545. With respect to the parking and loading requirements of UCDC § 152.560 through 152.562, the satellite O&M building is an existing building with adequate parking for its intended use. 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 the proposed facility.

UCDC Section 152.025

UCDC § 152.025 addresses the need for a zoning permit:

> *(A) Prior to the construction, reconstruction, addition to or change in use of a structure, or the change in use of a lot or the installation or replacement of a mobile home on a lot, a zoning permit shall be obtained from the County Planning Department. Within the flood hazard area, a zoning permit shall be required for all other developments including placement of fill, mining, paving, excavation or drilling. Structures of 120 square feet or less in area and structures described in § 152.026 [farm uses] do not require a zoning permit except when located in a designated flood hazard area. A zoning permit shall be voided after one year unless construction has commenced. The Planning Commission or its authorized agent may extend the permit for an additional period not to exceed one year upon written request.*
>
> *(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 the facility because the facility exceeds 120 square feet in size. A separate permit will not, however, be needed for the satellite O&M building because it is an accessory use structure. The land on which the facility would be located has not been developed or divided in violation of the Umatilla County Development Code.

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.

The proposed facility is a wind energy facility. It would, therefore, be a "locally-feasible renewable energy resource" eligible under this policy for encouragement through tax and permit incentives. The County has not proposed any specific tax or permit incentives for the Stateline project.

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 explained above, particularly with respect to compliance with UCDC § 152.061, the Council finds the proposed facility compatible with agriculture and with this comprehensive plan provision.

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.

In his letter of February 6, 2001, Dennis Olson stated: "it is the County's position that the Applicant has sufficiently addressed Policy 20(a) in its response to 20(b) and in Exhibit R of the Application. See Finding 14(b)[9] [sic] of the Staff Findings and Conclusions." The Umatilla County Planning Department prepared Staff Findings and Conclusions about the Stateline Wind Project in a document dated January 30, 2001. Finding 14(d) states:

The project is designed and located to minimize conflicts with scenic values and adjacent farming uses as outlined in policies of the Comprehensive Plan.

[9] We assume Olson meant to refer to 14(d).

The project will be visible from a few properties to the south and east but most dwellings are several miles away. The project's turbines will be visible from the residents to the north (near Touchet, Washington). The applicant provided several illustrations that depict the view from the north looking south toward the project both before and after project construction. To date, Umatilla County has not received any public comment regarding the visual impacts of either the existing and adjacent Vansycle Wind Project or the proposed Stateline Wind Project.

(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.

Facility construction would minimize the areas of disturbance to the extent possible. Temporarily disturbed areas would be re-vegetated before or upon completion of construction. The certificate holder would take measures to prevent soil erosion and noxious weed species from taking hold in disturbed areas. See Conditions (20), (44), (60), (61) 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 take measures to reduce soil erosion and to prevent noxious weed species from taking hold in disturbed areas. See Conditions (60) and (61).

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

The proposed facility would not create "unsightly land uses." The turbine towers would be painted gray to allow the turbines to blend 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.*

The facility would be compatible with surrounding area development (farm use). It would retain the open landscape. Facility structures would be painted to blend with the surroundings.

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) 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.*

The facility 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 59.

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

Unlike many commercial and retail land uses, the facility would not be open to the public. Existing parking is adequate and most public services unnecessary. The resource-dependent nature of wind generation requires open spaces and makes it unsuitable for co-location with most other commercial and retail facilities, and therefore construction of the facility would not encourage strip commercial development.

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 62. A qualified cultural resource expert would be on the site during construction. The certificate holder would notify the Office of Energy, the Oregon State Historic Preservation Officer and the CTUIR if previously unidentified cultural resources were discovered during construction. See Conditions (75) and (76).

Directly Applicable State Regulations

In 1994, the Land Conservation and Development Commission (LCDC) amended the rules implementing Goal 3 (Agricultural Lands) as set forth in OAR Chapter 660, Division 33. Umatilla County has not yet adopted amendments to its land use regulations implementing the 1994 revisions to the LCDC rules. Therefore, under ORS 197.646(3), the amended LCDC rules are directly applicable to the local government's land use decisions. The relevant amended LCDC rules are as follows:

> **OAR 660-033-0120**
> **Uses Authorized on Agricultural Lands**
>
> *The specific development and uses listed in Table 1 are permitted in the areas that qualify for the designation pursuant to this division. All uses are subject to the general provisions, special conditions, additional restrictions and exceptions as set forth in this division. The abbreviations used within the schedule shall have the following meanings:*
>
> *(1) A – Use may be allowed. Authorization of some uses may require notice and the opportunity for a hearing because the authorization qualifies as a land use decision pursuant to ORS Chapter 197. Minimum standards for uses in the table that include a numerical reference are specified in OAR 660-033-0130. Counties may prescribe additional limitations and requirements to meet local concerns as authorized by law.*
>
> *(2) R – Use may be approved, after required review. The use requires notice and the opportunity for a hearing. Minimum standards for uses in the table that include a numerical reference are specified in OAR 660-033-0130. Counties may prescribe additional limitations and requirements to meet local concerns as authorized by law.*
>
> *(3) * – Use not permitted.*
>
> *(4) # – Numerical references for specific uses shown on the chart refer to the corresponding section of OAR 660-033-0130. Where no numerical reference is noted for a use on the chart, this rule does not establish criteria for the use.*

Table 1 lists "[c]ommercial utility facilities for the purpose of generating power for public use by sale" as an "R" – or allowable use on agricultural lands – subject to the minimum standards found in OAR 660-033-0130(5) and (22). FPL's proposed use is a "commercial utility facility for the purpose of generating power for public use by sale," which is allowed as a conditional use under ORS 215.283(2)(f).

> **OAR 660-033-0130**
> **Minimum Standards Applicable to Schedule of Permitted and Conditional Uses**
>
> * * *
>
> *(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.

This rule is similar to the criteria in UCDC § 152.061 discussed at page 22 above. For the reasons explained above with respect to UCDC § 152.061(B), OAR 660-033-0130(5) is satisfied.

(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.[10]

The proposed facility is compatible with farm use and landowners would be able to continue their farm operations around and beneath the turbines. However, the facility would permanently preclude about 31 acres of current or former cropland from farm use (App K-14).[11] Thus, the proposed facility would preclude more than 20 acres of land from use as a commercial agricultural enterprise. The Council finds , therefore, that the proposed facility cannot comply with this rule and that the Council must decide whether an exception to Goal 3 is warranted.[12]

Under ORS 469.504(2) and OAR 345-022-0030(4) (quoted above on page 19), the Council may take an exception to a planning goal if the Council finds that:

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

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[10] 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.

[11] Land categorized either as non-irrigated cropland or as former cropland enrolled in the Conservation Reserve Program as shown in the application, Table P-10, and Table 1, letter from Andrew Linehan received July 23.

[12] FPL interprets the phrase "power generation facility" in LCDC's OAR 660-033-130(22) not to include access roads. The LCDC rules do not define "power generation facilities." FPL relies on the definition of "generating facility" in the Council rules, which does not include related or supporting facilities. However, that definition (OAR 345-001-0010(23)) was added to the definitions section of Council rules to distinguish "generating facilities" from "nongenerating facilities" (OAR 345-001-0010(37)). This distinction relates to whether a facility is required to comply with the carbon dioxide standard. When the Council addresses the issue of carbon dioxide emissions, the Council is not looking at roads or other related or supporting facilities that do not emit carbon dioxide. When addressing land use in OAR 345-022-0030, the Council uses the broader term "facility," which includes all related or supporting facilities, such as access roads. We believe that "power generation facility" as used in the LCDC rule is meant to include all land that the *facility* precludes from use for commercial agriculture, including the access roads.

The roads will permanently disturb approximately 50 acres of agricultural land. If the roads are not treated as part of the facility allowed under either ORS 215.283(2), they would need to be established under ORS 215.283(3). Table 1 identifies roads as an "R" or allowable use on agricultural lands, subject to the minimum standards found in OAR 660-033-0130(13). Subsection (13) provides for the establishment of roads subject to the adoption of an exception to Goal 3. For that reason, an exception would be required regardless of whether the new and improved roads are treated as part of the facility under ORS 215.283(2) or evaluated separately under ORS 215.283(3).

(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 the 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.

We analyze each of these requirements below.

(a) Reasons

Reasons justify why the state policy embodied in the goal should not apply. Goal 3 is to "[t]o preserve and maintain agricultural lands":

> *Agricultural lands shall be preserved and maintained for farm use, consistent with the existing and future needs for agricultural products, forest and open space and with the state's agricultural land use policy expressed in ORS 215.243 and 215.700.*

The land on which the facility would be located is not high value farmland. The farm use in the area involves low-intensity uses such as cattle grazing and cultivation of small grain (generally winter wheat) with summer fallow, with the remainder held in reserve under the Conservation Reserve Program. The affected area is not among the highest priorities for protection under Goal 3.

The project furthers other important state and local policies and objectives. There is a current and future need for electrical energy. The proposed wind energy facility not only addresses the public need for electricity but also furthers federal, state and local policies that encourage development of renewable energy sources. In particular, the project furthers the objectives of the Governor's Executive Order No. EO-00-07 on Sustainability, which emphasizes the need for the state to encourage and promote the development of renewable energy sources, including wind power. It also furthers Statewide Planning Goals 13 (Energy Conservation) and 6 (Air, Water, and Land Resources). Goal 13 expressly encourages land use planning to utilize renewable energy sources, including wind, whenever possible. A wind energy facility supports Goal 6 because it supplies electric generation that would otherwise likely be met by a non-renewable energy facility that would impose greater impacts on the state's air and water resources. Consistent with Statewide Planning Goal 13, the County's comprehensive plan encourages the utilization of local renewable energy resources (Energy Conservation element), and the proposed facility furthers that objective.

This energy facility is by its nature dependent on location. As a general matter, an open landscape is essential for an economic wind generation project. The lack of wind-breaks such as trees, buildings or homes make the large areas of open landscape typical of agricultural land superior to forested or more developed areas for purposes of wind energy generation. The proposed site offers a significant comparative advantage by virtue of its proximity to the Washington portion of the Stateline development and the existing electrical transmission lines and proposed substation to which the proposed facility can connect without duplicating those facilities in Oregon.

Finally, the local economy would benefit through the employment opportunities offered by the project, primarily during construction, and the property taxes paid to Umatilla

County. Compensation paid to the landowners who lease space for the roads, turbines and other facilities would add income to the affected agricultural operations.

(b) Environmental, Economic, Social and Energy Consequences

This order identifies the environmental consequences of the proposed facility. The certificate holder would mitigate environmental impacts according to the conditions proposed in this order. Neither the construction nor the operation of the facility would cause significant adverse impacts to air or water quality, wetlands or protected or scenic areas. Under the terms and conditions of the site certificate, the certificate holder would mitigate construction-related impacts such as noise, dust, soil erosion and traffic, as well as operational impacts related to erosion, invasive weeds and fire risk. Site certificate conditions would require the certificate holder to avoid, minimize and mitigate impacts to fish and wildlife and their habitat. See discussion of the Council's fish and wildlife habitiat standard at page 48 and threatened and endangered species standard at page 56.

The proposed facility would not have significant adverse economic and social consequences. It would not cause any significant adverse impact on the ability of the affected communities to provide community services such as housing, health care, schools, police and fire protection, water and sewer, solid waste management, transportation and traffic safety. See discussion of the Council's socio-economic standard at page 66. Subject to site certificate conditions, the proposed facility would not adversely affect important visual resources, recreational opportunities or cultural resources. See discussion of the Council's scenic and aesthetic values standard at page 59, recreational opportunities standard at page 64 and historic, cultural and archaelogical resources standard at page 62.

The facility would offer local employment opportunities and contribute to the county's tax base. It would also help meet the region's energy needs by generating electricity from a renewable source.

(c) Compatibility with Adjacent Uses

For the reasons stated above, particularly with respect to UCDC § 152.061, the Council finds that the proposed facility is compatible with adjacent uses. The facility would not alter the farming land use pattern in the area or otherwise conflict with existing or reasonably foreseeable farming practices or operations on adjacent lands.

The Council finds, therefore, that an exception is warranted to allow development of a location-dependent, renewable energy generation project as proposed by FPL and subject to the site certificate conditions described in this order.

Conclusions of Law

The Council concludes that the facility does not comply with rules implementing Goal 3 of the statewide planning goals but that an exception is warranted. The Council concludes that the proposed facility otherwise complies with the statewide planning goals adopted by the Land Conservation and Development Commission. These conclusions are subject to the conditions stated in this order.

Conditions (2), (20), (31), (96), (37), (38), (40), (44), (58), (60), (61), (62), (68), (72), (75), (76), (81) and (82) relate to the Council's land use standard.

(b) Structural Standard

OAR 345-022-0020

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

(1) 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

(2) 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;

(3) 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

(4) The applicant can design, engineer and construct the facility to avoid dangers to human safety presented by the hazards identified in section (3).

Findings of Fact

The Office of Energy consulted with a qualified earthquake engineer, Douglas R. Schwarm, P.E, GeoEngineers, Inc., to review the structural standard analysis FPL provided in its application. The Oregon Department of Geology and Mineral Industries reviewed and concurred with Schwarm's report. We base the following findings upon that report.

Site Characterization – Seismic Hazards

CH2M HILL performed a site-specific characterization of seismic, geologic and soil hazards for the proposed facility. The ground motion portion of the seismic hazard evaluation was performed using probabilistic methods as allowed under OAR 345-021-0010(1)(h)(F). Three seismic sources comprise the seismic hazards at the site: interplate, intraslab and crustal events. Each source is capable of producing peak ground acceleration greater than 0.05g on rock at the site.

Two of the potential sources, interplate and intraslab events, are related to the subduction of the Juan de Fuca plate beneath the North American plate along the Cascadia Subduction Zone. Interplate events are a result of movement at the interface of the two tectonic plates. Intraslab events originate within the subducting tectonic plate when stresses in the plate are released. These two sources are currently reported to be capable of producing moment magnitude earthquakes of 9.0 and 7.5, respectively. These magnitudes are roughly equivalent to the maximum credible seismic event (MCE) defined in OAR 345-021-0010(1)(h)(F).

Crustal events are the third source of seismic hazard. Movements along crustal faults, generally in the upper 10 to 15 miles, produce earthquakes. These events are a result of a release of stresses that have accumulated within the crust of the North American tectonic

plate. There are several crustal faults in the facility area. FPL states that these faults are inactive or have a low probability of activity.

FPL estimated the peak ground acceleration for the maximum probable seismic event (MPE) and MCE recurrence intervals using information developed by the USGS in its National Seismic Hazard Facility (USGS, 1996). The probabilistic seismic hazard method considers the contribution of all possible seismic sources for a given recurrence interval. FPL used de-aggregation to evaluate the predominant contribution to ground shaking hazard at each recurrence interval.

The 475-year (MPE event) ground shaking level is 0.08g. For this recurrence interval, the USGS de-aggregation information indicates that the mean moment magnitude is 6.1 at a mean distance of 24 miles. The USGS estimates ground shaking of 0.23g from a mean moment magnitude of 6.4 at a mean distance of 7 miles for the 2500-year return period. The ground shaking for a 5,000-year return period (MCE event) is 0.37g, with a mean moment magnitude of 6.7 at a mean distance of 4.3 miles.

The Oregon Building Code (OBC) soil type for the site is primarily S_B, which refers to a rock site with shear wave velocities greater than 2,500 feet per second. The site is located in OBC Seismic Zone 2B that has a seismic zone factor of 0.2. This factor corresponds to a mean peak horizontal ground acceleration of 0.2g for an S_B soil profile that is the prevalent soil profile at the site. This ground shaking magnitude would be used in design, as required by the OBC. It significantly exceeds the 0.08g ground motion (MPE) required by OAR 345-022-0020(1).

The application notes that although the soil type is generally S_B, "localized areas of S_C and S_D are present" (App H-7).

The potential impacts of the MPE-level seismicity on the proposed facility include: ground motion amplification, seismic slope stability, surface fault displacement, liquefaction, lateral spreading and subsidence.

Ground Motion Amplification

Generally, a thin soil mantle atop basalt bedrock underlies the energy facility site. No significant ground motion amplification is anticipated in those areas. Construction in localized S_C and S_D soil type would incorporate ground motion amplification design parameters of the OBC.

Seismic Slope Stability

The foundation designer would be required to evaluate the potential affects of slope instability on turbines if the slopes are steeper than 30°. The acceptable design will show that either (1) the slope has a minimum safety factor of at least 1.1 for pseudo-static loading with a seismic coefficient of 0.13 or (2) the possible deformations of slopes with safety factors less than 1.1 will not adversely affect the structure (Condition (50)).

Surface Fault Displacement

Several short faults with low activity are mapped in the proposed site area, and the probability of fault rupture is low but not zero. Should a fault rupture, the amount of movement is estimated to be less than 1 foot. The turbine foundations and conduit would be designed to tolerate the movement without global instability or breakage.

Other Hazards

Groundwater is not present in the thin soil mantle overlying the basalt bedrock. Consequently, liquefaction, lateral spreading and subsidence are not considered hazards at the site.

Facility Design Criteria for Seismic Hazards

The proposed facility consists of roadways, wind turbine towers and underground collector cables. There would be no continuously occupied structures in Oregon. Consequently, the risk to human safety due to seismic hazards is low.

The facility would be designed in accordance with the seismic design provisions in the OBC (Condition (49)). The OBC acceleration response spectra are approximately equal to the 2,500-year event. The probability that the threshold would be exceeded is about 2 percent over a 50-year period. The facility would be designed to experience no permanent structural damage due to design levels of ground shaking or secondary hazards associated with ground movement or failure.

The preliminary geotechnical and seismic evaluation did not indicate any major geologic or seismic hazard that would significantly affect the proposed facility. The potential impacts would be relatively minor and could be mitigated through design, based on standard geotechnical engineering practices.

Site Characterization – Geologic and Soils Hazards

Geologic and soils hazards are those that occur in the absence of an earthquake triggering event. Such hazards may include flooding, landslides and erosion. FPL evaluated geologic processes or geological conditions that may constitute a threat to human activities. The risks posed by non-seismic hazards are considered small.

Elevations of the energy facility are well above the flood elevations for the area. Consequently, no flood-related hazards that would threaten human safety or facility operations are expected. No mitigation is proposed.

The energy facility site can generally be characterized as basalt covered by a thin loess mantle. The basalt bedrock is typically not subject to landslides. FPL's geotechnical engineer reviewed aerial photography of the project area to determine if there were any evidence of landslide or other terrain features that might affect turbine stability. The geotechnical engineer reported that the photographs showed no evidence of landslide features. Additionally, no landslide features were observed during the site reconnaissance.

Facility Design Criteria for Geologic and Soils Hazards

Because aerial photographs of the energy facility site showed no evidence of landslide features and because no landslide features were observed during the site reconnaissance, the threat of landslides that would threaten human safety or facility operations appears to be small. The foundation designer would be required to meet normal stability standards when designing foundations or modifying slope angles for roads and other facilities. Permanent slopes would be designed to have a minimum safety factor of 1.5. Temporary slopes would be designed to have a minimum safety factor of 1.3. All structures would be constructed with a sufficient setback from slopes to mitigate landslide induction due to their construction.

Earthwork construction for roads and turbine foundations would be engineered and would be subject to an erosion control plan. Condition (61) describes erosion control measures to be used during construction.

Conclusion of Law

The Council concludes that FPL, through appropriate site-specific study, has adequately characterized the proposed site in terms of seismic zone and expected ground response during the maximum credible and reasonably probable seismic events. The Council concludes that FPL has shown, subject to the conditions stated in this order, that the proposed facility can be designed, engineered, and constructed adequately to avoid potential dangers to human safety presented by seismic hazards affecting the proposed site, including amplification, that are expected to result from all reasonably probable seismic events. These conclusions are subject to the conditions stated in this order.

Conditions (49), (50), (51), (59) and (61) relate to the Council's structural standard.

(c) Retirement

OAR 345-022-0130

To issue a site certificate, the Council must find that the site, taking into account mitigation, can be restored adequately to a useful, non-hazardous condition following facility retirement.

Findings of Fact

This standard addresses retirement of the proposed facility after a period of operation. The financial assurance standard, discussed above at page 16 addresses the cost of site restoration that could become necessary before the beginning of facility operation. A final retirement plan, approved by the Council, would describe the activities necessary to retire the site (Condition (19)).

For the purposes of the retirement standard, a "useful, non-hazardous condition" is a condition consistent with the applicable local comprehensive land use plan and land use regulations. The proposed facility is located on land zoned for exclusive farm use in Umatilla County. The certificate holder would obtain the necessary authorization from the appropriate regulatory agencies to proceed with decommissioning of the facilities.

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 uses or consistent with other resource uses such as wildlife habitat or land conservation. The facility would not include underground storage tanks, long-term storage or on-site disposal of hazardous or non-hazardous wastes. Thus, soil contamination is unlikely.

Retirement of the facility would require dismantling the turbines, towers, pad-mounted transformers, meteorological towers and related aboveground equipment. 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. These cables could be abandoned in place without being a hazard or interfering with agricultural use or other consistent resource uses of the land. 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 retire the facility are feasible. Restoration of the facility site to a useful, non-hazardous condition could be accomplished in a relatively short time, assuming availability of sufficient funds to complete the work.

Conclusions of Law

The Council concludes that, subject to the conditions stated in this order, the proposed site can be restored adequately to a useful, non-hazardous condition following facility retirement.

Conditions (2) and (19) relate to the Council's retirement standard.

(d) 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

FPL would reduce the visual impact of the proposed facility by the measures described in Condition (37). FPL would not allow any advertising on any part of the facility, except the turbine manufacturer's logo on turbine nacelles. The overall appearance of the facility would be comparable to the Vansycle project. No advertising sign would be posted at the facility.

On its turbine strings, FPL would use only the minimum lighting required by the Federal Aviation Administration. No other facilities in Oregon would have outdoor lighting, except that the satellite O&M building would have a small amount of low-impact exterior lighting for security purposes.

At the facility, FPL would use only those signs required for facility operation and safety. These are likely to include signs posting the maximum traffic speed on certain access

roads, stop signs at intersections of access roads and warning signs posted on or near electrical equipment.

FPL 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)).

FPL proposes to use existing roads, where feasible, for access to the facility area. Approximately 12 miles of new roads would be constructed to access ridges where no roads currently exist. 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 lines for the facility 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 facility would not have a substation in Oregon. Instead, FPL would connect the Oregon facility with the Washington Stateline facilities. No existing substation in the area could be used, and so FPL would construct a new substation in Washington.

To avoid creating artificial habitat for raptors or their prey, FPL would spread gravel on all above ground portions of the turbine pads to reduce the potential for weed infestation and raptor use (Condition (64)). FPL 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. They would provide no opportunities for sheltering raptor prey. FPL would avoid creating perching opportunities on towers or related structures by using tubular steel turbine towers and guyed mast meteorological towers. The facility would have no overhead transmission structures.

Conclusions of Law

The Council concludes that FPL, taking into account mitigation and subject to the conditions stated in this order, can design and construct the facility to reduce visual impact, can design and construct the facility to restrict public access and can design and construct facility to reduce cumulative adverse environmental impacts in the vicinity to the extent practicable.

Conditions (30), (37), (38), (44), (64) and (65) relate to the Council's siting standards for wind energy facilities.

4. Standards about Impacts of Construction and Operation

(a) 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, is not likely to result in a significant adverse impact to soils including, but not limited to, erosion and chemical factors such as salt deposition from cooling towers, land application of liquid effluent, and chemical spills.

Findings of Fact

The 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. Relevant under this standard are the facility's potential for impacts such as erosion, compaction, mass wasting and slumping.

FPL identified the near-surface soils at the facility site using the U.S. Soil Conservation Service Soil Survey of Umatilla County, Oregon. FPL used discrete sampling to obtain soil classifications. FPL believes these samples represent average conditions in the vicinity. FPL grouped the soils under a single category known as the Ritzville General Soil Unit. As described by FPL, the Ritzville General Soil Unit generally consists of deep, well-drained soils, primarily Ritzville soils but including other soils such as moderately deep Mikkalo soils, shallow Lickskillet soils, deep Nansene soils and moderately deep Willis soils. In general, the soil unit has a very fine silt loam and sandy loam surface layer with a substratum of silt loam.

According to FPL, there are no prime agricultural soils within the facility site or its vicinity as defined by the Oregon Department of Land Conservation and Development OAR 660-033-0020(8)(a)(B) and identified by Umatilla County. Of the 150 acres that would be temporarily or permanently disturbed by the facility, approximately 85 acres are in agricultural use.[13] 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.

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 chemicals would be stored subject to applicable safety regulations at the main O&M building in Washington, and small amounts of such chemicals would be transported to the facility site in Oregon.

The potential adverse impacts from construction and operation of the facility are erosion and compaction. Soil erosion potential is moderate to high. During construction, all areas where vegetation is removed would be exposed to wind and water erosion. Excavations for underground cables will 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 will 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.

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[13] In the application, Tables B-1 and B-2 indicate a total of 164 acres permanently or temporarily disturbed. However, FPL states that in their soil impact analysis they used Geographic Information System data and took into account areas of overlap (App B-2 and C-1). Acreage amounts are based on Table 1 (letter from Andrew Linehan, received July 23).

FPL does not expect significant potential erosion impact due to operation of the facility. Each turbine would have a gravel pad large enough to permit parking and turning of maintenance or other similar vehicles. Precipitation could result in surface water collecting on, and draining from, gravel surfaces or structures. Soils could be exposed to increased erosion during repair of underground cables during operation of the facility.

FPL has proposed mitigation actions to reduce the erosion risk. Those actions are described in conditions (61) and (92). FPL proposes no formal monitoring program for soil impacts. However, if areas of erosion were observed during construction or operation, FPL would implement mitigation and reclamation measures.

Conclusions of Law

The Council concludes that the design, construction and operation of the proposed facility, taking into account mitigation and subject to the conditions stated in this order, is not likely to result in a significant adverse impact to soils.

Conditions (61) and (92) relate to the Council's soil protection standard.

(b) 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, the Council must find that, taking into account mitigation, the design, construction and operation of a proposed facility located outside the areas listed below is 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 September 1, 2000:

(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.

Findings of Fact

The proposed facility would not be located within any protected area designated under OAR 345-022-0040(1).

The applicant identified three protected areas and four potential protected areas within 20 miles of the proposed facility site. The following table shows current and potential protected areas and the approximate distance of each from the proposed energy facility site:

Protected Areas	Distance	State
Cold Springs National Wildlife Refuge	15 miles	Oregon
Hat Rock State Park	17 miles	Oregon
McNary National Wildlife Refuge	12 miles	Washington
Potential Protected Areas		
Wallula Habitat Management Unit	5 miles	Washington
Stateline Habitat Management Unit	6 miles	Oregon and Washington
Two Rivers Habitat Management Unit	10 miles	Washington
Peninsula Habitat Management Unit	11 miles	Washington

According to the applicant, the U.S. Army Corps of Engineers owns the four habitat management units (HMUs) but they are included in a new cooperative agreement transferring their management to the U.S. Fish and Wildlife Service (USFWS). The long-term intent of the transfer of management of the HMUs is for their eventual inclusion in the USFWS wildlife refuges system. National wildlife refuges are protected areas under OAR 345-022-0040. For this reason, these four areas are included in the protected area analysis.

Noise

The nearest protected area, McNary National Wildlife Refuge, is 12 miles from the facility site, and the nearest potential future protected area, Wallula HMU, is 5 miles from the facility site. At these distances, the noise from construction or operation of the facility would be inaudible. There would be no significant impact on any protected area or potential future protected area.

Traffic

Vehicle traffic associated with construction of the facility would be dispersed on roads near the site and spread over a six-month period. Highway 730 runs near Hat Rock State Park and the Stateline HMU. Highway 12 runs near McNary National Wildlife Refuge and Two Rivers HMU. These routes are busy major highways. 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 HMUs. During operation, the use of these routes by operation and maintenance personnel would be unnoticeable. Therefore, traffic during construction and operation of the facility would not have a significant impact on any protected area or potential future protected area. See the discussion of the Council's socio-economic impacts standard at page 66 for a further discussion of traffic impacts from construction and operation of the proposed facility.

Visual Impact

The applicant used geographic information system (GIS) line-of-sight, topographic analysis to determine whether any part of the proposed facility would be visible from the three protected areas and the four potential future protected areas. The applicant also interviewed site managers. See discussion of the Council's scenic and aesthetic values standard at page 59 for further analysis of the visual impact of the facility.

The applicant's GIS analysis suggests that intervening topography would make it impossible for any part of the facility to be seen from Cold Springs National Wildlife Refuge. The GIS analysis indicates that there would be a direct line of sight between a few of the turbine strings and Hat Rock State Park. However, the state park is 17 miles from the facility, and at that distance, the turbines would be practically invisible in most light and atmospheric conditions. Even if visible, the turbines would appear so small and be such a minor part of the visual environment that the impact on the state park viewshed would be insignificant.

The manager of McNary National Wildlife Refuge, the Peninsula HMU and the Two Rivers HMU stated that distance and intervening landscape features would prevent any views of the facility from the wildlife refuge. He stated that any views from the two HMUs would be obscured by distance and by visible plumes from the Boise Cascade paper mill at Wallula, Washington.

According to the applicant's interviews, the Wallula HMU and Stateline HMU have a line of sight from at least one location to some of the proposed turbine strings. However, the view of the turbines would not be significant at the distances of from the site (5 to 6 miles). Furthermore, because the sites are managed for wildlife conservation as opposed to aesthetic values, the small visual impact would not be significantly adverse.

Conclusions of Law

The Council concludes that the proposed facility is not located in a protected area as defined by OAR 345-022-0040(1) and that the design, construction and operation of the proposed facility, 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.

(c) 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, is consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025 in effect as of September 1, 2000.

Findings of Fact

Mitigation Goals and Standards

OAR 635-415-0025 defines six categories of habitat in order of their value to wildlife. The rule then establishes mitigation goals and corresponding implementation standards for each habitat category.

"Habitat Category 1" is irreplaceable, essential habitat for a fish or wildlife species, population, or a unique assemblage of species and is limited on either a physiographic province or site-specific basis, depending on the individual species, population or unique assemblage.

The mitigation goal for Category 1 habitat is no loss of either habitat quantity or quality. The goal is achieved through avoidance of impacts.

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

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

"Habitat Category 3" is essential habitat for fish and wildlife, or important habitat for fish and wildlife that is limited on either a physiographic province or site-specific basis, depending on the individual species or population.

The mitigation goal for Category 3 habitat is no net loss of either habitat quantity or quality. The Council interprets this to mean that both habitat quantity and quality are preserved. The goal is achieved by avoidance of impacts or by mitigation of unavoidable impacts through reliable in-kind, in-proximity habitat mitigation to achieve no net loss in either pre-development habitat quantity or quality.

"Habitat Category 4" is important habitat for fish and wildlife species.

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

"Habitat Category 5" is habitat for fish and wildlife having high potential to become either essential or important habitat.

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

"Habitat Category 6" is habitat that has low potential to become essential or important habitat for fish and wildlife.

The mitigation goal for Category 6 habitat is to minimize impacts. The goal is achieved actions that minimize direct habitat loss and avoid impacts to off-site habitat.

The habitat impacts of construction, operation and retirement of the facility may be so significant in nature, extent or duration that mitigation measures to achieve the goals and standards of OAR 635-415-0025 cannot be identified without the evaluation that would be provided in a written mitigation plan. A "mitigation plan" means a written plan that is substantially as described in OAR 635-415-0020 and is approved by the Office of Energy in consultation with the Oregon Department of Fish and Wildlife (ODFW).

For habitat in categories 2, 3 and 4, the applicant (or certificate holder) shall report progress towards achieving the mitigation goals and standards on a schedule agreed to in the mitigation plan performance measures. The fish and wildlife mitigation measures shall be implemented and completed either prior to or concurrent with the development action.

Habitat in the Analysis Area

The analysis area is the area within the site boundary (generally a 300-foot wide corridor around the turbine strings and access roads) and all laydown and staging areas and within 500 feet from any project facilities. The applicant identified six habitat types within the analysis area. Within each of the six habitat types, the applicant identified subtypes. The applicant then identified the ODFW habitat categories within each habitat subtype. Table P-1 of the application (App P-3 through P-5), incorporated here by reference, lists the habitat types, subtypes and categories. Figures P-2 of the application (3 pages, dated June 14, 2001), incorporated here by reference, maps the location of habitat within each of the ODFW habitat categories as identified by the applicant.

A small area of upland tree habitat, identified as Category 1 habitat, exists near the southern end of turbine strings HG-J and HG-K.[14] An area of shrub-steppe grassland, identified as Category 1 habitat, lies north of turbine strings BG-B and BG-C. No Category 1 habitat would be directly disturbed by the facility, 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 of sensitive species. Indirect impact from operation of the facility could affect habitat quality.

Approximately 75 acres of shrub-steppe grassland identified as Category 2 habitat exists throughout the analysis area. The largest areas of Category 2 habitat are in pockets east of turbine string P-B, south of the road connecting turbine strings P-B and WS-B, west and south of turbine string WS-B and south of the road and proposed underground cable between turbine strings WS-B and BG-B. Construction would temporarily disturb approximately 0.7 acres of Category 2 grassland, and facility roads or structures would permanently eliminate about 0.5 acres. Indirect impacts from construction and operation of the facility could affect habitat quality.

FPL identified as Category 3 habitat approximately 726 acres of Conservation Reserve Program (CRP) lands and 861 acres of shrub-steppe grasslands. Facility roads and structures would permanently eliminate about 22 acres of CRP land and 26 acres of Category 3

[14] A second upland tree area lies in section 22 south of turbine string HG-K about 900 feet from the nearest road or underground cable location. It is discussed in the application text at P-8. It is not shown on the final Figure P-2 West due to a slight change in turbine location. This upland tree habitat is shown on the original version of Figure P-2 (dated January 9, 2001).

grassland. Temporary disturbance during construction would directly affect approximately an additional 39 acres of CRP land and 38 acres of grassland. Indirect impacts from construction and operation of the facility could affect habitat quality.

Construction of an underground collector cable across Vansycle Canyon would disturb a small area of non-forested riparian habitat (Category 3). The disturbance of approximately 0.001 acres would be temporary.

The analysis area includes about 61 acres of shrub-steppe grassland identified as Category 4 habitat. It exists in small pockets around the HG turbine strings and in a larger area to the south of a road connecting turbine strings P-B and WS-B. Direct impact by the facility would temporarily disturb approximately 0.01 acres and permanently disturb 0.02 acres of Category 4 grassland habitat. Indirect impacts from construction and operation of the facility could affect habitat quality.

The applicant identified 46 acres Category 5 habitat land in the analysis area. All the Category 5 habitat is newly enrolled CRP land; that is, former cropland recently taken out of production to provide erosion control and wildlife habitat. The areas of Category 5 habitat are to the west and south of a proposed underground collector cable between turbine strings BG-B and WS-B and to the south of the access road between turbine strings WS-B and P-B. The construction and operation of the facility would have no direct impact on Category 5 habitat. By definition, this land does not currently provide essential or important habitat for wildlife, and therefore construction would not cause any significant indirect impacts.

FPL identified approximately 335 acres of non-irrigated cropland within the analysis area as Category 6 habitat. Most of this land lies around or near turbine strings HG-J and HG-K. Facility structures or roads would permanently eliminate about 10 acres of Category 6 agricultural land, and construction would temporarily disturb 15 acres. By definition, this land has low potential to become essential or important habitat for fish and wildlife, and therefore construction would not cause any significant indirect impacts.

Potential Impacts from Construction and Operation of the Facility

As described above, construction of the facility would result in temporary disturbance of approximately 93 acres of habitat.[15] This acreage would be used for temporary laydown and staging areas during construction of the access roads, turbine pads, meteorological towers and underground transmission lines. About 0.7 acres would be Category 2, 77 acres would be Category 3, 0.01 acres would be Category 4 and about 15 acres would be Category 6 habitat. Construction related noise and traffic would be limited to an estimated 6-month construction period.

The placement of permanent structures (turbine pads, access roads and meteorological towers) would eliminate approximately 58.3 acres of habitat.[16] About 0.5 acres would be

[15] Based on Table 1 (letter from Andrew Linehan, received July 23). FPL states that in their habitat analysis they used Geographic Information System data and took into account areas of overlap (App B-2 and C-1). Accordingly, acreage totals differ from amounts shown in Table B-2.

[16] Based on Table 1 (letter from Andrew Linehan, received July 23). FPL states that in their habitat analysis they used Geographic Information System data and took into account areas of overlap (App B-2 and C-1). Accordingly, acreage totals differ from amounts shown in Table B-1

Category 2, 47.8 acres would be Category 3, 0.02 acres would be Category 4 and about 10 acres would be Category 6 habitat.

In addition to the direct effects on habitat, whether temporary or permanent, construction and operation of the facility would have indirect effects. Of special concern are the indirect effects on essential or important wildlife habitat within the analysis area; that is, effects on the quality of habitat identified within Categories 1 through 4. The applicant acknowledges the issue of indirect impact:

> The nature, extent, and duration of significant potential impacts that could result from construction and operation of the project were identified based on the existing values of each site that would be directly or indirectly impacted by the proposed wind plant and related facilities. Potential impacts identified include temporary habitat loss or alteration and disturbance from equipment and people during construction. (App P-39)

Indirect effects on habitat quality during construction and operation could occur because of noise, vehicle traffic, human activity and operation of the wind turbines in areas near important or essential habitat. During operation, a decline in use by, or significant fatalities of, species known to use important or essential habitat in the analysis area would imply an indirect impact on habitat quality.

Mitigation during Construction and Operation

FPL would avoid direct impact to all Category 1 habitat in the analysis area and would avoid indirect impacts during construction by scheduling construction to avoid activity near Category 1 habitat during the nesting season. The Category 1 upland tree habitat is irreplaceable, essential habitat for Swainson's hawks and ferruginous hawks. Fatalities of these raptor species or a decline in nesting success attributed to facility operation could indicate a loss of habitat quality due to indirect impacts of the facility. Analysis of monitoring data might indicate impacts to wildlife or wildlife habitat that the certificate holder has not adequately addressed by mitigation. If these impacts result in a loss of habitat quantity or quality, further mitigation may be required.

Category 1 grassland habitat is irreplaceable, essential habitat for Washington ground squirrels, a state-listed endangered species. However, operation of the facility is not expected to cause fatalities of Washington ground squirrels.

The applicant would largely avoid direct impact to Category 2 habitat in the analysis area. Of 75 acres of shrub-steppe grassland identified as Category 2 habitat, construction and operation would directly affect less than one acre temporarily and one-half acre permanently. The applicant proposes to employ general mitigation measures during construction as described in Condition (63) and (65). To mitigate for the permanent elimination of one-half acre of Category 2 habitat, the applicant proposes to control weeds and enhance habitat on one acre of weed-infested upland habitat with native plants (Condition (66)). The location of this habitat enhancement area would be determined in consultation with ODFW and landowners.

The Category 2 and Category 3 grassland habitat is essential or important habitat for wildlife species including but not limited to the Grasshopper sparrow and Swainson's hawk. Category 3 CRP land is essential or important habitat for wildlife species including but not

limited to the Grasshopper sparrow. 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. 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.

The greatest direct impact of construction and operation of the facility upon wildlife habitat is the impact on Category 3 CRP and grassland habitats. More than 80 percent of the land temporarily or permanently affected by the facility is Category 3 habitat. By definition, this land is essential habitat for wildlife or is important habitat that is limited in quantity. The applicant proposes to employ general mitigation measures during construction as described in Condition (63) and (65). To mitigate for the permanent elimination of approximately 48 acres of Category 3 habitat, the applicant proposes to control weeds and enhance habitat on an equal area of weed-infested land in the project vicinity (Condition (67)). The location of this habitat enhancement area would be determined in consultation with ODFW and landowners.

Construction and operation of the facility would directly affect a small amount of Category 4 grassland habitat. The applicant proposes to employ general mitigation measures during construction as described in Condition (63) and (65). The applicant proposes no additional habitat enhancement to mitigate for the permanent elimination of 0.02 acres of Category 4 habitat. The applicant believes that weed control throughout temporarily disturbed areas and in the habitat enhancement area created to mitigate the permanent loss of Category 2 habitat would result in no net loss of Category 4 habitat. To further help achieve no net loss of Category 4 habitat, the applicant relies also on the proposal to enhance one acre of weed-infested habitat to mitigate for the loss of one-half acre of Category 2 habitat, described above.

There are about 61 acres of shrub-steppe grassland identified as Category 4 habitat in the analysis area. This habitat is important for wildlife species including but not limited to the Grasshopper sparrow, western burrowing owl and Swainson's hawk. A reduction in use by raptors, owls or grassland/steppe avian species near the facility would indicate a loss of habitat quality. Fatalities of these species attributed to facility operation could also indicate a loss of habitat quality due to indirect impacts of the facility. Analysis of monitoring data might indicate impacts to wildlife or wildlife habitat that the certificate holder has not adequately addressed by mitigation. If these impacts result in a loss of habitat quantity or quality, further mitigation may be required.

Although the analysis area includes about 46 acres of Category 5 newly enrolled CRP land, construction and operation of the facility would have no temporary or permanent direct impact on this Category 5 habitat. Because this land has only recently been taken out of production, construction of the facility is not expected to have significant indirect impacts on the quality of this habitat. Operation of the facility may have an indirect impact on habitat quality as the land's potential value to wildlife improves over the life of the facility.

The proposed facility would permanently eliminate approximately 10 acres of Category 6 dryland agricultural habitat and would temporarily disturb another 15 acres during construction. The applicant proposes to minimize impacts to the temporarily disturbed areas by mitigation measures described in Condition (68). Construction and operation of the facility are not expected to have significant indirect impacts on the quality of this habitat.

Potential Impacts and Mitigation during Retirement of the Facility

Retirement of the facility is described above under the Council's retirement standard at page 40. The anticipated actions to retire the energy facility and restore the energy facility site to a useful condition would have effects on important and essential wildlife habitat (Categories 1 through 4) similar to the effects of construction. Furthermore, 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.

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)).

Oregon Wildlife Monitoring Plan

To assure that the operation of the facility complies with the Council's fish and wildlife habitat standard, the site certificate would require the certificate holder to conduct monitoring after beginning operation of the facility (Condition (93)). The overall monitoring objectives are to determine whether the facility causes significant fatalities of birds and bats and to determine whether the facility results in a loss of habitat quality.

The details of the monitoring components, statistical analysis and data reporting is described in the *Oregon Wildlife Monitoring Plan*, Attachment A, which is incorporated in this order. The Office of Energy developed the monitoring plan based on monitoring FPL proposed in the application (Attachments P-6 and P-7), consultation with ODFW and consultation with BioResource Consultants.[17]

The objectives of components of the monitoring plan are as follows:

1. Fatality Monitoring (standardized carcass searches): The objective of the standardized carcass searches 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.

2. 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.

3. 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

[17] The Office of Energy, acting with the advice of ODFW, engaged BioResource Consultants of Ojai, California, to assist in the assessment of the potential impacts of the proposed facility on wildlife. The principal consultants were Carl G. Thelander and Dr. Michael Morrison, both qualified experts in siting wind energy facilities to avoid impacts wildlife and monitoring for impacts, especially to avian species, following construction.

of nesting activity or nesting success in the local populations of target raptor species: Swainson's hawk, ferruginous hawk, golden eagle and prairie falcon.

4. 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.

5. 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.

The requirement of monitoring during the operation of the facility 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 the ODFW in OAR 635-415-0025. The Council makes the following general findings of consistency:

- Design: By location of the proposed wind turbines and structural design, the proposed facility avoids impacts to wildlife and to essential and important habitat to the extent reasonably possible (Condition (52)).

- Construction: Construction of the proposed facility avoids direct impact to all Category 1 habitat in the analysis area.

  Construction avoids direct impact to all but 1.2 acres of the Category 2 habitat in the analysis area, and the certificate holder would provide habitat enhancement of one acre of weed-infested habitat to compensate for the permanent loss of 0.5 acres of Category 2 habitat (meeting the "net benefit" requirement).

  Construction would have a direct impact on 125 acres of Category 3 habitat but would permanently eliminate less than half of that (about 48 acres). To compensate for the loss of Category 3 habitat, the certificate holder would provide habitat enhancement on about 48 acres of weed-infested land in the area.

  Construction of the facility would have a direct impact on less than a half-acre of Category 4 habitat, about 25 acres of Category 6 habitat and no Category 5 habitat. The proposed habitat enhancement areas would adequately compensate for the small loss of Category 4 habitat. The standard for Category 6 (minimize impacts) is met because of the small area affected.

  The proposed enhancement of a total of about 49 acres 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 2, 3 and 4 with

respect to direct, permanent elimination of habitat. The certificate holder would mitigate for indirect impacts to wildlife and wildlife habitat, as described in Conditions (53), (54), (63) and (65).

- Operation: The certificate holder would mitigate for indirect impacts to wildlife and wildlife habitat, as described in Conditions (89), (90) and (91). Operational monitoring as described in the *Oregon Wildlife Monitoring Plan* 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 facility, taking into account mitigation and subject to the conditions stated in this order, is consistent with the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025.

Conditions (7), (8), (14), (52), (53), (54), (63), (65), (66), (67), (68), (82), (89), (90), (91), (93) and (94) relate to the Council's fish and wildlife habitat standard.

(d) 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) Is 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, is 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, is 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 Oregon Department of Agriculture (ODA) designates state-listed threatened or endangered plant species under ORS Chapter 564 and OAR Chapter 603, Division 73. FPL contacted ODA for information about listed plant species and any applicable protection and conservation programs. FPL also consulted with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (NMFS) and with the Oregon Natural Heritage Program for information about listed and sensitive species.

Botanical field surveys conducted within and near the analysis area from 1994 through 2000, which FPL reviewed, included the following: *Botanical Investigation: Vansycle Wind Facility* (Eagle Cap Consulting, 1997); *Botanical and Wildlife Investigation: Stateline Wind Power Facility* (Northwest Wildlife Consultants and Eagle Cap Consulting, 1999); and *Rare Plant Investigation: Stateline Wind Power Facility* (Eagle Cap Consulting, 2000).

FPL conducted surveys for the presence of threatened or endangered plant species within an analysis area that included all proposed laydown and staging areas and the area within a 300-foot corridor centered on turbine strings and transmission and road centerlines. No state-listed plant species were found during field surveys, and there are no current records of state-listed plant species populations within the analysis area.

One threatened plant species, Laurence's milk-vetch (*Astragalus collinus*), potentially could occur in the analysis area but was not found during field surveys. Two other candidate species, Hepatic monkeyflower (*Mimulus jungermanniodies*) and Columbia yellow-cress (*Rorippa columbiae*), potentially could occur in the analysis area but were not found during field surveys.

After botanical surveys were completed, FPL relocated certain laydown areas and other project features. As a result, small areas of land not surveyed are now included within the facility site. FPL states that these areas have habitat similar to that within the surveyed areas and therefore does not expect listed plant species to be present in these areas. However, FPL would conduct pre-construction surveys in these areas to confirm this. If any listed plants are found, FPL would consult with ODA and use appropriate measures to protect the species and mitigate for impacts from construction, operation and retirement of the facility.

The ODA has reviewed FPL's application. According to the ODA, no listed plants are expected to occur in the area and FPL performed adequate survey work (Robert J. Meinke, Oregon Department of Agriculture). Accordingly, the Council finds that the proposed facility would have no adverse impact on state-listed threatened or endangered plant species.

Threatened and Endangered Species - Wildlife

The Oregon Fish and Wildlife Commission designates state-listed threatened and endangered wildlife species under ORS 496.172. OAR Chapter 635, Division 100 provides authority for adoption of the state sensitive species list and the Wildlife Diversity Plan and contains the state list of threatened and endangered wildlife species. FPL reviewed Oregon Department of Fish and Wildlife sources and consulted with the U.S. Fish and Wildlife Service and National Marine Fisheries Service (NMFS) and with the Oregon Natural Heritage Program (ONHP) for information about listed and sensitive species.

Wildlife field surveys conducted within and near the analysis area from 1994 through 2000, which FPL reviewed, included the following: *Avian Baseline Study for the Vansycle Ridge Facility* (Woodward-Clyde and WEST, 1997; URS, 2000); *Vansycle Wind Facility Wildlife Species of Concern and Habitat Study* (CH2M HILL, 1997); *Botanical and Wildlife Investigation Stateline Wind Power Facility* (Northwest Wildlife Consultants and Eagle Cap Consulting, 1999); *Avian and Bat Mortality Associated with the Vansycle Wind Facility, Umatilla County, Oregon, 1999 Study Year* (Erickson et al., 2000); *Wildlife Investigation Spring/Summer Field Season Stateline Wind Power Facility* (Northwest Wildlife Consultants, 2000a); *Washington Ground Squirrel Surveys Stateline Wind Power Facility* (Northwest Wildlife Consultants, 2000b); *Potential Influences of the Stateline Wind Facility on Bats – Final Report* (Hayes and Waldien, 2000); and *Nocturnal Bird Migration at the Stateline and Vansycle Ridge Wind Energy Facility, Fall 2000* (ABR, 2000).

In addition, FPL consulted with local biologists and reviewed reports for relevant biological resource information including: *Current Status of Washington Ground Squirrels in Oregon and Washington* (Betts, 1999), *Status and Habitat Use of the Washington Ground Squirrel (Spermophilus washingtoni) on State of Oregon Lands, South Boeing, Oregon, in 1999* (Morgan and Nugent, 1999) and the *Northern States Bald Eagle Recovery Plan* (USFWS, 1983).

Based on consultations and its review of the literature, FPL generated a list of all threatened and endangered species that could potentially occur in the analysis area and then narrowed that list to those species that might be affected by the facility. FPL conducted surveys for the presence of those wildlife species within an analysis area that included all proposed laydown and staging areas and the area within a 300-foot corridor centered on turbine strings and transmission and road centerlines. FPL found Washington ground squirrels, a state-listed endangered species, within the analysis area. FPL acknowledged that a threatened species, the bald eagle, could be present near the facility.

Washington Ground Squirrel

During pre-construction surveys conducted in late April through mid-June 2001, FPL found active Washington ground squirrel colonies in areas where FPL had proposed to build wind turbines. Due to the presence of this state-listed endangered species in the area, FPL chose to eliminate 15 turbines from turbine string BG-B and 12 turbines from turbine string BG-C. As initially proposed in the application FPL submitted in January 2001, both of these strings extended farther to the north from the turbines shown on Figure B-3 East (dated June 15, 2001).

In earlier baseline investigations, burrows that ground squirrels might use were found throughout the analysis area, but no Washington ground squirrels or their signs (droppings) were found. A historical colony has been active since at least 1988 approximately 1.5 miles south of turbine string BG-C in relatively high-quality native habitat, according to a local biologist. Several colonies have been identified in the general vicinity of the facility, but outside of the analysis area.

No part of the facility would be placed on any of the possible ground squirrel burrows, but construction would occur near the burrows. Potential impacts include individual animals being struck by vehicles, burrows being damaged by vehicles and disturbance of behavior

patterns due to nearby construction. The mitigation actions described in conditions (56), (63), (65) and (69) would reduce the risk of potential impacts to the Washington ground squirrel.

Bald Eagle

The ONHP and the Washington Department of Fish and Wildlife had no records of bald eagles within five miles of the facility. During surveys in 1995, one bald eagle was observed in Washington approximately three miles north of the nearest part of the facility in Oregon, and another was observed at least seven miles southwest of the nearest Oregon project facilities.

Some bald eagles may fly through the facility site during migration. Potential impacts to bald eagles include injuries or fatality from collisions with turbines during construction or operation of the facility. The mitigation actions described in condition (70) would reduce the risk of potential impacts to bald eagles. Although facility operation is not expected to cause a significant impact on the survival of the species, 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. Operational monitoring is described in the *Oregon Wildlife Monitoring Plan* (Attachment A).

Conclusions of Law

The Council concludes that no conservation program applies and that the design, construction, operation and retirement of the proposed facility, taking into account mitigation and subject to the conditions stated in this order, does not have the potential to significantly reduce the likelihood of the survival or recovery of any threatened or endangered species listed under Oregon law.

Conditions (55), (56), (63), (65), (69) and (70) relate to the Council's threatened and endangered species standard.

(e) Scenic and Aesthetic Values

OAR 345-022-0080

To issue a site certificate, the Council must find that the design, construction, operation and retirement of the facility, taking into account mitigation, is 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.

Findings of Fact

Visual Features of the Proposed Facility

The proposed energy facility site occupies an area of approximately 15 square miles. Within that area, 125 wind turbine towers and tower pad areas and approximately 15 miles of new or improved access roads would cover a total of about 55 acres of land surface. Turbines would be arrayed in nine strings along natural ridges within the facility site area. The number of turbines per string would vary from 5 to 36. The distance between turbines would be approximately 250 feet.

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, and the turbines would be almost identical to the turbines in use at the existing Vansycle Ridge Wind facility, several miles to the southeast of the proposed facility.

Four meteorological (met) towers would be built. Met towers would be steel mast structures approximately 165 feet tall. Permanent met towers would be constructed near the upwind end of several turbine strings. Met towers would have one or two anemometers to record wind speed at one or more elevations.

Lighting required by the Federal Aviation Administration (FAA) would make the facility visible at night. The FAA requires dual white/red lights at the turbines that form the periphery of the project and at turbines located approximately every 1,000 feet along the length of turbine strings.

Land Planning Authorities

The project order defines the analysis area as the area within the site boundary and 30 miles from the site boundary, including areas outside the state. The analysis area in Oregon includes unincorporated areas in Umatilla County, 10 municipalities, lands of the Confederated Tribes of the Umatilla Indian Reservation (CTUIR), a small portion of the Umatilla National Forest and three federal habitat management units (HMUs). Two of the HMUs extend into Washington. In addition, in Washington, the analysis area includes unincorporated areas of Walla Walla, Benton and Franklin Counties, five municipalities, three HMUs and a state-managed scenic overlook.

Potential Significant Impacts to Identified Scenic Values

County Plans

The Open Space, Scenic and Historic Areas, and Natural Resources element of the Umatilla County Comprehensive Plan (UCCP) requires that developments of potentially high visual impacts address and mitigate those impacts. We discuss the general mitigation of visual impact and applicable site certificate conditions under the discussion of the UCCP, beginning at page 30 above.

At Wallula Gap, the Columbia River narrows and turns westerly in its course to the Pacific Ocean. Wallula Gap is dominated by steep, basalt formations rising nearly vertically from both banks of the river. The UCCP identifies the Wallula Gap as a significant scenic area (UCCP, VIII-18) and references the county's Technical Report.[18] As discussed in the footnote, the Technical Report identifies two other scenic areas FPL analyzed for potential

[18] In the application, FPL analyzed 30 "outstanding sites and views" identified in Table D-XVII of the Technical Report. FPL included the table in the application as Attachment R-2. FPL used a screening process to determine that, in addition to Wallula Gap, four other scenic areas within the analysis area could be affected by the facility. The screening process eliminated sites that the county designated as "not important" with respect to Statewide Planning Goal 5 (Natural Resources, Scenic and Historic Areas, and Open Spaces) and included only those sites that the county designated as enjoyed "to look from." FPL then used geographic information system analysis to determine that only two of the four sites (not including Wallula Gap) would have a direct line of site to any part of the proposed facility: Hat Rock State Park and Highway 204 (a scenic highway).

visual impact. Hat Rock State Park lies on the south shore of Lake Wallula behind McNary Dam on the Columbia River. Travelers on Highway 204 driving from the mountains toward the west enjoy vistas of open range and wheat fields.

FPL determined that some parts of the proposed facility would be in a line of sight from Wallula Gap at a distance of about 7 miles. However, the Technical Report designates the scenic value of Wallula gap as enjoyed "to look upon" rather than "to look from." Thus, the visual impact of the facility would not adversely affect the scenic value identified as significant or important, and the visual impact is likely to be insignificant at a distance of 7 miles.

To illustrate the impact of the facility on the visual landscape, FPL included a photographic simulation of the view of the facility from Touchet, Washington, at a distance of about 2.5 miles (App Figure R-3). In the simulation, the turbine towers are a relatively minor feature in the landscape.

The proposed facility would be at least 16 miles distant from both Hat Rock State Park and Highway 204. FPL believes that at that distance, the turbine strings would be virtually invisible under many lighting conditions. When visible at all, the turbines would appear as relatively tiny vertical structures. The Oregon Parks and Recreation Department concurs in this conclusion as to Hat Rock State Park, commenting: "The distance and intervening topography between the park and the project essentially eliminate the potential for noise, visual or other impacts on the park" (Steve Brutscher, agency report). Although the lights from the facility would be visible at night, darkness would largely obscure the value of these sites that the county has identified as scenic or important (open vistas).

The comprehensive plans of Walla Walla and Benton counties in Washington do not identify any significant or important scenic values. The closest portion of Franklin County is about 17 miles from the proposed facility.

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 facility. None of the municipalities in Oregon has designated scenic or aesthetic values in their local land use plans.

The comprehensive plan of the city of Walla Walla, Washington, identifies views of the Blue Mountains as scenic. However, these scenic views are to the east and away from the proposed facility. The municipality of College Place has no designated scenic sites in its local land use plan. The municipalities of Kennewick, Pasco and Richland are at least 20 miles distant from the proposed facility in Oregon. As discussed above, even if a line of sight exists from any identified scenic view from these cities, the visual impact of the facility would be insignificant at that distance.

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

The Lewis and Clark Highway Interpretive Project in Washington has developed recommended locations for kiosks and panels to be installed as part of the Lewis and Clark Highway Interpretive Project. The only such location within the analysis area is the Wallula Junction Overlook. The overlook would have no line of sight to the proposed facility in Oregon. The overlook site is west of the proposed facility and the scenic views from the site extend to the west, away from the facility.

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. Viewsheds are in scenic corridors, most of which do not have a line of sight to the proposed facility.

Six federal HMUs lie within the analysis area: Stateline, Juniper Canyon, Wallula, Peninsula, Two Rivers and McNary National Wildlife Refuge. The U.S. Army Corps of Engineers owns these HMUs and leases them to the U.S. Fish and Wildlife Service, which manages them. None of the HMU management plans identifies any significant or important scenic or aesthetic values, and the HMUs are all at least 8 miles distant from the proposed facility.

Conclusions of Law

The Council concludes that the design, construction, operation and retirement of the proposed facility, 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.

(f) Historic, Cultural and Archaeological Resources

OAR 345-022-0090

To issue a site certificate, the Council must find that the construction, operation and retirement of the facility, taking into account mitigation, is not likely to result in significant adverse impacts to:

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

(2) 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

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

Findings of Fact

FPL conducted a survey for historic, cultural and archaeological resources in the analysis area. The project order defines the analysis area as the area within the site boundary

and all laydown and staging areas and within a 300-foot corridor centered on turbine strings and transmission and road centerlines. All land within the analysis area is private land.

The survey included file and literature searches at the Oregon State Historic Preservation Office, the Office of Archaeology and Historic Preservation in Lacey, Washington and the Walla Walla County Library. The Confederated Tribes of the Umatilla Indian Reservation (CTUIR) Cultural Resources Protection Program conducted a records search to determine whether previous investigations had been conducted in the area.

In April through August 2000, FPL conducted archaeological field surveys for the proposed Stateline Wind Project, using 80- to 100-foot transect intervals to inspect 300-foot wide project corridors.[19] No subsurface investigations were conducted. The CTUIR's Cultural Resources Protection Program (CRPP) prepared ethnographic information. It included oral history and interviews with knowledgeable tribal elders. No traditional cultural properties were reported by the CTUIR. A representative of the CRPP surveyed the area affected by a proposed additional access road and laydown area near turbine string PB and reported no evidence of cultural resources.[20]

Based on its survey investigation, FPL found no historic, cultural or archaeological resources listed or eligible for listing on the National Historic Register of Historic Places (NRHP). FPL found two cultural sites. The site designated as SL-1 is a small lithic scatter (an area where prehistoric Native Americans fabricated stone tools and left behind characteristic byproducts or "flakes" on the ground surface). The site designated as SL-2 is a human-constructed stone wall feature. FPL concluded that these two sites were not likely to be eligible for listing in the NRHP because neither site has yielded or is likely to yield information important to understanding American prehistory.

Under OAR 345-022-0090(2), the Council must determine whether either of the two cultural sites is an "archaeological site" as defined in ORS 358.905(1)(c). Under that statute, an archaeological site is a geographic locality that contains archaeological objects and the contextual associations of the archaeological objects. An "archaeological object" is an object that is at least 75 years old, is part of the physical record of an indigenous or other culture and is material remains of past human life or activity that are of archaeological significance. The statute defines a "site of archaeological significance" as any archaeological site on, or eligible for inclusion on, the NRHP as determined in writing by the State Historic Preservation Officer or any archaeological site that has been determined significant in writing by an Indian tribe. The State Historic Preservation Officer (SHPO) has not determined either of the sites eligible for listing on the NRHP. The Council finds that neither of the two cultural sites is an "archaeological site."

SL-2 is about 1,500 feet from the closest proposed construction activities. It would be staked or flagged to ensure that construction workers avoid the area, and it would not be affected by facility construction or operations. However, a contractor mistakenly covered SL-1 with fill during preliminary road construction work. The site had not been flagged, although it was identified on a construction map. FPL promptly notified the CTUIR of the

[19] FPL surveyed an analysis area that included turbine strings BG-B and BG-C as initially proposed.
[20] Letter from Andrew Linehan, received July 23.

disturbance. Tribal representatives of the CRPP visited the site to assess impacts and to determine whether the site is eligible for inclusion in the NRHP (App Appendix S-3).

FPL and the CTUIR have entered an agreement to ensure that no further disturbances occur. Under the agreement, FPL hired a cultural resources coordinator, chosen by the CTUIR, who would be on site at all times during construction activities in the vicinity of the cultural sites. No-entry barriers have been posted to ensure that construction workers stay away from the vicinity of the cultural sites. The barrier creates a buffer with a minimum width of 50 feet between the cultural sites and construction activities. See Condition (75).

If cultural sites are discovered in the course of construction of the facility, earth-disturbing activities in the immediate vicinity of the find would be halted, in accordance with Oregon state law (ORS 97.745 and 358.920).[21] The Oregon SHPO and CTUIR would be notified, and a qualified archaeologist would be called in to evaluate the discovery and recommend subsequent courses of action in consultation with the tribes and the Oregon SHPO (Condition (76)).

Conclusions of Law

The Council concludes that construction, operation and retirement of the proposed facility, taking into account mitigation and subject to the conditions set forth in this order, are not likely to result in significant adverse impacts to historic, cultural or archaeological resources that have been listed on, or would likely be listed on, the National Register of Historic Places or to archaeological sites or archaeological objects as defined in ORS 358.905.

Conditions (75) and (76) relate to the Council's historic, cultural and archaeological standard.

(g) Recreation

OAR 345-022-0100

To issue a site certificate, the Council must find that the design, construction and operation of a facility, taking into account mitigation, is not likely to result in a significant adverse impact to important recreational opportunities in the analysis area. The Council shall consider the following factors in judging the importance of a recreational opportunity:

(1) Any special designation or management of the location;

(2) The degree of demand;

(3) Outstanding or unusual qualities;

(4) Availability or rareness;

(5) Irreplaceability or irretrievability of the opportunity.

[21] Under OAR 736-051-0090, a person may not "knowingly and intentionally excavate, injure, destroy or alter an archeological site or object or remove an archeological object from private lands in Oregon" without a permit issued under ORS 390.235.

Findings of Fact

The project order defines the analysis area for the recreation standard as the area within the site boundary and five miles from the site boundary, including areas outside the state.[22] In the application, FPL analyzed the area in Oregon within five miles from the site boundary. This part of the analysis did not include areas in Washington. To cover the areas within Washington, FPL referred to an analysis prepared for the Washington State Environmental Policy Act Final Environmental Impact Statement (FEIS). The FEIS (pages 2-137 through 2-142) addressed recreational opportunities in a study area within five miles from the project facilities. Thus, FPL's analysis in Washington extended beyond the study area defined in the project order.

The area within the site boundary is privately owned, and it contains no county, state or federal recreational facilities. Pheasant hunting is allowed seasonally by landowner permission in some areas, both within the site boundary and within the analysis area outside the site boundary. However, that activity is not an important recreational opportunity, based on the factors listed in the standard. There are numerous similar opportunities for pheasant hunting on public and private land throughout Umatilla County and the rest of the state. Similarly, other recreational activities such as hiking, wildlife observation and nature photography may occur on private land in the analysis area but would not be important recreational opportunities under the standard.

In the five-mile analysis area outside the site boundary, the only designated recreation land in Oregon is the federally-owned Bureau of Land Management (BLM) Juniper Canyon area. Recreational opportunities at Juniper Canyon include hiking, camping, wildlife observation, nature photography and off-road vehicle use. However, this land does not provide important recreational opportunities. The area does not have a high degree of demand, is not rare and does not possess unusual qualities in comparison to surrounding lands. Use by the public is low due to the lack of public road access. Accordingly, the recreational opportunity at Juniper Canyon is not important, based on the factors listed in the standard.

Within the area FPL analyzed in Washington, recreational sites include Madame Dorian Park, the Wallula Habitat Management Unit (which includes Madame Dorian Park) and local park and recreation facilities in the unincorporated community of Touchet (about three miles northeast). FPL concluded that these sites were not important recreational opportunities under the standard because they receive low use and do not have unique or irreplaceable recreational features.

However, the local park and recreation facilities in Touchet may be important, because they are designated within the community as recreational areas. Recreational land may be limited in Touchet, and other potential recreational sites may be no less affected by the proposed facility. However, although some facility structures would be visible from local recreational areas in Touchet, the facility would not interfere significantly with the recreational activities that occur there.

The Wallula HMU is managed primarily for wildlife habitat. The recreational opportunities at the Wallula HMU may include wildlife viewing and nature photography.

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[22] Within the state boundaries, it is the policy of the state to conserve outdoor recreational resources. ORS 390.010.

Other recreational opportunities may exist at Madame Dorian Park, which is within the Wallula HMU. Although there may be a line of sight to the project facilities from some locations within the Wallula HMU, no significant visual impacts would occur, considering the distance (at least 5 miles). The location of Madame Dorian Park does not provide a line of sight to the facility. No noise, traffic, water or wastewater impacts would occur at these areas as a result of construction or operation of the proposed facility. Assuming that the area within the Wallula HMU, including Madame Dorian Park, is important as a designated habitat management area because of the limited and unusual qualities of such areas, the impact of the facility would not interfere significantly with the recreational value of that area.

Conclusions of Law

The Council concludes that the design, construction and operation of the proposed facility, 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 impact 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) Socio-Economic Impacts

OAR 345-022-0110

To issue a site certificate, the Council must find that the construction and operation of the facility, taking into account mitigation, is not likely to result in significant adverse impact to the ability of communities within the analysis area to provide the following governmental services: sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.

Findings of Fact

The project order defines the analysis area for the socio-economic impact standard as the area within the site boundary and 30 miles from the site boundary, including areas outside the state. Communities within the analysis area include:

Incorporated Cities in Oregon
Adams
Athena
Echo
Helix
Hermiston
Milton-Freewater
Pendleton
Stanfield
Umatilla
Weston

Unincorporated Cities in Oregon
Calhounville
Ferndale

Sunnyside
Umapine

Incorporated Cities in Washington
Walla Walla
College Place
Kennewick
Pasco

Unincorporated Cities in Washington
Touchet
Wallula

No community in the analysis area currently provides sewers or sewage treatment services to the facility area. Rural residences in the area generally use on-site private septic systems for sewage disposal. No community in the analysis area currently provides water to the facility area. Helix, the city nearest to the proposed facility, has a municipal water supply system, and its water would serve the facility. See further discussion of water use below at page 84. Other incorporated cities in the analysis area also have public water systems, but those systems would not be affected by the facility. No community in the analysis area currently provides stormwater drainage service to the facility area, with the exception of minimal stormwater drainage facilities associated with public roads maintained by Umatilla County. No community in the analysis area currently provides solid waste management services to the facility area. Solid waste disposal for the facility during construction and operations would be provided by private contract with a local commercial hauler. The Umatilla County Sheriff's Office in Pendleton provides police service covering the facility area. The volunteer Helix Fire Department and the Milton-Freewater Rural Fire Department provide fire protection services to the facility area. Health care services are provided by the hospitals nearest the facility site: St. Anthony Hospital in Pendleton, Oregon; Good Shepherd Community Hospital in Hermiston, Oregon; and St. Mary's Medical Center in Walla Walla, Washington. Ambulance service in the area is provided by private service providers that contract with Umatilla County. Twelve school districts and 36 individual schools are located in the analysis area.

The effect of the proposed facility on the ability of communities to provide services would result from the impacts associated with employment, population and traffic increases related to construction and operation and from any direct physical impacts. FPL considered both the Oregon and Washington portions of the Stateline Wind Project in assessing employment, population and traffic impacts. For the purpose of analysis, FPL assumed conservatively that any adverse impacts would occur in Oregon, although only one-third of the total Stateline Wind Project would be constructed in Oregon. The addition of two turbines as a result of the amendment of the application by the letter from Andrew Linehan (received July 23) has no effect on the findings and conclusions. One of the two turbines, previously assumed to be located in Washington, was considered in the assessment of impacts of the Washington portion of the project, and the incremental effect of the two turbines on the ability of communities in the area to provide governmental services would not be significant.

Employment and Population

Construction

Construction of the Stateline project in Oregon and Washington is expected to take one year, although FPL estimates that construction of the Oregon facility would take six months. FPL estimates an average of 150 people would be employed during construction. Employment could peak at about 350 employees at some time during the construction period. Most construction workers would be employees of construction and equipment manufacturing subcontractors. Construction workers would include locally hired workers for road and turbine pad construction and specialized workers for substation and electrical transmission construction, turbine erection and turbine testing. For purposes of analysis, FPL assumed that 30 percent of the construction workforce would be hired locally. Local hiring may be greater and would depend upon the availability of workers with appropriate skills.

Population in the analysis area would change very little during construction. From about 100 to a maximum of 250 new workers would become temporary residents in communities near the project site. Assuming an average household size of 2.0 persons (because many workers would not be accompanied by families or others), an estimated 500 temporary new residents might be associated with facility construction.

Operation

FPL estimates 8 to 15 full-time and 5 to 10 part-time staff would be employed in Oregon and Washington for operations and maintenance of the facility. Most of the operations and maintenance staff would be hired locally, with the exception of one or two supervisors with experience at other wind generation facilities and specialized outside contractors (for example, for repair of nacelles or meteorological services).

Of the estimated maximum of 25 permanent employees (full time and part time) hired for operation of the facility, FPL assumed that five employees would be new residents. Assuming an average household size of 3.0, the local population could increase by as many as 15 new permanent residents.

Transportation Assumptions

FPL assumed that the small average daily traffic (ADT) generated by facility construction and operation would not result in traffic safety issues on either the state system or the portions of the city street systems designated as state routes. The state highway system, including portions of the system through the city of Pendleton, is constructed to design, safety and load-bearing standards that accommodate vehicles at the legal load limit. Because County roads are built to less rigorous standards than the state system, FPL consulted with the Umatilla County Department of Public Works about specific issues related to use of the county road system by construction vehicles.

FPL identified five transportation routes (transporter routes) for bringing equipment to the facility site.[23] They include state and county roads within the analysis area, as well as existing private roads and newly constructed roads. Based on discussions with the county Public Works Department, FPL believes that no improvements would be needed for the

[23] FPL described the transportation routes on pages U-4 and U-5 of the application and in Figure U-1.

county road system. However, access roads (private roads at the facility site) would need to be improved or built to provide access to the turbine string sites.

FPL's analysis included an inventory of the types of construction vehicles needed, the purpose or use of each vehicle type and the approximate gross vehicle weight and payload or capacity. FPL calculated the required vehicle trips for each transportation route for each vehicle or equipment type based upon the number of turbines on the transportation route and the quantities of the various materials or trips required by each turbine.

FPL also analyzed transportation impacts from the long-term operation of the proposed facility. FPL considered the number of vehicle trips and types of vehicles associated with long-term maintenance activities for the turbines. FPL believes the traffic impact during operation would be insignificant.

Impacts During Construction

Sewers and Sewage Treatment

The only sewage services required during construction would be the handling of sewage from contract portable toilets. FPL anticipates no adverse impact on the ability of communities to provide sewage services, because the sewage demands of the facility during construction would be minimal and temporary.

FPL's analysis of the impact on sewer services in Washington State is shown in Attachment U-8. FPL incorporated by reference the analysis contained in the Final Environmental Impact Statement (FEIS) prepared during the Walla Walla County conditional use permit process. Section 2.9.3.7 of the FEIS addressed "public facilities and services," including water, sewer and solid waste services. The analysis concluded that the project would have minimal impact on public facilities and services.

Water

Based on the water needs during construction of the nearby Vansycle Wind Facility, FPL estimates that approximately 6.2 million gallons would be required for construction of the Stateline facility. Water demand for would range between 14,000 and 61,000 gallons per day. The City of Helix would provide all of the water needed for construction. Helix has adequate water to supply facility construction needs without impairing supply to other users. See further discussion of water use below at page 84.

FPL's analysis of the impact on water services in Washington State is shown in Attachment U-8. FPL incorporated by reference the analysis contained in the FEIS Section 2.9.3.7, which addressed "public facilities and services" including water, sewer and solid waste services. The analysis concluded that the project would have minimal impact on public facilities and services.

Storm Water Drainage

Stormwater drainage impacts could occur during construction of new roads, staging areas and turbine foundations. FPL would prevent adverse impacts by use of erosion control measures required under a National Pollutant Discharge Elimination System (NPDES) Stormwater Discharge Permit (Condition (60)) and measures described in Condition (61). Construction of the facility would not have a significant adverse impact on the water quality

of any receiving waters and would not have an adverse impact on the ability of any community in the area to provide stormwater drainage.

FPL's application did not directly address the impact on storm water drainage services in Washington State. However, storm water runoff from the proposed facilities in Oregon would have no effect in Washington.

Solid Waste Management

Relatively little construction waste would require offsite disposal. See discussion of the Council's waste minimization standard at page 75 below. The nearest landfill is the Humbert Sanitary Landfill (also known as the Athena Landfill). Based on consultation with staff at the Umatilla County Department of Resources Services and Development who indicated adequate landfill capacity, FPL believes that construction of the facility would not have any significant adverse impact on the ability of any community in the area to provide solid waste management services.

FPL's analysis of the impact on solid waste services in Washington State is addressed in Attachment U-8. FPL incorporated by reference the analysis contained in the FEIS Section 2.9.3.7, which addressed "public facilities and services" including water, sewer and solid waste services. The analysis concluded that the project would have minimal impact on public facilities and services.

Housing

Typical housing options for temporary workers include motels and hotels, apartments or other short-term rental homes and campgrounds and other areas where workers can park trailers or other mobile housing. These types of temporary housing are most available in the larger communities. Based on FPL's employment and population estimates described above, additional temporary housing could be required for up to 250 new households during the construction period.

FPL found there were about 1,400 hotel and motel units in Pendleton, Hermiston, Umatilla and Milton-Freewater combined as of October 2000. In addition, there were about 295 units at recreation vehicle parks in Pendleton and Hermiston. Although not all of these units would be available at any given time, there is a large supply in relation to the number of temporary workers. The rental vacancy rate for apartments and rental housing in the Pendleton area is estimated at about 3 percent. Additional, more distant housing opportunities would be available in Walla Walla and the surrounding area in Washington. Based on housing availability, FPL believes construction would cause no significant adverse impacts on the ability of communities to provide housing.

FPL's analysis of the impact on housing in Washington State is addressed in Attachment U-8. FPL incorporated by reference the analysis contained in the FEIS Section 2.9.3.4, which addressed housing impacts. The analysis concluded that adequate housing opportunities were available in the general project area and that there would be no adverse impact on housing from project construction.

Traffic Safety

FPL assessed traffic volumes and vehicle types generated by construction compared to existing traffic volumes on roadways used by construction vehicles. FPL also addressed

traffic safety by assessing pavement conditions and design standards. FPL specifically addressed U.S. Highway 30 through Pendleton, because this part of the transportation route is within the city limits of Pendleton.

Traffic safety impacts would be associated most directly with the numbers of vehicles generated by construction and by the size and weight of the vehicles. The size and weight of the vehicles are a concern in areas where roadways are designed for less than the legal load limit of 80,000 pounds, where pavement conditions are poor or where there would be extensive use of city streets.

FPL estimated that construction would create 12,707 trips by vehicles in Oregon. Assuming a compressed construction schedule, with the major construction activities occurring during the period from approximately September 1, 2001 through December 31, 2001, six days per week, there would be 96 days of construction activity. Based on this compressed schedule, the ADT would be approximately 133 vehicle trips. However, not all of these vehicles would use the same routes. The ADT would be about 67 on Transporter Route 4, 36 on Transporter Route 3 and 23 on Transporter Route 2. If construction were to take longer, the traffic would be spread over a longer period, reducing ADTs more.

Compared to the existing traffic volume for state highways in the analysis area, these ADTs are a small fraction of the traffic volumes on the state facilities except for the most rural state highways that are part of Transporter Route 4.[24] On the basis of traffic volumes, construction is not expected to have any traffic safety impacts to the state highway system.

The anticipated ADTs would approximately double the number of vehicles currently on the county roads that are part of Transporter Routes 3 and 4. However, existing traffic volumes are so low to begin with, that a doubling of vehicles would not raise any traffic safety concerns based upon volumes.

Regarding traffic safety as it relates to pavement conditions, FPL found that the only affected road on the state highway system with poor pavement conditions is Highway 37 north of Pendleton. Transporter Route 4 would use this highway. Based on the estimated ADT on Transporter Route 4, FPL believes that the use of the highway during construction would not cause traffic safety problems because of pavement conditions.

County roads are oil matte, gravel or dirt. Based on the low ADT of both construction vehicles and all other traffic, FPL believes that the use of county roads during construction would not cause traffic safety issues because of pavement conditions.

Regarding traffic safety as it relates to road design standards, FPL found that the state highway system is designed and constructed to accommodate 80,000-pound gross vehicle weight (GVW) equipment. All of the affected state highways are two to four-lane roads. Based on the low ADT of construction-related trips and the design standards for state highways, FPL believes that construction-related traffic would have no significant impacts to traffic safety on state highways.

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[24] Highway 334 is the only highway with a traffic volume as low as 100 ADT. It would be used only for the alternate routing of the transporter trucks and not for other vehicles using Transporter Route 4. A total 272 transporter trips are expected for the duration of construction on Transporter Route 4. Assuming a schedule of 34 working days for this activity, the ADT would be 8, which is about 8 percent of the existing ADT.

FPL found that paved roads in Umatilla County are built for a 4,000-pound GVW limit. Affected county roadways have two lanes and a total width of 22 to 24 feet. Some portions of the county system may require one-way traffic to safely allow larger vehicles to pass. See Condition (77).

Regarding traffic safety as it relates to Highway 30 within the city limits of Pendleton, FPL consulted with the Pendleton Public Works director to discuss potential traffic safety effects of construction vehicles. Most vehicles following Transporter Route 4 would exit onto Highway 30 from Interchange 207 west of Pendleton. Vehicles would proceed east on U.S. Highway 30 to the intersection of Highway 37, and then proceed north. The portion of U.S. Highway 30 from Interchange 207 to Highway 37 is within the Pendleton city limits. The Pendleton Public Works director had no concerns about facility construction impact on traffic safety through Pendleton. He noted that the NW Carden Avenue intersection with Highway 37 one block north of U.S. Highway 30 is a busy intersection, which would have the potential for vehicular conflicts, but he did not think that there needed to be any special provisions in the contract specifications for handling traffic at this intersection.

The only vehicles larger than those normally encountered on a city street designated as a state highway would be the transporter trucks, which are 80 feet long. FPL reviewed possible routes with Lone Star Transportation (the operator of these trucks) and selected an alternate route, which bypasses Pendleton. Transporter trucks would exit I-84 and travel east on Highway 11, proceed north on Highway 335, west on Highway 334, north on Myrick Road, west on Holdman Road, and north on South Juniper Canyon Road. The remainder of the route would follow Transporter Route 4 to the facility site.

Wheat harvest is a crucial component of the local economy. Large numbers of 80,000-pound GVW trucks need adequate access to the county and private road systems for a minimum of two weeks, typically in August. The county and private road system does not allow the two-way passage of 80,000-pound GVW vehicles. FPL would write traffic control procedures into the contract specifications for construction of the facility. Flaggers would be used at appropriate locations and times during construction to direct traffic and to ensure minimal conflicts among harvest and construction vehicles. (Condition (77))

Long-term traffic safety of the county road system is served by the roads being in good repair. All Umatilla County roads used as access to the facility would be videotaped before beginning construction. A written agreement would be established between Umatilla County and the contractor stating that all roads used by the contractor would be restored to as good or better condition than they were before construction. (Conditions (45) and (81))

The FPL Energy construction manager would monitor the implementation of the traffic control procedures written into contract specifications. FPL believes that, with the measures discussed above to assure traffic safety, construction of the facility would have no significant adverse effect on the ability of communities in the analysis area to provide services for traffic safety.

FPL's analysis of the impact on traffic safety in Washington State is shown in Attachment U-8. FPL incorporated by reference the analysis contained in the FEIS Section 2.10, which addressed transportation impacts from the Oregon and Washington Stateline project as a whole. The estimated ADT for the entire project was 241, based on a conservative 6-month construction schedule, or an ADT of 60 per transporter route, allocated over four

transporter routes in Washington. The analysis concluded that this level of traffic would not make a substantial difference on roads in Washington.

The Office asked the Oregon Department of Transportation to review FPL's traffic safety analysis. George Ruby, ODOT District 12 Operations Coordinator, reported that the assumptions made by FPL were reasonable and the proposed project would not "overly impact" the state transportation system.

Police and Fire Protection

FPL consulted with the Umatilla County Sheriff, who indicated that he expected little if any impact from the construction of the facility. FPL does not expect the relatively small number of new temporary residents would place significant new demands on the providers of police protection in the area. Accordingly, construction of the facility would not have a significant adverse impact on the ability of communities in the analysis area to provide police protection or law enforcement services.

FPL would take steps to prevent fires during construction as described in Condition (58). During construction, there could be some risk of accidental grass fires on the site. However, fire protection measures would minimize the risk of such fires. See Conditions (31), (32) and (96).

FPL consulted with the Helix Fire chief, who indicated that he had no concerns about providing fire protection services during facility construction (App Attachment U-5). FPL also consulted with the chief for the Milton-Freewater Rural Fire Department (MFRFD), who indicated that MFRFD could provide fire protections services under a contract (App Attachment U-7). See Condition (33). Construction is not likely to have an adverse impact on the ability of communities to provide fire protection services.

Health Care and Schools

FPL would manage site health and safety risks during construction as described in Conditions (35) and (48). These measures would help to minimize any impacts on local health care services. FPL believes the relatively small number of new temporary residents during construction would not place significant demands on the health care facilities that serve the area. Therefore, facility construction would not have a significant adverse impact on the ability of the communities in the analysis area to provide health care services.

Because construction would be short-term, FPL anticipates few new students during facility construction. FPL consulted with officials at the Helix School District and the other larger districts in the analysis area (Hermiston, Pendleton, Umatilla, and Milton-Freewater), who indicated that there is available capacity for new students in all the districts. FPL believes construction would have no significant impact on the ability of communities in the analysis area to provide school services.

Impacts during Operation

Sewers and Sewage Treatment

There would be no on-site sewage disposal. Portable toilets would be used at the satellite O&M building (Condition (87)). No other sewage treatment would be needed for facility operations. Operation of the facility would not adversely affect the ability of communities to provide sewers and sewage treatment services.

Water

FPL anticipates no direct water use during operation of the facility. Occasional blade washing might be conducted by a contractor, who would purchase water from a private or municipal source having a valid water right (Condition (88)). These operational needs would not adversely affect existing water rights or the ability of communities in the analysis area to provide water services.

Storm Water Drainage

The design of the facility would not alter existing drainage patterns. Operation of the facility would not have an adverse impact on the ability of any community in the area to provide stormwater drainage.

Solid Waste Management

Operation of the facility would generate only small amounts of solid waste. Facility operation would not have any significant adverse impact on the ability of any community in the area to provide solid waste management services.

Housing

FPL estimates that about five new households would need permanent housing starting in 2002. FPL assumes that adequate opportunities would be available to purchase housing or to construct new housing within the analysis area and that facility operation would have no significant adverse impacts on the ability of communities to provide housing.

FPL's analysis of the impact on housing in Washington State is addressed in Attachment U-8. FPL incorporated by reference the analysis contained in the FEIS Section 2.9.3.4. The analysis concluded that adequate housing opportunities were available in the general project area and that there would be no adverse impact on housing from operation of the facility.

Traffic Safety

Operational impacts would consist primarily of employees traveling to work in their personal vehicles to the satellite O&M building or to the main O&M building on Hatch Grade Road in Washington. Periodic turbine inspections would require only a few vehicles. Occasionally, heavy vehicles would be used in making repairs to the towers or supplying replacement parts. Traffic impacts from facility operation would be insignificant.

Police and Fire Protection

As discussed above, FPL consulted with the Umatilla County Sheriff, who expected operation of the facility to cause little law enforcement impact. The additional permanent work force is not expected to create any significant concerns, and the relatively small number of new permanent residents is not anticipated to place significant new demands on the providers of police protection in the area. Therefore, FPL does not expect operation of the facility to have an adverse impact on the ability of communities in the analysis area to provide police protection or law enforcement services.

FPL consulted with the Helix Fire Chief, who indicated that he did not foresee any problems in providing adequate fire protection to the turbines and related facilities (App Attachment U-5). FPL also consulted with the chief for the Milton-Freewater Rural Fire

Department (MFRFD), who indicated that MFRFD could provide fire protections services under a contract (App Attachment U-7). See Condition (33). Fire protection measures would minimize the risk of fires (Condition (96)). FPL does not expect that facility operation would have an adverse impact on the ability of communities in the analysis area to provide fire protection services.

Health Care and Schools

FPL would manage site health and safety risks during operation as described in Conditions (35) and (85). These measures would help to minimize any impacts on local health care services. FPL believes the relatively small number of new permanent residents during operation would not place significant demands on the health care facilities that serve the area. Therefore, facility operation would not have a significant adverse impact on the ability of the communities in the analysis area to provide health care services.

Assuming five new permanent households result from operation of the proposed facility, FPL assumed a maximum of 10 new school children could move to the analysis area. FPL consulted with officials at the Helix School District and the other larger districts in the analysis area (Hermiston, Pendleton, Umatilla, and Milton-Freewater), who indicated that there is available capacity for new students in all the districts. FPL believes operation would have no significant impact on the ability of communities in the analysis area to provide school services.

FPL's analysis of the impact on schools in Washington State is addressed in Attachment U-8. FPL incorporated by reference the analysis contained in the FEIS Section 2.9.3.5. The analysis concluded the number of new students expected could be accomodated by schools in Washington.

Conclusions of Law

The Council concludes that construction and operation of the proposed facility, taking into account mitigation and subject to the conditions stated in this order, are not likely to result in a significant adverse impact to the ability of communities within the study area to provide governmental services, including sewers and sewage treatment, water, storm water drainage, solid waste management, housing, traffic safety, police and fire protection, health care and schools.

Conditions (31), (32), (96), (33), (35), (45), (48), (58), (60), (61), (77), (81), (85), (87) and (88) relate to the Council's socio-economic impacts standard.

(i) Waste Minimization

OAR 345-022-0120

To issue a site certificate, the Council must find that, to the extent reasonably practicable:

(1) 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;

(2) 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.

Findings of Fact

Solid Waste

The solid waste generated during construction would consist primarily of concrete waste from turbine pad construction, wood waste from wood forms used for concrete pad construction and scrap steel from turbine tower construction. Some additional wastes could include erosion control materials, such as straw bales and silt fencing and packaging materials for associated turbine parts and other electrical equipment.

FPL plans to minimize generation of wastes from construction through detailed estimating of needed materials and through efficient construction practices. Any wastes generated during construction would be recycled or disposed of as described in Condition (71). FPL would have a full-time on-site assistant construction manager to observe contractor waste management practices to assure compliance with applicable regulations and construction site policy (Condition (74)).

Operation of the facility would generate very little solid waste. Office waste, such as paper and food packaging and scraps, would be generated at the satellite O&M building. Other solid waste generated during facility operation would include incidental waste from repair or replacement of electrical or turbine equipment. During operation, solid waste would be collected and recycled as much as feasible and non-recyclable wastes would be collected and transported to a local landfill (Condition (86)).

Turbine lubrication and other maintenance would generate some potentially hazardous wastes, such as oily rags. FPL would manage hazardous waste as described in Condition (32).

When the facility is retired, the turbine towers and related aboveground electrical equipment would be removed from the site and the materials reused or sold for scrap. Concrete turbine pads would be removed to a depth of three feet below the surface. Underground electrical cables, installed at a depth of three feet, would be left in place. See discussion of the Council's retirement standard at page 40. Measures for reducing, reusing and recycling solid waste upon retirement would be addressed as part of the retirement plan that the Council must be approve before retirement of the facility (Condition (19)).

Wastewater

Wastewater generated during construction would consist of washdown of concrete trucks after concrete loads have been emptied. However, washdown would occur off-site either at a portable batch plant or at existing facilities such as the concrete plant or gravel pit where the truck was loaded. Portable toilets would be provided for on-site sewage handling during construction and would be pumped and cleaned regularly by the construction contractor (Condition (73)). No other wastewater would be generated during construction. No industrial wastewater would be generated during operations.

Impact on Surrounding and Adjacent Areas

The accumulation, storage, disposal and transportation of waste generated by construction and operation of the proposed facility would have minimal adverse impact on surrounding and adjacent areas. Most waste would be removed from the site and reused, recycled or disposed of at an appropriate landfill or hazardous-waste disposal facility if necessary. Any waste disposed of on-site (e.g., concrete waste and wastewater) would be inert and would be disposed of in a manner consistent with applicable regulations and protective of human health and the environment.

The only clean fill that has the potential to be disposed of on-site is waste concrete generated during construction. Disposal of waste concrete on-site would be conducted in accordance with OAR 340-093-0080 and other applicable regulations. The construction contractor may (with the agreement of the landowner) bury waste concrete on-site. The material would be placed in an excavated hole and covered with at least three feet of topsoil and the area would be graded to match existing contours. See Conditions (72) and (83).

Transportation of wastes to landfills or recycling facilities would involve periodic truck trips over public and private roads between the facility site and the landfill or recycling facilities. Because of the expected low volume of waste materials, FPL believes these trips would not have an adverse impact on surrounding and adjacent areas.

Conclusions of Law

The Council concludes that, to the extent reasonably practicable, FPL'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. The Council further concludes that FPL'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. These conclusions are subject to the conditions stated in this order.

Conditions (19), (32), (71), (72), (73), (74), (83) and (86) relate to the Council's waste minimization standard.

(j) 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 facility would be located on private property, limiting access by the public. The turbine strings would not be located within 1,000 feet from any inhabited dwelling or near any well-traveled roads or paths. Turbine hubs would be mounted on towers approximately 165 feet above the ground, and during operation, the tips of the turbine blades would extend no closer than approximately 88 feet from ground level. The turbine towers would have locked access doors and the tubular design would preclude climbing (Condition (38)). Pad-mounted transformers located at each turbine would be located inside locked metal cabinets. The facility's substation would be located in Washington, and it would be enclosed by a fence with a locked gate.

FPL reports that the Vestas turbines proposed for the facility have been used commercially for several years with no record of failure that has endangered public safety. FPL is not aware of any instances of structural failure of the tubular steel towers proposed for the facility. FPL would inspect turbine blades on a regular basis for signs of wear or potential failure (Condition (95)).

Conclusions of Law

The Council concludes that FPL can design, construct and operate the facility to exclude members of the public from close proximity to the turbine blades and electrical equipment. The Council further concludes that FPL 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. These conclusions take into account mitigation and are subject to the conditions stated in this order.

Conditions (38) and (95) relate to the Council's public health and safety standards for wind energy facilities.

(k) 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 believes that there would be no measurable electric field at one meter above the ground surface. The cable will be aluminum stranded conductors with insulation, jacket and shield. The insulation shield is effectively at ground potential. In a shielded cable, the electric field between conductor and electrical ground is contained within the cable. The grounding of the shield prevents the accumulation of an electrical potential on the surface of the cable that could be hazardous to individuals coming into contact with the cable surface. There is no electric field external to the shield.

Conclusions of Law

The Council concludes that FPL 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. The Council further concludes that FPL 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. These conclusions take into account mitigation and are subject to the conditions stated in this order.

Condition (62) relates to the Council's siting standards for transmission lines.

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 order, as amended, as applicable to the issuance of a site certificate for the proposed facility."

Applicable Oregon statutes and administrative rules identified in the project order 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.[25]

(a) Noise

OAR 340-035-0035

(1) Standards and Regulations:

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(b) New Noise Sources:

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(B) New Sources Located on Previously Unused Site:

[25] Other statutes and regulations listed in the project order do not apply to the proposed facility as described in the application: ORS Chapters 274, 758, OAR Chapter 141, Divisions 82 and 83.

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

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

Findings of Fact

ORS Chapter 467 authorizes the state's noise control regulation. The DEQ noise standard for industrial noise sources is described in OAR 340-035-0035. To comply with the DEQ noise regulation, new noise sources must meet two tests. The noise generated or indirectly caused by the new noise source, as measured at an appropriate measurement point:

a) Must not increase the ambient statistical noise levels, L_{10} or L_{50}, by more than 10 decibels (dBA)[26] in any one hour, and

b) Must not exceed the "levels specified in Table 8."

The DEQ noise standard exempts noise that originates from construction activities. OAR 340-035-0035(5)(g). Construction of the proposed facility would produce noise levels similar to those produced by any large construction project, principally from the operation of construction equipment. 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)).

The appropriate measurement point (nearest receptor) in this case is a residence approximately 2,000 feet from the closest proposed turbine.[27] At this location, FPL measured background L_{50} noise levels[28] 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.

Wind turbines produce noise from rotation of the turbine blades. Generally, turbine noise increases with wind speed. FPL provided a statistical correlation of turbine noise to wind speed over the range of operating wind speeds from 7.9 to 56 mph. Within this range, turbine noise increases at the rate of 0.20 dBA for each mile-per-hour increase in wind speed.

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[26] More precisely, dBA is the A-weighted sound pressure level. That is, the sound pressure level in decibels as measured on a sound level meter using the A-weighted filter network. The A-weighted filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.

[27] This residence is the nearest "noise sensitive property" as that term is used in OAR 340-035-0035(3)(b).

[28] The L_{50} noise level is the noise level exceeded 50 percent of the time.

At the nearest receptor, turbine noise would range from 37.8 dBA at a wind speed of 7.9 mph to 47.5 dBA at a wind speed of 56 mph.[29]

"Table 8" Test

At wind speeds above 56 mph, the turbine blades feather to avoid damage to the turbines. It is reasonable to assume that when the blades are feathered, turbine noise does not increase significantly with increased wind speed. Therefore, 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."

In the application, FPL included the following table based on the relevant information from DEQ's Table 8:

State of Oregon Statistical Noise Limits for Industrial and Commercial Sources

	Maximum Permissible Statistical Noise Levels (dBA)	
Statistical Descriptor	**Daytime (7 a.m.-10 p.m.)**	**Nighttime (10 p.m.-7 a.m.)**
L_{50}	55	50
L_{10}	60	55
L_1	75	60

FPL calculated total noise emissions for the wind energy facility by reference to specifications provided by the equipment manufacturer. FPL then calculated turbine noise levels at the nearest receptor at the maximum wind speed of 56 mph. Based on FPL's calculation, the L_{50} noise level at the nearest receptor would not exceed 47.5 dBA.

Because FPL would operate the energy facility on a 24-hour basis, FPL must comply with the more stringent nighttime noise limits shown in the table above. The predicted L_{50} noise level of 47.5 dBA would not exceed the nighttime L_{50} noise limit of 50 dBA. Furthermore, it is reasonable to assume that noise from the wind facility would be at a relatively constant level. Accordingly, the 47.5 dBA noise from facility would also not exceed the L_{10} or L_1 limits.[30]

Ambient Degradation Test

Operation of the energy facility must not increase ambient noise levels by more than 10 dBA in any one hour.[31] Our analysis of the ambient degradation test 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 analysis is based on ambient L_{50} noise data provided by FPL. FPL describes this as a more "restrictive limit" than L_{10} analysis, based on the assumption that wind turbine noise level is constant at any particular wind speed.

[29] FPL determined noise levels at the nearest receptor by modeling. The model accounted for variations in noise attenuation at various sound levels.
[30] The noise levels exceeded 10 percent and 1 percent of the time in one hour respectively.
[31] "Any one hour" means any period of 60 consecutive minutes during the 24-hour day. OAR 340-035-0015(7)

The wind turbine start speed is 3.5 m/s (7.9 mph). At a wind speed of 7.9 mph, FPL's modeling predicts turbine noise to be 37.8 dBA at the nearest receptor. At wind speeds below 7.9 mph, the turbine blade speed may vary. We assume that below 7.9 mph any noise produced by the wind turbines would decrease at a more rapid rate than the 0.20 dBA per mile per hour correlation that applies within the operating range of wind speeds above 7.9 mph. Therefore, we assume that maximum ambient degradation would occur 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 ambient noise level at a wind speed of 7.9 mph will vary. However, it is possible to calculate a level of non-turbine related ambient noise such that the addition of turbine noise would increase total ambient noise by 10 dBA. We have calculated this background noise level to be 28.3 dBA. 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[32], a 10 dBA increase. Therefore, 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.

FPL presented noise measurement data from the vicinity of the nearest residential receptor showing L_{50} ambient noise levels as low as 20.8 dBA and as high as 49.4 dBA at a wind speed of 1.1 mph, essentially calm conditions. FPL presented data showing L_{50} ambient noise levels in the range of 45.0 to 49.6 dBA when wind speeds were in the range of 8.4 mph to 12.2 mph. It is possible that many of the higher noise levels were due to temporary noise sources other than wind-generated noise, such as machines or people. In assuming the worst case conditions, sources other than wind-generated noise would be excluded.

The ambient noise data provided by FPL are insufficient to calculate with certainty the range of background wind-generated noise at 7.9 mph. However, we assume that the measurements of 20.8 dBA at 1.1 mph and 23.4 dBA at 3.0 mph are representative of wind-generated background noise alone. Therefore, the Council finds it reasonable to assume that wind-generated background noise at 7.9 mph would exceed 28.3 dBA under most realistic circumstances.[33]

For comparison, a soft whisper at a distance of five feet typically produces a noise level of 30 dBA in a quiet bedroom (App X-3). The difference between 28.3 dBA and 30 dBA would not usually be noticeable to humans. In the absence of rigorous controlled noise measurements, we believe it is reasonable to assume that wind-generated background noise at 7.9 mph in an open field typical of the project area would be at least as loud as a soft whisper. The addition of turbine noise at that wind speed, therefore, is not expected to increase the ambient noise level by more than 10 dBA in any one hour. Based on this analysis, the Council finds that the facility would meet the ambient degradation test.

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[32] Decibels are measured on a logarithmic scale.

[33] Using a mathematical analysis of the wind measurement data, FPL predicted a background ambient ("current ambient") noise level of 41.3 dBA at 7.9 mph. We believe this prediction includes sources other than wind-generated noise.

Conclusions of Law

The Council concludes that noise from the facility would not exceed the applicable DEQ noise control standards.

Condition (78) relates to noise mitigation.

(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 Statewide Wetland Inventory of the Division of State Lands identifies no wetlands on or near the facility site. The applicant's contractor, CH2M HILL conducted investigations on and near the site and found no standing water, saturated soils or evidence of vegetation adapted for life in saturated soil conditions. Their field investigations located only one intermittent stream that would be affected by construction and operation of the facility. The re-routing of an underground collection cable, proposed in the letter received from Andrew Linehan on July 23, would cross Vansycle Canyon in an apparent wetland area.

The Oregon Division of State Lands (DSL) reviewed the application, before the July 23 amendment, and concurred with FPL's findings on wetlands. After the amendment, the Office consulted with Bob Brown, DSL, who confirmed that a fill permit would not be required for the proposed Vansycle Canyon crossing.

FPL addressed an intermittent stream site located in the area of the Warm Springs Canyon crossing. According to information in the application, the Warm Springs site has a streambed and discernable banks, although there was no water in the stream or wetland plant species present during the field investigation. An existing 12-foot-wide dirt road crosses the stream site on a raised, 4-foot berm. There is no culvert at the crossing.

FPL proposes to widen the existing road an additional 15 feet to provide improved access. Road widening would require the placement of approximately 14 cubic yards of earthen fill material between the banks of the intermittent Warm Springs stream. Due to the small amount of proposed fill, the road widening qualifies for a self-executing U.S. Army Corps of Engineers Nationwide Permit and does not require pre-construction notification to the Corps' District Engineer.

In the July 23 amendment letter, FPL analyzed the crossing of Vansycle Canyon. The proposed underground cable would cross a defined stream channel approximately 10 feet wide and 3 feet deep. There are no trees in the area, and the limited riparian vegetation has been grazed. FPL would construct the crossing while the stream is dry. Approximately 50 square feet of the streambed would be temporarily affected by trenching. Approximately 7.5 cubic yards of material would be removed during trenching and backfilled after placement of the cable (Condition (79)).

The proposed amount of fill material for the two stream crossings combined (21.5 cubic yards) does not meet the definition of "fill" under ORS 196.800(5). Notwithstanding the

definition of "fill," ORS 196.810(1)(b) requires a permit if the fill activity will occur in "essential indigenous anadromous salmonid habitat." Neither the intermittent stream site at the Warm Springs Canyon crossing site nor the streambed crossing site in Vansycle Canyon have fish species present at any time of the year. Neither site has been designated by the Division of State Lands on its "Essential Salmonid Habitat Areas Stream List."

Conclusions of Law

The Council concludes that a 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.[34]

Findings of Fact

FPL does not anticipate the need for a new water right for the construction or operation of the facility. FPL estimates that water use during construction would range from 14,000 to 61,000 gallons per day for a total use of approximately 6.2 million gallons. Water uses would include road compaction, dust suppression and concrete mixing. FPL proposes to obtain the necessary water from the City of Helix under the City's existing municipal water right. The City's water right authorizes the City to appropriate up to about 161,000 gallons per day. FPL does not expect that the amount of water needed for construction of the project would injure any existing water rights or exceed the amount of water available for beneficial use within the watershed.

During operation of the facility, water use would be insignificant. The satellite O&M facility would have portable toilet facilities for the small number of employees working at the facility (Condition (87)). FPL believes that any incidental use of water associated with operation of the facility would qualify as an exempt industrial use. 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 right.

The Water Resources Department has reviewed the application for compliance with applicable state statutes and administrative rules 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 complies with the Ground Water Act of 1955 and the rules of the Water Resources Department.

Conditions (87) and (88) relate to this conclusion.

[34] Other statutory law applicable to water rights and state water policy generally are included in ORS Chapters 536 through 541.

(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 77.

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 78, and for the reasons discussed there the proposed transmission line would not exceed that standard.

In recent years there has been concern that exposure to magnetic fields, even at low levels, might cause health risks. This issue has been the subject of considerable scientific research and discussion.

The Council has previously considered this issue. (Final Order for the Hermiston Power Project, dated March 25, 1996; Report of the EMF Committee to the Energy Facility Siting Council, dated March 30, 1993; Final Report on Human Health Effects from Exposure to 60-Hz Electric and Magnetic Fields from High Voltage Power Lines to the Council, dated April 1990). Based on its review, the Council concluded that the credible evidence relating low levels of exposure to health risks was inconclusive, and that there was insufficient information upon which to set "health based" limits for exposure to magnetic fields. The Council recommended that, given the uncertainty as to health consequences, those who propose transmission lines under the Council's jurisdiction should use low-cost ways to reduce or manage public exposure to magnetic fields. This is sometimes called "prudent avoidance."

Generally, underground power lines have much smaller magnetic fields than overhead lines. Because underground conductors are closer together than is possible with overhead lines, the magnetic fields of adjacent conductors tend to cancel each other. FPL proposes to place the underground conductors as little as 36 inches below the ground surface. The magnetic field directly over an underground line can be relatively high. FPL estimated the magnetic field strength to be about 60 milli-Gauss (mg) directly above the line (App Figure AA-2). However, the maximum magnetic field levels likely to be experienced directly above the buried cables are comparable to levels commonly experienced near home appliances. For example, at a distance of 12 inches, electric hair dryers have magnetic fields of 1 to 70 mg and microwave ovens have fields of 40 to 80 mg (Edison Electric Institute, *A Consumer's Guide to EMF*, 1991). In addition, the closeness of the conductors increases the cancellation effect as one moves away from the centerline. This means that the magnetic fields from underground lines diminish much more rapidly with distance from the line. For these reasons, the proposed 34.5-kV electric transmission lines are consistent with the Council's policy of "prudent avoidance" and do not present a significant risk to public health and safety.

The 34.5-kV electric transmission lines are not expected to cause significant interference with radio transmission. Because the project's location is so remote and because the voltage involved is so low, there will be no interference with radio reception near interstate, U.S. or state highways caused by the project's collector cables. The nearest state highway to Oregon facilities is Highway 12 in Washington, located at least three miles away from the closest Stateline Wind Project facilities. See Conditions (6), (21) and (22).

Conclusions of Law

The Council concludes that the siting, construction and operation of the proposed facility, subject to the conditions stated in this order, are consistent with protection of the public health and safety.

Conditions (6), (21), (22), (38), (62) and (95) relate to the protection of public health and safety.

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 only federally-delegated program that applies to the proposed facility is the National Pollutant Discharge Elimination System (NPDES) permit program.The Oregon Department of Environmental Quality (DEQ), Water Quality Division, administers the program under ORS Chapters 468 and 468B and OAR Chapter 340, Division 45.[35] The permit program regulates and permits stormwater runoff and discharges to public waters. DEQ has advised us that FPL has submitted an "administratively complete" permit application for stormwater activities during construction and that a 1200-Z stormwater permit after construction is not required.

(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.

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[35] ORS Chapter 454 and OAR Chapter 340, Divisions 71 and 73, listed in the project order, address sewage treatment and disposal and do not apply to the proposed facility as described in the application. Water quality maintenance plans, addressed by OAR Chapter 340, Division 41, listed in the project order, may indirectly apply. The project order erroneously listed Division 14, which addresses air quality.

The Council concludes that, for the proposed Stateline Wind Project, 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. CONDITIONS REQUIRED BY COUNCIL RULES

This section lists conditions to be included in the site certificate as 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 in section VII of this order 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 to specific conditions in sections IV and V of this order are included for convenience. However, such references do not relieve the certificate holder from the obligation to comply with all site certificate conditions listed in sections VI and VII.

In addition to all other conditions stated 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 certificate is executed. 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. However, the certificate holder is responsible for ensuring compliance with all provisions of the site certificate.

Citation to the sources of, or basis for, the conditions are shown in parentheses. Conditions are numbered continuously throughout sections VI and VII of this order.

1. General Conditions

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

(2) The certificate holder shall design, construct, operate and retire the facility:
(a) Substantially as described in the site certificate;
(b) In compliance with the requirements of ORS Chapter 469, applicable Council rules, and applicable state and local laws, rules and ordinances in effect at the time the site certificate is issued; and
(c) In compliance with all applicable permit requirements of other state agencies.

(OAR 345-027-0020(3))

(3) The certificate holder shall begin and complete construction of the facility by the dates specified in the site certificate. (345-027-0020(4))

See condition (24).

(4) The certificate holder shall prevent the development of any conditions on the site that would preclude restoration of the site to a useful, non-hazardous condition to the extent that prevention of such site conditions is within the control of the certificate holder. (345-027-0020(7))

(5) The Council shall include as conditions in the site certificate all representations in the site certificate application and supporting record the Council deems to be binding commitments made by the applicant. (OAR 345-027-0020(10))

The conditions that the Council deems to be binding commitments made by FPL are included in section VII of this order.

(6) For the related or supporting transmission lines:
(a) The certificate holder shall design, construct and operate the transmission line in accordance with the requirements of the National Electrical Safety Code (American National Standards Institute, Section C2, 1997 Edition); and
(b) The certificate holder shall develop and implement a program that provides reasonable assurance that all fences, gates, cattle guards, trailers, or other objects or

structures of a permanent nature that could become inadvertently charged with electricity are grounded or bonded throughout the life of the line. (OAR 345-027-0023(5))

(7) The following general monitoring conditions apply:

(a) The certificate holder shall consult with affected state agencies, local governments and tribes and shall develop specific monitoring programs for impacts to resources protected by the standards of divisions 22 and 24 of this chapter and resources addressed by applicable statutes, administrative rules and local ordinances. The certificate holder must submit the monitoring programs to the Office of Energy and receive Office approval before beginning construction or, as appropriate, operation of the facility.

(b) The certificate holder shall implement the approved monitoring programs described in section (a) and monitoring programs required by permitting agencies and local governments.

(c) For each monitoring program described in sections (a) and (b), the certificate holder shall have quality assurance measures approved by the Office before beginning construction or, as appropriate, before beginning commercial operation.

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

(OAR 345-027-0028)

(8) The certificate holder shall report according to the following requirements:

(a) General reporting obligation for non-nuclear facilities under construction or operating:

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

(ii) The certificate holder shall, within 120 days after the end of each calendar year after beginning construction, submit an annual report to the Council addressing the subjects listed in this rule. The Council secretary and the certificate holder may, by mutual agreement, change the reporting date.

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

(b) In the annual report, the certificate holder shall include the following:

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

like that occurred during the year and that had a significant adverse impact on the facility;

(ii) Reliability and Efficiency of Power Production: For electric power plants,

(A) The plant availability and capacity factors for the reporting year. If equipment failures or plant breakdowns had a significant impact on those factors, the certificate holder shall describe them and its plans to minimize or eliminate their recurrence;

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

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

(iii) Status of Surety Information: Documentation demonstrating that the bond or other security described in OAR 345-027-0020(8) or the financial mechanism or instrument described in OAR 345-027-0020(9) is in full force and effect and will remain in full force and effect for the term of the next reporting period;

(iv) Industry Trends: A discussion of any significant industry trends that may affect the operations of the facility;

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

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

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

(OAR 345-026-0080)

(9) The certificate holder shall promptly notify the Office of Energy of any changes in major milestones for construction, decommissioning, operation or retirement schedules. Major milestones are those identified by the certificate holder in its construction, retirement or decommissioning plan. (OAR 345-026-0100)

(10) The certificate holder and the Office of Energy shall exchange copies of all correspondence or summaries of correspondence related to compliance with statutes, rules and local ordinances on which the Council determined compliance, except for material withheld from public disclosure under state or federal law or under Council rules. The certificate holder may submit abstracts of reports in place of full reports; however, the certificate holder shall provide full copies of abstracted reports and any summarized correspondence at the request of the Office of Energy. (OAR 345-026-0105)

2. Conditions That Must Be Met Before Construction Begins

(11) Except as necessary for the initial survey or as otherwise allowed for transmission lines or pipelines under this section, the certificate holder shall not begin construction, as defined in OAR 345-001-0010, or create a clearing on any part of the site until the certificate holder has construction rights on all parts of the site. For the purpose of this rule, "construction rights" means the legal right to engage in construction activities. For transmission lines or pipelines, if the certificate holder does not have construction rights on all parts of the site, the certificate holder may nevertheless begin construction, as defined in OAR 345-001-0010, or create a clearing on a part of the site if:

(a) The certificate holder has construction rights on that part of the site; and

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

(OAR 345-027-0020(5))

(12) Following receipt of the site certificate, the certificate holder shall implement a plan that verifies compliance with all site certificate terms and conditions and applicable statutes and rules. As a part of the compliance plan, to verify compliance with the requirement to begin construction by the date specified in the site certificate, the certificate holder shall report promptly to the Office of Energy when construction begins. Construction is defined in OAR 345-001-0010. In reporting the beginning of construction, the certificate holder shall describe all work on the site performed before beginning construction, including work performed before the Council issued the site certificate, and shall state the cost of that work. For the purpose of this exhibit, "work on the site" means any work within a site or corridor, other than surveying, exploration or other activities to define or characterize the site or corridor. The certificate holder shall document the compliance plan and maintain it for inspection by the Office of Energy or the Council. (OAR 345-026-0048)

(13) Except as provided in OAR 345-027-0023(6), before beginning construction, the certificate holder shall submit to the Office of Energy a legal description of the site. The Office shall append the legal description to the site certificate. (OAR 345-027-0020(2))

See Condition (84).

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

(15) Before beginning construction of the facility, the certificate holder shall submit to the State of Oregon, through the Council, a bond or comparable security, satisfactory to the Council, in an amount specified in the site certificate. The Council shall specify an amount adequate to restore the site to a useful, non-hazardous condition if the certificate

holder either begins but does not complete construction of the facility or permanently closes the facility before establishing the financial mechanism or instrument described in section OAR 345-027-0020(9). The certificate holder shall maintain the bond or comparable security in effect until the certificate holder has established that financial mechanism or instrument. (OAR 345-027-0020(8))

See Condition (43).

3. Conditions That Apply During Construction

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

(17) The certificate holder shall notify the Office of Energy, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if site investigations or trenching reveal that conditions in the foundation rocks differ significantly from those described in the application for a site certificate. After the Office receives the notice, the Council may require the certificate holder to consult with the Department of Geology and Mineral Industries and the Building Codes Division and to propose mitigation actions. (OAR 345-027-0020(13))

(18) The certificate holder shall notify the Office, the State Building Codes Division and the Department of Geology and Mineral Industries promptly if shear zones, artesian aquifers, deformations or clastic dikes are found at or in the vicinity of the site. (OAR 345-027-0020(14))

4. Conditions That Must Be Met Before Operation Begins

(19) Before beginning operation of the facility, the certificate holder shall establish a financial mechanism or instrument, satisfactory to the Council, assuring the availability of adequate funds throughout the life of the facility to retire the facility and restore the site to a useful, non-hazardous condition as described in OAR 345-022-0130. The certificate holder shall retire the facility according to an approved final retirement plan, as described in OAR 345-027-0110. (OAR 345-027-0020(9))

See Condition (80).

(20) Upon completion of construction, the certificate holder shall restore vegetation to the extent practicable and shall landscape portions of the site disturbed by construction in a manner compatible with the surroundings and proposed use. Upon completion of construction, the certificate holder shall dispose of all temporary structures not required for facility operation and all timber, brush, refuse and flammable or combustible material resulting from clearing of land and construction of the facility. (OAR 345-027-0020(11))

(21) If the proposed energy facility is a pipeline or a transmission line or has, as a related or supporting facility, a pipeline or transmission line, the Council shall specify an approved corridor in the site certificate and shall allow the certificate holder to construct the

pipeline or transmission line anywhere within the corridor, subject to the conditions of the site certificate. If the applicant has analyzed more than one corridor in its application for a site certificate, the Council may, subject to the Council's standards, approve more than one corridor. Before beginning operation of the facility, the certificate holder shall submit to the Office a legal description of the permanent right-of-way where the applicant has built the pipeline or transmission line within an approved corridor. The Office shall append the legal description to the site certificate. The site of the pipeline or transmission line subject to the site certificate is the area within the permanent right-of-way. (OAR 345-027-0023(6))

5. Conditions That Must Be Met During Operation

(22) For the related or supporting transmission lines, the certificate holder shall restore the reception of radio and television at residences and commercial establishments in the primary reception area to the level present prior to operations of the transmission line, at no cost to residents experiencing interference resulting from the transmission line. (OAR 345-027-0023(4))

(23) The certificate holder shall notify the Office of Energy within 72 hours of any occurrence involving the facility if:

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

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

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

(OAR 345-026-0170)

VII. SPECIFIC FACILITY CONDITIONS

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

This section includes other specific facility conditions the Council finds necessary to ensure compliance with the siting standards of OAR Chapter 345, Divisions 22 and 24, and to protect the public health and safety. The references to specific conditions in sections IV and V of this order are included for convenience. However, such references do not relieve the certificate holder from the obligation to comply with all site certificate conditions listed in sections VI and VII.

Citation to the sources of, or basis for, the conditions are shown in parentheses. Conditions are numbered continuously throughout sections VI and VII of this order.

1. General Conditions

(24) The certificate holder shall begin construction of the facility within one year after the effective date of the site certificate. The certificate holder shall complete construction of the facility on or before two years from the effective date of the site certificate. Under

OAR 345-015-0085(9), a 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.

See condition (3).

(25) Within 72 hours of discovery of conditions or circumstances that may violate the terms or conditions of the site certificate, the certificate holder shall report the conditions or circumstances to the Office of Energy. (OAR 345-027-0020(3))

(26) Notwithstanding OAR 345-027-0050(2), an amendment of the site certificate is required 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. (OAR 345-027-0020(3))

(27) The certificate holder shall restore the site to a useful, nonhazardous condition if the certificate holder either begins but does not complete construction of the facility or permanently closes the facility after construction is complete. (OAR 345-027-0020(3))

(28) The certificate holder shall report promptly to the Office of Energy any change in its corporate relationship with FPL Energy LLC. The certificate holder shall report promptly to the Office of Energy any change in its access to the resources, expertise and personnel of FPL Energy LLC. (App A-3, D-2, OAR 345-022-0010)

(29) The certificate holder shall inspect and maintain all roads, pads and trenched areas to minimize erosion. (App B-11)

(30) The certificate holder shall carry out weed control and reseeding as necessary for the life of the facility, in consultation with the weed control board of Umatilla County. (App B-11)

(31) The certificate holder shall not store fuel or chemicals in Oregon. (App B-12)

(32) The certificate holder shall use hazardous materials in a manner that is protective of human health and the environment and shall comply with all applicable local, state, and federal environmental laws and regulations. The certificate holder shall make sure that accidental releases of hazardous materials will be prevented or minimized through the proper containment of these substances during transportation and use on the site. The certificate holder shall make sure that any oily waste, rags or dirty or hazardous solid waste will be collected in sealable drums and removed for recycling or disposal by a licensed contractor. The certificate holder shall have spill kits containing items such as absorbent pads on equipment and in storage facilities to respond to accidental spills. If an accidental hazardous materials spill or release occurs, the certificate holder shall clean up the spill or release and shall treat or dispose of contaminated soil or other materials according to applicable regulations. (App G-2, V-3)

(33) The certificate holder shall provide to the Office of Energy a copy of the contract with the Milton-Freewater Rural Fire Department for fire protection services during construction and operation of the facility before beginning construction. (App U-25)

(34) During construction and operation of the facility, the certificate holder shall have water-carrying trailers ("water buffaloes") at appropriate locations around the facility. The certificate holder shall bring a water buffalo to any job site where there is a substantial risk of fire. The certificate holder shall coordinate with the fire chiefs of the Helix and Milton-Freewater Rural Fire Departments as to the number, capacity and location of the water buffaloes. The certificate holder shall make sure that each water buffalo has a minimum capacity of 350 gallons with sufficient pump and hose equipment, as approved by the local fire chiefs. The certificate holder shall have service trucks and pickup trucks capable of towing water buffaloes available in sufficient numbers at all times during construction and operation of the facility. (App B-12)

(35) The certificate holder shall take steps to reduce the risk of accidental injury during construction and operations would be minimized by (App U-25, 26):

(a) Maintaining fencing and access gates around dangerous equipment or portions of the site as feasible

(b) Posting warning signs near high-voltage equipment

(c) Requiring construction contractors to provide specific job-related training to employees, including cardiopulmonary resuscitation, first aid, tower climbing, rescue techniques and safety equipment inspection

(d) Requiring each worker to be familiar with site safety

(e) Assigning safety officers to monitor construction activities and methods during each work shift

(f) Ensuring that workers on each shift are certified in first aid

(g) Ensuring a well-stocked first-aid supply kit is accessible on-site at all times and that each worker knows its location

(h) Conducting periodic safety meetings for construction and maintenance staff

(36) The certificate holder shall notify the Office of Energy and the Umatilla County Planning Department of any accidents including mechanical failures on the site associated with the operation of the wind power facility that may result in public health and safety concerns. (ORS 469.310)

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

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

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

(c) Construct each turbine to be approximately 165 feet tall at the turbine hub and with a total height of approximately 242 feet with the nacelle and blades mounted (App B-5)

(d) Mount nacelles on smooth, hollow steel towers, approximately 14 feet in diameter at the base (App B-5)

(e) Paint all towers uniformly in a neutral light gray color (App B-5)

(f) Not allow any advertising to be used on any part of the facility or on any signs posted at the facility, except that the turbine manufacturer's logo may appear on turbine nacelles (App BB-2)

(g) Use only the minimum lighting on its turbine strings required by the Federal Aviation Administration, except that the satellite operations and maintenance building may have a small amount of low-impact exterior lighting for security purposes (App BB-2)

(h) Use only those signs required for facility safety or required by law (App BB-2)

(38) To restrict public access to turbine towers, the certificate holder shall install locked access doors accessible only to authorized project staff. (App BB-3)

(39) If any state-listed threatened, endangered or candidate plant species are found during the pre-construction surveys described in condition (55), the certificate holder shall use appropriate measures to protect the species and mitigate for impacts from construction, operation and retirement of the facility.

See condition (55).

(40) In constructing and operating the facility, the certificate holder shall make reasonable efforts not to disturb the farming and ranching activities on adjacent lands. (App K-6)

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

See Condition (2).

2. Conditions That Must Be Met Before Construction Begins

(42) The certificate holder shall notify the Office of Energy in advance of any initial road improvement work that does not meet the definition of "construction" in OAR 345-001-0010(10) or ORS 469.300(6) and shall provide to the Office of Energy plans of the work and evidence that its value is less than $250,000. (App B-21)

(43) The certificate holder shall submit to the State of Oregon through the Council a bond or letter of credit in the amount of $1,459,000 (in 2001 dollars) naming the State of Oregon, acting by and through the Council, as beneficiary or payee.

(a) The calculation of 2001 dollars shall be made using the U.S. Gross Domestic Product Implicit Price Deflator 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 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 bond or letter of credit shall not be subject to revocation or reduction before the certificate holder's satisfaction of Condition (19).

(e) The certificate holder may satisfy Sections IV.2(15) and V.2(43) of this site certificate by delivering to the Council a facsimile of the duly issued letter of credit along with a certification from the issuing bank. The bank's certification shall state that the original of the letter of credit has been deposited with a reputable mail carrier for delivery to the Council and shall provide the mail carrier's tracking number for the letter of credit. To maintain the certificate holder's compliance with Sections IV.2(15) and V.2(43) of this site certificate, the original of the letter of credit must be received by the Council within five business days after the facsimile transmission. The parties have agreed to this condition in light of unique circumstances affecting air travel and mail delivery and it is not intended by the Council to have any precedential effect.

See Conditions (15) and (41).

(44) The certificate holder shall locate roads to minimize disturbance and maximize transportation efficiency and to avoid sensitive resources and unsuitable topography. The certificate holder shall use existing county roads and private farm roads to the maximum extent feasible. The certificate holder shall coordinate farm road improvements with landowners to minimize crop impacts and to assure that the final road provides useful access, where possible, to the landowners' fields. (App B-6)

(45) The certificate holder shall videotape all Umatilla County roads used as access to the facility and shall require construction contractors to enter into a written agreement with Umatilla County stating that all roads used by the contractor will be restored to as good or better condition than they were before construction. (App U-24)

(46) The certificate holder shall notify the Office of Energy of the identity and qualifications of major construction contractors for the facility. The certificate holder shall select major construction contractors based on a proven record of environmental compliance and stewardship, a clean record in terms of other regulatory obligations and other appropriate factors. (App D-3, 4)

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

See condition (2).

(48) The certificate holder shall require that all on-site construction contractors prepare a site health and safety plan before beginning construction activities. The certificate holder shall ensure that the plan informs employees and others onsite what to do in case of emergencies and includes the locations of fire extinguishers and nearby hospitals, important telephone numbers and first aid techniques. (App U-25)

(49) The certificate holder shall design the facility in accordance with seismic design provisions given in the Oregon Building Code. The certificate holder shall identify

localized areas of S_C and S_D soil types and assure that any structures to be built in those areas are designed according to the code. (App H-7, 13)

(50) The certificate holder shall provide the Office with design specifications showing the locations of turbines and type of foundations to be employed and demonstrating that the following conditions have been satisfied (OAR 345-022-0020):

(a) If a turbine is located within 50 feet of a slope steeper than 30°, the stability of the slope has been reviewed by the foundation designer to confirm that either (i) the slope has a safety factor of at least 1.1 during the maximum probable seismic event or (ii) the safety factor is less than 1.1, but ground displacements will not adversely affect the stability of the wind turbine. Slopes shall be evaluated in the field for each proposed turbine location.

(b) The foundation designer's review of slope displacement during a seismic event has been made using a pseudo-static horizontal coefficient of 0.13g and, if the safety factor is less than 1.1, the foundation designer has shown that (i) the movement will not intersect the turbine, (ii) the movement will intersect the turbine but will not affect its stability, or (iii) additional stabilization measures, such as anchor tie-downs or ground support systems, will be employed to maintain stability.

(c) If a turbine is located where power generating or other requirements preclude sufficient setback distances to avoid intersection of a moving slope with the turbine foundation, the foundation designer has demonstrated that the turbine foundation will withstand loads from the moving soil or has been equipped with ground support systems that will withstand loads from moving soil.

(d) The foundation designer has confirmed that the turbines and conduit can tolerate some movement without instability or breakage if a mapped fault were to rupture.

(51) In modifying slope angles for roads or other facilities, the certificate holder shall assure that the foundation designer has achieved a factor of safety of 1.5 or greater for permanent structures and a factor of safety of 1.3 or greater for temporary structures. (OAR 345-022-0020)

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

(a) Siting the turbines on ridges outside of migration flyways

(b) Siting turbines to avoid placing turbines in saddle locations along ridges (where bird use is typically higher)

(c) Avoiding the use of overhead collector lines

(53) The certificate holder shall survey the status of known Swainson's and ferruginous hawk nests within the vicinity of proposed construction before the projected date for construction to begin. If active nests are found, and construction is scheduled to begin before the end of the sensitive nesting and breeding season (mid-April to mid-August), the certificate holder shall develop a no-construction buffer in consultation with ODFW and shall not engage in construction activities within the buffer until the sensitive season has ended. If construction continues into the sensitive nesting and breeding season for the following year, the certificate holder shall not engage in construction activities within the buffer until the sensitive season has ended. (App P-42)

(54) The certificate holder shall conduct pre-construction nest surveys for burrowing owls, grasshopper sparrows and other ground-nesting birds (March to July). The certificate holder shall leave a no-construction buffer, developed in consultation with ODFW, around any active nests during the sensitive period. (App P-42)

(55) The certificate holder shall conduct pre-construction surveys for state-listed threatened, endangered or candidate plant species in all areas not included in earlier botanical surveys of the analysis area. If any listed plants are found, FPL will notify the Office of Energy and consult with the Oregon Department of Agriculture regarding appropriate measures to protect the species and mitigate for impacts from construction, operation and retirement of the facility. (App Q-7)

(56) The certificate holder shall conduct pre-construction surveys for the presence of Washington ground squirrels in the facility area and shall identify locations of active burrows. If potentially active burrows are found, the certificate holder shall develop an appropriate no-construction buffer in consultation with ODFW. If active burrows are discovered that may be within proposed ground disturbing activities, the certificate holder shall develop an appropriate mitigation plan in consultation with ODFW. (App Q-9, 12)

3. Conditions That Apply During Construction

(57) The certificate holder shall report to the Council any change of major construction contractors.

See condition (8).

(58) The certificate holder shall take steps to prevent fires during construction including but not limited to (App U-25):

(a) Establishing roads before accessing the site to allow vehicles to stay away from grass

(b) Using diesel vehicles whenever possible to prevent potential ignition by catalytic converters

(c) Avoiding idling vehicles in grassy areas

(d) Keeping cutting torches and similar equipment away from grass

(e) Making sure that all construction personnel receive appropriate fire-safety instruction from qualified local fire departments or qualified fire-fighting trainers on the job site

(f) Making sure that fire-fighting equipment is available at all active parts of the job site

(59) The certificate holder shall require the foundation designer to inspect excavations during construction of foundations for the turbines and other facilities to confirm that geologic conditions are appropriate for supporting the turbines during gravity, seismic and wind loading. (OAR 345-022-0020)

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

shall include in the ESCP any procedures necessary to meet local erosion and sediment control requirements or stormwater management requirements. (App B-7, 13, E-3, P-41)

(61) The certificate holder shall mitigate potential adverse impacts to soils from erosion and compaction by measures including but not limited to the following (App H-17, I-4, 5):

(a) Maintaining vegetative buffer strips between the areas impacted by construction activities and any receiving waters

(b) Installing sediment fence/straw bale barriers at locations shown on the plans

(c) Wherever feasible, constructing roadways so that surface drainage continues along natural drainage patterns with minimal diversions through ditches and culverts

(d) Working with the Umatilla County Public Works Department and the local Natural Resources Conservation Service office to design water bars and other management practices to slow the flow of water on newly constructed repaired roads

(e) Straw mulching and discing at locations adjacent to the road that have been impacted

(f) Providing temporary sediment traps downstream of intermittent stream crossings

(g) Providing sedimat type mats downstream of perennial stream crossings

(h) Planting designated seed mixes at impacted areas adjacent to the roads

(i) Installing sediment fencing along the downslope side of construction equipment staging areas

(j) Seeding all areas that are impacted by construction and reseeding as necessary to establish a healthy cover crop

(k) Leaving sediment fencing, check dams and other erosion control measures in place until the impacted areas are well vegetated and the risk of erosion has been eliminated

(l) Limiting truck and heavy equipment traffic, to the extent possible, to improved road surfaces, and thereby limiting soil compaction and disturbances

(m) Scarifying and reseeding compacted areas after construction is completed

(n) Using appropriate erosion control methods to limit soil loss due to water and wind action

(o) Covering roads and turbine pads with gravel immediately following exposures, thereby limiting the time for wind or water erosion (App I-2, 3)

(p) Using water for dust suppression during construction (App O-1)

(62) The certificate holder shall place underground electrical and communications cables at a minimum depth of three feet below grade in trenches along the length of each turbine string corridor and in some cases in trenches from the end of one turbine string to the end of an adjacent turbine string. The certificate holder shall excavate trenches and segregate the topsoil from subsoil. After installing the electrical or communications cables and within two weeks of trenching, the certificate holder shall backfill the trenches and replace topsoil on top. The certificate holder shall reseed the area with native grasses or other plants appropriate to the location. (App B-8, I-2, W-2)

(63) The certificate holder shall mitigate possible impacts to wildlife by measures including but not limited to the following (App P-42 through 45, Q-10, 11):

(a) Preparing maps to show sensitive areas that are off-limits during the construction phase, distributing the maps to construction staff and having a biologist flag sensitive areas as needed

(b) Minimizing road construction and vehicle use where possible

(c) Posting speed limit signs throughout the construction zone

(d) Instructing construction personnel (including all construction contractors and their personnel) on sensitive wildlife of the area and on required precautions to avoid injuring or destroying wildlife

(e) Instructing construction personnel (including all construction contractors and their personnel) to watch out for wildlife while driving through the project area, to maintain reasonable driving speeds so as not to harass or accidentally strike wildlife and to be particularly cautious and drive at slower speeds in a period from one hour before sunset to one hour after sunrise when some wildlife species are the most active

(f) Requiring all construction personnel to report any injured or dead wildlife detected at the facility site

(g) Requiring all construction personnel to respect all staked wildlife areas and associated no-construction buffer areas

(64) To avoid creating habitat for raptor prey near turbine towers, the certificate holder shall spread gravel on all above ground portions of the turbine pads to reduce the potential for weed infestation. (App BB-5)

(65) The certificate holder shall mitigate possible impacts to fish and wildlife habitat by measures including but not limited to the following (App P-42 through 45, Q-10, 11):

(a) Avoiding vegetation removal wherever possible

(b) Limiting construction activities to within public road right-of-ways where possible

(c) Using best management practices to prevent erosion of soil into stream channels

(d) Controlling invasive, weedy plant species during maintenance of project facilities

(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 this order as Attachment B

(f) Developing re-vegetation plant mixes and habitat enhancement locations in consultation with ODFW and the Umatilla County weed control board

(g) Monitoring re-vegetated areas to ensure successful establishment of new vegetation

(h) Monitoring turbine strings, roads and other disturbed areas regularly to prevent the spread of noxious weeds

(i) Developing measures to reduce the potential spread of noxious weeds in consultation with the weed control board of Umatilla County.

(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 this 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)

(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 this 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 this order as Attachment B

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

(69) The certificate holder shall not place any part of the facility within any Washington ground squirrel colony or on potential Washington ground squirrel burrows. The certificate holder shall limit permanent road widening and other improvements and shall locate temporary roads and laydown areas to minimize impacts to potential Washington ground squirrel habitat (App Q-8, 10).

(70) To reduce potential injury or fatality of migratory birds, the certificate holder shall (App Q-10):

(a) Locate turbines away from saddles in long ridges

(b) Locate turbines on the top or slightly downwind side of distinct ridges and set back from the upwind (prevailing) side

(c) Use monopole design for all turbine and meteorological towers

(71) The certificate holder shall implement a waste management plan during construction that includes but is not limited to the following measures (App V-2):

(a) Collecting steel scrap and transporting it to a recycling facility

(b) Recycling wood waste to the greatest extent feasible, depending on size and quantity of scrap or leftover materials

(c) Using concrete waste as fill on-site or at another site or, if no reuse option is available, transporting it to a local landfill

(d) Recycling packaging wastes (such as paper and cardboard)

(e) Collecting non-recyclable waste and transporting it to a local landfill

(72) The certificate holder shall require that disposal of waste concrete on-site is conducted in accordance with OAR 340-093-0080, other applicable regulations and this condition. The construction contractor may bury waste concrete on-site with the permission of the landowner in the following manner: by placing the waste concrete in an excavated hole, covering it with at least three feet of topsoil and grading the area to match existing contours so that all buried concrete is at least three feet below grade. (App V-3, 4).

(73) The certificate holder shall provide portable toilets for onsite sewage handling during construction and make sure that they are pumped and cleaned regularly by a licensed

pumper who is qualified to pump and clean portable toilet facilties. The certificate holder shall minimize the generation of wastes from construction through detailed estimating of materials needs and through efficient construction practices. The certificate holder shall recycle any wastes generated during construction as much as feasible and shall collect any non-recyclable wastes and transport such wastes to a local landfill. (App B-13, G-3, V-2)

(74) The certificate holder shall have a full-time on-site assistant construction manager, qualified in environmental compliance and familiar with all site certificate conditions, to observe contractor waste management practices and to assure compliance with applicable regulations and construction site policy. (App V-4)

(75) The certificate holder shall post no-entry barriers by staking or flagging to ensure that construction workers stay away from the vicinity of the cultural sites. The certificate holder shall locate barriers to create a buffer with a minimum width of 50 feet between the cultural sites and construction activities. The certificate holder shall have a qualified cultural resource expert, chosen by the Confederated Tribes of the Umatilla Indian Reservation, present during construction in the immediate vicinity of the sites to ensure that construction crews respect the buffers. (App S-4)

(76) If previously unidentified cultural resources are encountered during construction, the certificate holder shall halt earth-disturbing activities in the immediate vicinity of the find, in accordance with Oregon state law (ORS 97.745 and 358.920), and shall notify the Office of Energy, the Oregon State Historic Preservation Officer (SHPO) and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR). The certificate holder shall have a qualified archaeologist evaluate the discovery and recommend subsequent courses of action in consultation with the CTUIR and the SHPO. (App S-5, 6)

(77) The certificate holder shall include traffic control procedures in contract specifications for construction of the facility. The certificate holder shall require flaggers to be at appropriate locations at appropriate times during construction to direct traffic and to ensure minimal conflicts between harvest and construction vehicles. (App U-24)

(78) The certificate holder shall confine the noisiest construction activities to the daylight hours. (App X-8)

(79) The certificate holder shall construct the cable crossing of Vansycle Canyon at a time when the stream is dry. The certificate holder shall remove no more than approximately 7.5 cubic yards of material from the streambed crossing and shall replace a like amount of fill material after the cable has been laid, restoring the area similar to the original contours of the streambed. (Linehan, July 23 letter, 3)

4. Conditions That Must Be Met Before Operation Begins

(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 (in 2001 dollars) naming the State of Oregon, acting by and through the Council, as beneficiary or payee (the "retirement fund").

(a) The calculation of 2001 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).

See Conditions (19) and (41).

(81) After construction is complete, the certificate holder shall restore the county roads to at least their pre-project condition, to the satisfaction of the county public works department. (App B-6, 9)

(82) The certificate holder shall grade and reseed laydown areas to wheat or native grasses as necessary to restore those areas to their pre-construction condition (App B-10).

(83) For any materials disposed of as fill on site, the certificate holder shall conduct such disposal with the approval of the landowner and in accordance with OAR 340-093-0080 and other applicable regulations. (App G-3, V-3)

(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. The Office shall append the legal description to the site certificate. The site of the facility is the area identified by that legal description. By means of the legal description, 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))

See Condition (13).

5. Conditions That Must Be Met During Operation

(85) The certificate holder shall prepare and maintain a site health and safety plan that informs employees and others onsite what to do in case of emergencies and includes the locations of fire extinguishers and nearby hospitals, important telephone numbers and first aid techniques. (App U-25)

(86) The certificate holder shall recycle solid waste generated during operation of the facility as much as feasible and shall collect non-recyclable waste and transport it to a local landfill. (App V-2)

(87) The certificate holder shall provide portable toilets for use at the satellite O&M building and shall make sure that they are pumped and cleaned regularly by a licensed pumper

who is qualified to pump and clean portable toilet facilties. The certificate holder must contact the Oregon Department of Environmental Quality if the on-site septic system is to be used. (App O-2)

(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 not use chemicals or additives in the wash water. (App O-2)

(89) If any new nesting or denning sites for wildlife species of concern are located, the certificate holder shall prepare maps indicating off-limit areas. In addition, the certificate holder shall minimize road construction and vehicle use where possible. (P-42)

(90) The certificate holder shall mitigate possible impacts to wildlife by measures including but not limited to the following (App P-43, Q-10):

(a) Instructing all personnel on sensitive wildlife of the area and on required precautions to avoid injuring or destroying wildlife

(b) Instructing all personnel to watch out for wildlife while driving through the project area, to maintain reasonable driving speeds so as not to harass or accidentally strike wildlife and to be particularly cautious and drive at slower speeds in a period from one hour before sunset to one hour after sunrise when some wildlife species are the most active

(c) Requiring all personnel to report any injured or dead wildlife detected at the facility site

(91) The certificate holder shall mitigate possible impacts to fish and wildlife habitat by measures including but not limited to the following (App P-43, Q-10):

(a) Using best management practices to prevent erosion of soil into stream channels

(b) Controlling invasive, weedy plant species during maintenance of project facilities

(c) Monitoring re-vegetated areas to ensure successful establishment of new vegetation

(92) The certificate holder shall mitigate potential adverse impacts to soils from erosion by measures including but not limited to the following (App I-3 through 5):

(a) Using drainage collection procedures to capture surface water that collects on, and drains from, gravel surfaces or structures as a result of precipitation and routing the water to drainage ditches lined with quarry stone or other similar materials

(b) Using sand bags, straw bales and silt fences as needed to reduce erosion from precipitation during repair of underground cables or other soil-disturbing repairs

(c) If areas of erosion are observed during operation, implementing mitigation and reclamation measures

(93) The certificate holder shall conduct wildlife monitoring as described in the Oregon Wildlife Monitoring Plan, included in this order as Attachment A. 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)

(94) If analysis of monitoring data indicates impacts to wildlife or wildlife habitat that the certificate holder has not adequately addressed by mitigation and if these impacts result in a loss of habitat quantity or quality, the certificate holder shall mitigate for the loss of

habitat quality by measures approved by the Oregon Office of Energy. (OAR 345-022-0060)

(95) The certificate holder shall inspect turbine blades on a regular basis for signs of wear or potential failure. (App BB-1)

(96) The certificate holder shall make sure that all on-site employees receive annual fire prevention and response training by a professional fire-safety training firm. The certificate holder shall prohibit employees from smoking outside of company vehicles during dry summer months and shall require employees to keep vehicles on roads and off dry grassland during the dry months unless necessary for work purposes. The certificate holder shall not engage in welding, cutting, grinding or other flame or spark-producing operations near the turbines. The certificate holder shall equip each company vehicle on site with a fire extinguisher, water spray can, shovel, Emergency Response procedures book and a two-way radio for immediate communications with the O&M facility. The certificate holder shall have staff in the local area on call at all times to respond in case of fire or other emergency. The certificate holder shall supply all local fire departments with maps of and gate keys to the facility. (App B-12)

VIII. GENERAL CONCLUSION

In accordance with ORS 469.503, in order to issue a 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.

IX. FINAL ORDER

The Council grants issuance of a site certificate, subject to the terms and conditions set forth above, to FPL for the Stateline Wind Project.

Issued this 14th day of September, 2001.

The Oregon Energy Facility Siting Council

By _____

Karen H. Green, Chair

Attachments

Attachment A: Oregon Wildlife Monitoring Plan

Attachment B: Revegetation Plan

STATELINE WIND PROJECT

FINAL ORDER

Notice of the Right to Appeal

You have the right to appeal this order to the Oregon Supreme Court pursuant to ORS 469.405. To appeal you must file a petition for judicial review with the Supreme Court within 60 days from the day this order was served on you. If this order was personally delivered to you, the date of service is the date you received this order. If this order was mailed to you, the date of service is the date it was mailed, not the day you received it. If you do not file a petition for judicial review within the 60-day time period, you lose your right to appeal.