

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

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

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**FINAL ORDER ON
AMENDMENT #2**

June 6, 2003

STATELINE WIND PROJECT:
FINAL ORDER ON AMENDMENT #2

TABLE OF CONTENTS

I.	INTRODUCTION.....	1
II.	PROCEDURAL HISTORY AND AMENDMENT PROCESS	1
III.	PUBLIC COMMENTS.....	3
IV.	DESCRIPTION OF THE PROPOSED AMENDMENT	4
	1. CHANGES TO THE SITE CERTIFICATE AS PROPOSED BY FPL	6
	2. CHANGES TO THE SITE CERTIFICATE APPROVED UNDER THIS ORDER	11
V.	THE COUNCIL’S SITING STANDARDS: FINDINGS AND CONCLUSIONS	21
	1. GENERAL STANDARD OF REVIEW	22
	2. STANDARDS ABOUT THE APPLICANT	23
	(a) Organizational Expertise.....	23
	(b) Retirement and Financial Assurance.....	26
	3. STANDARDS ABOUT IMPACTS OF CONSTRUCTION AND OPERATION.....	32
	(a) Land Use	32
	(b) Soil Protection.....	54
	(c) Protected Areas	56
	(d) Scenic and Aesthetic Values	60
	(e) Recreation	64
	(f) Public Health and Safety Standards for Wind Energy Facilities	65
	(g) Siting Standards for Wind Energy Facilities.....	66
	(h) Siting Standards for Transmission Lines	69
	4. STANDARDS TO PROTECT WILDLIFE	71
	(a) Threatened and Endangered Species.....	71
	(b) Fish and Wildlife Habitat.....	75
	5. CATEGORY I HABITAT AND THE BALANCING ANALYSIS UNDER OAR 345-022-0000(2)	84
	6. STANDARDS NOT APPLICABLE TO SITE CERTIFICATE ELIGIBILITY	91
	(a) Structural Standard.....	92
	(b) Historic, Cultural and Archaeological Resources	93
	(c) Public Services.....	94
	(d) Waste Minimization.....	98
VI.	OTHER APPLICABLE REGULATORY REQUIREMENTS: FINDINGS AND CONCLUSIONS.....	99
	1. REQUIREMENTS UNDER COUNCIL JURISDICTION.....	99
	(a) Noise	99
	(b) Wetlands	106
	(c) Water Rights	107
	(d) Public Health and Safety.....	108
	2. REQUIREMENTS THAT ARE NOT UNDER COUNCIL JURISDICTION.....	111
	(a) Federally-Delegated Programs.....	111
	(b) Requirements That Do Not Relate to Siting.....	111
VII.	GENERAL APPLICATION OF CONDITIONS.....	112
VIII.	GENERAL CONCLUSION.....	113
IX.	ORDER.....	115

LIST OF ABBREVIATIONS

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

**STATELINE WIND PROJECT:
FINAL ORDER ON AMENDMENT #2**

I. INTRODUCTION

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

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

On May 17, 2002, the Council issued its Final Order in the Matter of the Request for Amendment #1 of the Site Certificate for the Stateline Wind Project (“Final Order on Amendment #1”). Amendment #1 authorized FPL to expand the Stateline 1 facility by the construction of 60 additional turbines and related or supporting facilities (referred to in this order as “**Stateline 2**”). As of January 3, 2003, FPL had completed construction of 55 of the Stateline 2 turbines. Currently, the Stateline wind facility includes 181² operating turbines in Oregon with a combined electrical generating capacity of approximately 119.5 MW.

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

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

II. PROCEDURAL HISTORY AND AMENDMENT PROCESS

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

¹ As described in the Final Order on the Application, pages 9-13.

² The site certificate authorized FPL to construct 127 Stateline 1 turbines. However, FPL elected to build 126 due to site conditions.

1 Council's mailing list and to persons on a list of property owners supplied by FPL. Within the
2 time allowed by Council rule, the Office notified FPL that the amendment would require
3 extended review and that the proposed order would be issued by November 12, 2002.

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

9 On November 15, 2002, FPL submitted its revised request for Amendment #2
10 (referred to herein as "Request for Amendment #2"). On November 19, 2002, the Office sent
11 a request for comments to the appropriate officers, agencies and tribes, asking them to submit
12 comments by December 20. The Office asked FPL to send them copies of the revised
13 amendment request, in accordance with OAR 345-027-0070. On the same date, the Office
14 sent notice of the amendment request to all persons on the Council's mailing list and to
15 persons on a list of property owners supplied by FPL, asking them to submit comments by
16 December 20. Within the time allowed by Council rule, the Office notified FPL that the
17 amendment would require extended review and that the proposed order would be issued by
18 March 7, 2003.

19 On February 11, 2003, FPL submitted a "Request for Addendum to Pending Request
20 for Amendment #2."³ On the same day, the Office sent a copy of the addendum request to the
21 appropriate officers, agencies and tribes, asking them to submit comments by February 25.
22 The Office also sent notice of the addendum request to all persons on the Council's mailing
23 list and to persons on a list of property owners supplied by FPL, asking them to submit
24 comments by February 25.

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

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

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

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

³ Because the request to extend the construction deadline for Stateline 2 came at a time when there was already an amendment process underway, the Office of Energy concluded that adding the extension request to the pending amendment as an "addendum" would be a more efficient process than initiating a separate amendment proceeding.

1 Under OAR 345-027-0070(7), the Council must decide whether any issue identified in
2 a contested case request justifies a contested case proceeding. In a memorandum dated May
3 27, 2003, the Office analyzed the legal theories presented in the Eurus request and
4 recommended that the Council deny the request for a contested case proceeding. On June 5,
5 2003, Eurus and FPL notified the Office that a settlement had been made between the two
6 companies, and Eurus withdrew its contested case request.

7 III. PUBLIC COMMENTS

8 During the initial public comment period (November 19 through December 20, 2002),
9 the Office received only one public comment that stated an objection to the proposed
10 amendment. In a letter dated December 19, 2002, the Pacific Northwest Regional Council of
11 Carpenters (PNRCC) urged rejection of the amendment request. In summary, the basis of the
12 objection was that the amendment request was “deficient with respect to complying with the
13 Oregon Statewide Planning Program goals.” The PNRCC asserted that the natural resources
14 protected under Statewide Planning Goal 5 include “Human Resources.”⁴ The PNRCC urged
15 that “Human Resources” should be given “equal treatment with Wildlife Resources,”
16 including “a better inventory, more accurate Projections and post construction monitoring of
17 the construction workforce.”⁵ We discuss Goal 5 at page 53 and find that the requirements of
18 Goal 5 are outside of the scope of the Council’s Land Use Standard. Therefore, the Council
19 concludes that the objection stated by the PNRCC does not support rejection of the
20 amendment request.

21 During the public comment period on the addendum (February 11 through 25), the
22 Office received one comment. In an e-mail message dated February 25, Mike Denny stated
23 that, while he was not opposed to extending the construction deadline for Stateline 2, he was
24 concerned about the cumulative effect of continued expansion of Stateline in Oregon on birds
25 and bats. He suggested there should be some limit on the number of turbines built on the site.
26 The Office responded that the Council, through the site certificate, would continue to require
27 mitigation of impacts to wildlife and wildlife habitat and post-construction monitoring of
28 impacts to avian species. Further, the Office responded that there is no basis in law currently
29 to arbitrarily limit the number of wind turbines in a given area but that the wind resource,
30 economic feasibility, site topography, other land uses and landowner willingness to
31 accommodate further wind energy development would limit future sites for additional
32 turbines.

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

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

1 **IV. DESCRIPTION OF THE PROPOSED AMENDMENT**

2 Amendment #2 would allow FPL to expand the Stateline facility (including Stateline 1
3 and Stateline 2) by the construction⁶ of 279 additional turbines and related or supporting
4 facilities in Oregon (referred to in this order as “Stateline 3”). The new turbines would
5 increase the electrical generation capacity of the facility by approximately 184 megawatts.
6 Construction would begin within two years after the effective date of the amendment. The
7 certificate holder would complete construction by December 31, 2005. In addition, the
8 proposed amendment would extend the construction completion date for Stateline 2 from
9 March 1, 2003, to March 1, 2005.

10 After the proposed expansion and completion of the Stateline 2 facilities, the Stateline
11 wind facility would have up to 466 turbines in Oregon with a combined electrical generation
12 capacity of approximately 307.6 megawatts.⁷ In addition, Amendment #2 would allow the
13 construction of underground and aboveground 34.5-kilovolt (kV) electrical collector lines, a
14 new substation and an aboveground 115-kV or 230-kV transmission line approximately 8.5
15 miles in length. The proposed Stateline 3 expansion would include construction of
16 approximately 21.5 miles of new access roads and improvement of approximately 9 miles of
17 existing farm roads.

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

26 Underground 34.5-kV collector cables would transmit the energy from the north
27 cluster of turbine strings to a substation in Washington. A combination of underground and
28 aboveground collector cables would transmit the energy from the center and south clusters to
29 a proposed new substation in Oregon. Altogether, Stateline 3 would include about 30.5 miles
30 of new underground collector cables and 17 miles of aboveground collector cables.⁸ The
31 substation would be located on a 2-acre site near the Vansycle project in Township 6N, Range
32 33E, Section 1. An aboveground 115-kV or 230-kV transmission line would connect the

⁶ Notwithstanding the definition in ORS 469.300, for the purpose of this amendment and as used in this order, “construction” means any work performed on the site regardless of cost but excluding surveying, exploration or other activities to define or characterize the site.

⁷ The totals shown assume construction of all turbines authorized under the amended site certificate. To date, FPL has constructed 126 of the authorized 127 Stateline 1 turbines and 55 of the authorized 60 Stateline 2 turbines.

⁸ To allow for flexibility in the construction of Stateline 3, the proposed collector system includes both northerly and southerly aboveground 34.5-kV segments from proposed strings BG-A, BG-B and BG-C. This would allow transmission of the output from those strings either to the existing Nine Mile substation in Washington or to the proposed new North Star substation to the south. In a phased construction of Stateline 3, for example, the certificate holder could build the northern strings first, using the Nine Mile substation, without the immediate need to construct the proposed North Star substation and higher-voltage transmission line.

1 substation to transmission facilities in Washington. The length of the segment of the 115-kV
2 or 230-KV line within Oregon would be about 8.5 miles.⁹

3 All of the Stateline 3 expansion would be located on privately-owned land. The
4 permanent structures¹⁰ would occupy approximately 75 acres. An additional area of
5 approximately 345 acres would be temporarily disturbed during construction.¹¹

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

12 In addition, the proposed amendment would extend the construction completion date
13 for the remaining five Stateline 2 turbines and related or supporting facilities from March 1,
14 2003, to March 1, 2005. FPL had intended to complete construction of Stateline 2 by
15 March 1, 2003, which is the construction completion deadline specified in the site certificate.
16 However, due in part to delays in finalizing a power purchase agreement and in fabrication
17 and delivery of the turbines and turbine tower sections, FPL determined that construction
18 could not be completed before that deadline.

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

28 FPL proposes no change to the design or location of the turbines, and no other
29 circumstances have changed that would affect the Council's previous decision. The Council
30 has already fully considered the potential impacts from construction and operation of the 60
31 Stateline 2 wind turbines and has concluded that construction and operation of the turbines
32 would comply with all Council standards.¹³

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

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

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

¹² Turbine tower height for the Stateline 3 turbines is identical to the existing Stateline turbines.

¹³ Final Order on Amendment #1.

1 **1. Changes to the Site Certificate as Proposed by FPL**

2 In the revised request for Amendment #2, FPL proposed the following amendments to
3 the site certificate.¹⁴ Additions are double-underlined and deletions have a strikethrough.

4 *At page 1, lines 7-16:*

5 The findings of fact, reasoning and conclusions of law underlying the terms
6 and conditions of this site certificate are set forth in the following documents,
7 incorporated herein by this reference: (a) the Council’s Final Order in the Matter of
8 the Application for a Site Certificate for the Stateline Wind Project (~~“final~~
9 ~~order”~~)(“Final Order on the Application”), issued on September 14, 2001; ~~and~~ (b) the
10 Council’s Final Order in the Matter of the Request for Amendment #1 of the Site
11 Certificate for the Stateline Wind Project (“Final Order on Amendment #1”);
12 ~~[Amendment #1]; and (c) the Council’s Final Order in the Matter of the Request for~~
13 ~~Amendment #2 of the Site Certificate for the Stateline Wind Project (“Final Order on~~
14 ~~Amendment #2”).~~ [Amendment #1 and #2]

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

21 *At page 1, lines 28-34:*

22 3. This site certificate does not address, and is not binding with respect to,
23 matters that were not addressed in the Council’s ~~final order, or the Final Order on~~
24 ~~Amendment #1~~. Final Order on the Application and Amendments #1 and #2. These
25 matters include, but are not limited to: building code compliance, wage, hour and
26 other labor regulations, local government fees and charges and other design or
27 operational issues (like where our contractors get their water for construction) that do
28 not relate to siting the facility (ORS 469.401(4)) and permits issued under statutes and
29 rules for which the decision on compliance has been delegated by the federal
30 government to a state agency other than the Council. 469.503(3). ~~[Amendment #1]~~
31 [Amendment #1 and #2]

32 *At page 2, lines 25-40:*

33 **1. The Facility**

34 (a) Major Structures

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

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

¹⁴ Where it applies, the proposed language from the Request for Addendum to Pending Request for Amendment #2 is shown instead of language from the Request for Amendment #2.

- 1 ▪ Stateline 2: 60 Vestas V47-660-kilowatt (kW) wind turbines with a total
2 nominal electric generating capacity of 39.6 MW (60 turbines, each with a
3 capacity of 0.66 MW) as described further in the Final Order on
4 Amendment #1.
- 5 ▪ Stateline 3: 279 Vestas V47-660-kilowatt (kW) wind turbines with a total a
6 nominal electric generating capacity of 184 MW (279 turbines, each with a
7 capacity of 0.66 MW), a substation (called North Star), and an 8.5 mile
8 115-kV transmission line as described further in the Final Order on
9 Revised Amendment #2.

10 Each wind turbine is connected to the next by a 34.5-kilovolt (kV) collector system.
11 The wind turbines are grouped in “strings” of 4 to 37 turbines, each turbine spaced
12 approximately 250 feet from the next, generally slightly downwind of the crest of
13 ridges. ~~Underground 34.5 kV cables connected to a substation in Washington collect~~
14 ~~the electrical output of each Oregon turbine string.~~ Major facility structures are further
15 as described in the final order, ~~and in the Final Order on Amendment #1.~~ ~~[Amendment~~
16 ~~#1] and in the Final Order on Revised Amendment #2. [Amendment #2]~~

17 *At page 3, lines 1-7:*

18 (b) Related or Supporting Facilities

19 The facility includes the following related or supporting facilities:

- 20 ▪ Access roads to reach each turbine for construction and maintenance
- 21 ▪ Underground and overhead collector cables linking each turbine to the
22 others in its string and ultimately to the substations in Washington and
23 Oregon
- 24 ▪ Meteorological towers
- 25 ▪ ~~A satellite operations and maintenance building~~

26 *At page 3, lines 8-15:*

27 Access Roads

28 County roads that extend south from Highway 12 in Washington (e.g., Hatch Grade
29 Road and Butler Grade Road) and north from Oregon Highway 11 (e.g., Vansycle
30 Canyon Road and Butler Grade Road) are the primary routes of access to the facility
31 site. From the county roads, a web of private farm roads provides access to most of
32 the ridges upon which the facility is located. Additional access roads are located along
33 the length of each turbine string and connecting each turbine string to the next.
34 Access roads are further as described in the final order, and in the Final Order on
35 Amendment #1. ~~[Amendment #1], and in the Final Order on Amendment #2. [Amendment~~
36 ~~#2]~~

37 *At page 3, lines 16-26:*

38 Collector System

39 The proposed wind turbines generate power at 690 volts. A transformer adjacent to
40 each tower transform the power to 34.5-kV. From there, ~~power is transmitted via~~
41 underground 34.5-kV cables connected to a substation in Washington collect the

1 electrical output of each Oregon turbine string from Stateline 1 and 2 and from the
2 northern strings in Stateline 3. Electrical output from the central and southern strings
3 in Stateline 3 is collected by primarily underground and some aboveground 34.5-kV
4 cables connected to a substation in Oregon. The underground 34.5-kV electric cables
5 are buried directly in the soil approximately 3 to 4 feet below the ground surface.
6 ~~power is transmitted via underground 34.5 kV electric cables buried directly in the soil~~
7 ~~approximately 3 to 4 feet below the ground surface. In some cases, trenches run from~~
8 ~~the end of one turbine string to the end of an adjacent turbine string to link the turbines~~
9 ~~via the underground network. There are no aboveground 34.5 kV transmission lines~~
10 ~~in Oregon. The underground collector system links the facility's turbines to a~~
11 ~~substation located in Washington. Overhead transmission lines, located in entirely~~
12 ~~within Washington, connect the Stateline 1, 2 and 3 electrical output between the~~
13 ~~Washington substation to a and the BPA transmission network 115-kV transmission~~
14 ~~line north of the Walla Walla River and to a PacifiCorp substation just north of~~
15 ~~Highway 12. The electrical output flowing through the Oregon substation is~~
16 ~~transmitted over a 8.5 mile 115-kV line running from the Oregon substation to the~~
17 ~~BPA transmission network in Washington. The 115-kV line is attached to H-frame~~
18 ~~wooden pole structures. The collector system is further as described in the final order,~~
19 ~~and in the Final Order on Amendment #1. [Amendment #1], and in the Final Order on~~
20 ~~Amendment #2. [Amendment #2]~~

21 *At page 3, lines 27-30:*

22 Meteorological Towers

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

27 *At page 3, lines 31-35:*

28 Satellite O&M Building

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

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

34 **2. Location of the Proposed Facility**

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

41 *At page 11, lines 27-38:*

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

- 1 (a) Design, construct and operate a facility consisting of:
2 (i) Stateline 1: Not more than 127 Vestas V47-660-kilowatt (kW) wind
3 turbines (App B-2, Table B-3)
4 (ii) Stateline 2: 60 Vestas V47-660-kW wind turbines [Amendment #1]
5 (iii) Stateline 3: Not more than 279 Vestas V47-660-kW wind turbines
6 [Amendment #2]

7 ***

8 (e) Paint all towers, except those close to the Vansycle Project, uniformly in
9 a neutral light gray color (App B-5). Towers close to the Vansycle Project shall be
10 painted in a neutral white color to blend in with the color of the towers in the Vansycle
11 Project. [Amendment #2]
12

13 *At page 12, lines 10-18:*

14 (41) If the certificate holder elects to use a bond to meet the requirements of
15 Conditions (43), (80), ~~or (102) or (107)~~, the certificate holder shall assure that the
16 surety is obligated to comply with the requirements of applicable statutes, Council
17 rules and this site certificate when the surety exercises any legal or contractual right it
18 may have to assume construction, operation or retirement of the energy facility. The
19 certificate holder shall also assure that the surety is obligated to notify the Council that
20 it is exercising such rights and to obtain any Council approvals required by applicable
21 statutes, Council rules and this site certificate before the surety commences any
22 activity to complete construction, operate or retire the energy facility. [Amendment
23 #1][Amendment #2]

24 *At page 22, lines 11-19*

25 1. General Conditions

26 (97) The certificate holder shall begin construction of Stateline 2 within six
27 months after the effective date of the First Amended Site Certificate. The certificate
28 holder shall complete construction of Stateline 2 before March 1, 2005~~March 1, 2003~~.
29 Under OAR 345-027-0070, an amended site certificate is effective upon execution by
30 the Council Chair and the applicant. Completion of construction occurs upon the date
31 commercial operation of the facility begins. The Council may grant an extension of
32 the construction beginning or completion deadlines in accordance with OAR 345-027-
33 0030 or any successor rule in effect at the time the request for extension is submitted.
34 [Amendment #2]

35 *At page 23, lines 3-14*

36 2. Conditions That Must Be Met Before Construction Begins

37 (101) The Certificate holder shall not engage in construction activities,
38 including the movement of heavy trucks and equipment within a ¼ - mile buffer
39 around an identified ferruginous hawk nest tree during the nesting season from (March
40 20~~March 1~~ to August 15), except as provided in this condition. The certificate holder
41 shall use a protocol approved by the Oregon Department of Fish and Wildlife
42 (ODFW) to determine whether the nest is occupied. The certificate holder may begin
43 construction activities before August 15, 2002, if the nest is not occupied. If the nest is
44 occupied, the certificate holder shall use a protocol approved by ODFW to determine

1 when the young are fledged (independent of the core nest site). With the approval of
2 ODFW, the certificate holder may begin construction before August 15, 2002, if the
3 young are fledged. During the specified nesting season, the certificate holder may use
4 the road into the site with vehicles that are one ton in capacity or smaller; conduct
5 turbine, turbine tower, blade or met tower construction activities that are not visible
6 above the horizon from the vantage point of the ferruginous hawk nest; and use the
7 road one time to transport heavy equipment off the site.” [Amendment #2]

8 *At page 24, following line 12:*

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

11 The conditions listed in this section include conditions based on
12 representations in the request for Amendment #2 and supporting record. The Council
13 deems these representations to be binding commitments made by the applicant. These
14 conditions are required under OAR 345-027-0020(10). These conditions apply to
15 Stateline 3.

16 In addition to the conditions listed in this section, all conditions in sections IV,
17 V and VI also apply to Stateline 3, except Conditions (11), (15), (19), (24), (27), (39),
18 (42), (43), (53), (54), (55), (56), (66), (80), (97), (101), (102), (104) and (105).

19 **1. General Conditions**

20 (106) The certificate holder shall begin construction of Stateline 3 within
21 twenty-four months after the effective date of the Second Amended Site Certificate.
22 The certificate holder shall complete construction of Stateline 3 before December 31,
23 2005. Under OAR 345-027-0070, an amended site certificate is effective upon
24 execution by the Council Chair and the applicant. Completion of construction occurs
25 upon the date commercial operation of the facility begins. The Council may grant an
26 extension of the construction beginning or completion deadlines in accordance with
27 OAR 345-027-0030 or any successor rule in effect at the time the request for
28 extension is submitted.

29 **2. Conditions That Must Be Met Before Construction Begins**

30 (107) In addition to the requirements of Conditions (80) and (102), the
31 certificate holder shall submit to the State of Oregon through the Council a bond or
32 letter of credit in the amount of \$3,033,347 (in 2002 dollars) naming the State of
33 Oregon, acting by and through the Council, as beneficiary or payee. However, the
34 Council authorizes the Office of Energy staff to proportionately reduce the amount in
35 the event less than 279 turbines are constructed using the same methodology and
36 formulas per turbine approved in the Amended Final Order #2. In lieu of submitting a
37 separate bond or letter of credit in the amount required under this condition, the
38 certificate holder may submit a bond or letter of credit that includes the amount
39 required under this condition and the amount required under Conditions (80) and
40 (102).

41 (a) The calculation of 2002 dollars shall be made using the U.S. Gross
42 Domestic Product Implicit Price Deflator as published by the U. S. Department of
43 Commerce, Bureau of Economic Analysis, or any successor agency (the “Index”).

1 The amount of the bond or letter of credit account shall increase annually by the
2 percentage increase in the Index and shall be pro-rated within the year to the date
3 of retirement. If at any time the Index is no longer published, the Council shall
4 select a comparable calculation of 2002 dollars.

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

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

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

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

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

18 **3. Conditions That Apply During Construction**

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

23 *At page 24, line 13:*

24 **VII. VIII. SUCCESSORS AND ASSIGNS**

25 *At page 24, line 16:*

26 **VIII. IX. SEVERABILITY AND CONSTRUCTION**

27 If any provision of this agreement and certificate is declared by a court to be
28 illegal or in conflict with any law, the validity of the remaining terms and conditions
29 shall not be affected, and the rights and obligations of the parties shall be construed
30 and enforced as if the agreement and certificate did not contain the particular provision
31 held to be invalid. In the event of a conflict between the conditions contained in the
32 site certificate and the Council's final order, ~~or~~ the Final Order on Amendment #1, or
33 the Final Order on Amendment #2, the conditions contained in this site certificate
34 shall control. ~~[Amendment #1]~~[Amendment #2]

35 *At page 24, line 24:*

36 **IX. X. GOVERNING LAW AND FORUM**

37 *At page 25, line 1:*

38 **X. XI. EXECUTION**

39 **2. Changes to the Site Certificate Approved Under This Order**

40 The the Council approves the amendment request in principle. However, the changes
41 to the site certificate as proposed by FPL do not address all site certificate modifications made

1 necessary by the proposed expansion of the Stateline facility. In addition, the Council adopts
2 editorial changes that conform to the style of the site certificate, as recommended by the
3 Office. The Council approves amendment of the site certificate as described in this section.

4 *At page 1, lines 7-16:*

5 The findings of fact, reasoning and conclusions of law underlying the terms and
6 conditions of this site certificate are set forth in the following documents, incorporated
7 herein by this reference: (a) the Council's Final Order in the Matter of the Application
8 for a Site Certificate for the Stateline Wind Project ("~~final order~~Final Order on the
9 Application"), issued on September 14, 2001; ~~and~~, (b) the Council's Final Order in the
10 Matter of the Request for Amendment #1 of the Site Certificate for the Stateline Wind
11 Project ("Final Order on Amendment #1") and (c) the Council's Final Order in the
12 Matter of the Request for Amendment #2 of the Site Certificate for the Stateline Wind
13 Project ("Final Order on Amendment #2"). [Amendments #1 and #2]

14 In interpreting this site certificate, any ambiguity will be clarified by reference to the
15 following, in order of priority: this Second Amended Site Certificate, the Final Order
16 on Amendment #2, this First Amended Site Certificate, the Final Order on
17 Amendment #1, the ~~final order issued on September 14, 2001~~Final Order on the
18 Application, and the record of the proceedings that led to the ~~final order and the Final~~
19 Orders on the Application and Amendments #1 and #2. [Amendments #1 and #2]

20 *At page 1, lines 28-34:*

21 3. This site certificate does not address, and is not binding with respect to, matters that
22 were not addressed in the Council's ~~final order or the Final Orders on the~~
23 Application and Amendments #1 and #2. These matters include, but are not limited
24 to: building code compliance, wage, hour and other labor regulations, local
25 government fees and charges and other design or operational issues that do not
26 relate to siting the facility (ORS 469.401(4)) and permits issued under statutes and
27 rules for which the decision on compliance has been delegated by the federal
28 government to a state agency other than the Council. 469.503(3). [Amendments #1 and
29 #2]

30 *At page 2, lines 25-40:*

31 **1. The Facility**

32 (a) Major Structures

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

- 34 • **Stateline 1:** No more than 127 Vestas V47-660-kilowatt (KW)kW wind
35 turbines authorized for construction, of which 126 were built, having a total
36 a nominal electric generating capacity of 83.2 megawatts (MW) (126
37 turbines, each with a capacity of 0.66 MW) as described further in the ~~final~~
38 orderFinal Order on the Application.
- 39 • **Stateline 2:** No more than 60 Vestas V47-660-kilowatt (KW)kW wind
40 turbines with a total a nominal electric generating capacity of 39.6 MW (60
41 turbines, each with a capacity of 0.66 MW) as described further in the Final
42 Order on Amendment #1.

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

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

12 *At page 3, lines 1-7:*

13 (b) Related or Supporting Facilities

14 The facility includes the following related or supporting facilities:

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

23 *At page 3, lines 8-15:*

24 Access Roads

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

33 *At page 3, lines 16-26:*

34 Collector System, Substation and Transmission Line

35 The proposed wind turbines generate power at 690 volts. A transformer adjacent to
36 each tower transforms the power to 34.5 kV. ~~From there, the turbines in Range 32 E,~~
37 ~~power is transmitted via underground 34.5-kV electric cables buried directly in the soil~~
38 ~~approximately 3 to 4 feet below the ground surface to a substation in Washington.~~ In
39 some cases, trenches run from the end of one turbine string to the end of an adjacent
40 turbine string to link the turbines via the underground network. ~~There are no~~ From
41 most of the turbines in Range 33 E, aboveground 34.5-kV transmission lines ~~in~~
42 Oregon transmit power to a substation in Township 6 N, Range 33 E, Section 1

1 (tentatively called “North Star Substation”). The underground collector system links
2 the facility’s turbines to a substation located in Washington. Overhead transmission
3 lines, located entirely within Washington, connect the Washington substation to a
4 BPA 115-kV transmission line north of the Walla Walla River and to a PacifiCorp
5 substation just north of Highway 12. An 8.5-mile aboveground 115-kV or 230-kV
6 transmission line connects the North Star Substation to existing major transmission
7 lines in Washington. The collector system is further as described in the final order and
8 in the Final Orders on the Application and Amendments #1 and #2. [Amendments #1 and
9 #2]

10 *At page 3, lines 27-30:*

11 Meteorological Towers

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

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

17 **2. Location of the Proposed Facility**

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

23 *At page 5, lines 1-2:*

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

26 *At page 11, lines 27-44:*

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

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

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

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

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

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

37 ***

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

41 ***

42 (g) Use only the minimum lighting on its turbine strings required by the
43 Federal Aviation Administration, except:

1 (i) ~~that~~ The satellite operations and maintenance building may have a
2 small amount of low-impact exterior lighting for security purposes (App BB-
3 2);

4 (ii) Low-impact lighting may be used for occasional nighttime repairs,
5 operations or maintenance at the substation (at other times this lighting would
6 be turned off). [Amendment #2]

7 At page 12, lines 10-18:

8 (41) If the certificate holder elects to use a bond to meet the requirements of
9 Conditions (43), (80)-~~or~~, (102), or (109), the certificate holder shall ~~assure~~ensure
10 that the surety is obligated to comply with the requirements of applicable statutes,
11 Council rules and this site certificate when the surety exercises any legal or
12 contractual right it may have to assume construction, operation or retirement of
13 the energy facility. The certificate holder shall also assure that the surety is
14 obligated to notify the Council that it is exercising such rights and to obtain any
15 Council approvals required by applicable statutes, Council rules and this site
16 certificate before the surety commences any activity to complete construction,
17 operate or retire the energy facility. [Amendments #1 and #2]

18 At page 12, line 25-33:

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

22 (a) The calculation of 2001 dollars shall be made using the U.S. Gross
23 Domestic Product Implicit Price Deflator, Chain-Weight, ~~as published by the~~
24 ~~U.S. Department of Commerce, Bureau of Economic Analysis, in the Oregon~~
25 ~~Department of Administrative Services' "Oregon Economic and Revenue~~
26 Forecast, or by any successor agency (the "Index"). The amount of the bond or
27 letter of credit account shall increase annually by the percentage increase in the
28 Index and shall be pro-rated within the year to the date of retirement. If at any
29 time the Index is no longer published, the Council shall select a comparable
30 calculation of 2001 dollars. [Amendment #2]

31 ***

32 At page 14, lines 20-25:

33 (52) The certificate holder shall design the facility to avoid or minimize adverse
34 impacts to wildlife by measures including but not limited to the following (App P-
35 41):

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

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

39 (c) Avoiding the use of overhead collector lines, except in Stateline 3 areas
40 where limitations in carrying capacity of underground lines make the use of
41 overhead collector lines unavoidable [Amendment #2]

42 At page 14, lines 26-38:

43 (53) The certificate holder shall survey the status of known Swainson's ~~and~~
44 ~~ferruginous-hawk~~ nests within the vicinity of proposed construction before the

1 projected date for construction to begin. If active nests are found, and construction
2 is scheduled to begin before the end of the sensitive nesting and breeding season
3 (~~mid April to mid August~~June 1 to August 31), the certificate holder shall
4 develop a no-construction buffer in consultation with ODFW and shall not engage
5 in construction activities within the buffer until the sensitive season has ended. If
6 construction continues into the sensitive nesting and breeding season for the
7 following year, the certificate holder shall not engage in construction activities
8 within the buffer around active nests until the sensitive season has ended.
9 [Amendment #2]

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

16 *At page 15, lines 1-6:*

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

30 *At page 18, lines 1-5:*

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

39 *At page 22, lines 12-19:*

40 (97) The certificate holder shall begin construction of Stateline 2 within six months
41 after the effective date of the First Amended Site Certificate. The certificate
42 holder shall complete construction of Stateline 2 before March 1, ~~2003~~2005.
43 Under OAR 345-027-0070, an amended site certificate is effective upon
44 execution by the Council Chair and the applicant. Completion of construction

1 occurs upon the date commercial operation of the facility begins. The Council
2 may grant an extension of the construction beginning or completion deadlines in
3 accordance with OAR 345-027-0030 or any successor rule in effect at the time the
4 request for extension is submitted. [Amendment #2]

5 *At page 23, lines 4-13:*

6 (101) The certificate holder shall not engage in construction activities for Stateline 2
7 facilities, including the movement of heavy trucks and equipment, within a ¼-
8 mile buffer around an identified ferruginous hawk nest tree during the sensitive
9 period of the nesting season (March 1-20 to August 15), except as provided in this
10 condition. The certificate holder shall use a protocol approved by the Oregon
11 Department of Fish and Wildlife (ODFW) to determine whether the nest is
12 occupied. The certificate holder may begin construction activities before August
13 15, 2002, if the nest is not occupied. If the nest is occupied, the certificate holder
14 shall use a protocol approved by ODFW to determine when the young are fledged
15 (independent of the core nest site). With the approval of ODFW, the certificate
16 holder may begin construction before August 15, 2002, if the young are fledged.
17 During the specified nesting season, the certificate holder may use the road into
18 the site with vehicles that are one ton in capacity or smaller; conduct turbine,
19 turbine tower, blade or met tower construction activities that are not visible above
20 the horizon from the vantage point of the ferruginous hawk nest; and use the road
21 one time to transport heavy equipment off the site. [Amendment #2]

22 *At page 23, lines 14-26:*

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

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

39 ***

40 *At page 24, following line 12:*

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

43 The conditions listed in this section include conditions based on representations in the
44 request for Amendment #2 and supporting record. The Council deems these

1 representations to be binding commitments made by the applicant. These conditions
2 are required under OAR 345-027-0020(10). These conditions apply to Stateline 3.

3 In addition to the conditions listed in this section, all conditions in sections IV, V and
4 VI also apply to Stateline 3, except Conditions (11), (15), (19), (24), (42), (43), (66),
5 (67), (79), (80), (97), (101), (102), (104) and (105).

6 **1. General Conditions**

7 (106) The certificate holder shall begin construction of Stateline 3 within twenty-four
8 months after the effective date of the Second Amended Site Certificate. The
9 certificate holder shall complete construction of Stateline 3 before December 31,
10 2005. Under OAR 345-027-0070, an amended site certificate is effective upon
11 execution by the Council Chair and the applicant. Completion of construction
12 occurs upon the date commercial operation of the facility begins. The Council
13 may grant an extension of the construction beginning or completion deadlines in
14 accordance with OAR 345-027-0030 or any successor rule in effect at the time
15 the request for extension is submitted.

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

20 (108) The certificate holder shall take reasonable steps to reduce or manage human
21 exposure to electromagnetic fields, including but not limited to:

22 (a) Designing and operating the transmission lines so that maximum current
23 (amps per conductor) would not exceed the following levels: For 34.5-kV
24 underground lines, 343 amps; for 34.5-kV aboveground lines, 1,200 amps; for
25 115-kV transmission lines, 1,064 amps; and for 230-kV transmission lines, 535
26 amps.

27 (b) Providing to landowners a map of underground and overhead transmission
28 lines on their property and advising landowners of possible health risks.

29 **2. Conditions That Must Be Met Before Construction Begins**

30 (109) In addition to the requirements of Conditions (80) and (102), the certificate
31 holder shall submit to the State of Oregon through the Council a bond or letter of
32 credit in the amount of \$3,322,900 (in 2002 dollars) naming the State of Oregon,
33 acting by and through the Council, as beneficiary or payee. However, the Council
34 authorizes the Office of Energy staff to adjust the amount if the certificate holder
35 constructs fewer than 279 turbines. For calculating any such adjustments, the
36 Office shall use the methodology and cost estimates approved in the Final Order
37 on Amendment #2. In lieu of submitting a separate bond or letter of credit in the
38 amount required under this condition, the certificate holder may submit a bond or
39 letter of credit that includes the amount required under this condition and the
40 amount required under Conditions (80) and (102).

41 (a) The calculation of 2002 dollars shall be made using the U.S. Gross
42 Domestic Product Implicit Price Deflator, Chain-Weight, as published in the
43 Oregon Department of Administrative Services' "Oregon Economic and

1 Revenue Forecast,” or by any successor agency (the “Index”). The amount of the
2 bond or letter of credit account shall increase annually by the percentage increase
3 in the Index and shall be pro-rated within the year to the date of retirement. If at
4 any time the Index is no longer published, the Council shall select a comparable
5 calculation of 2002 dollars.

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

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

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

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

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

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

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

27 3. Conditions That Apply During Construction

28 (112) To mitigate for the Stateline 3 impacts to Category 2, 3 and 5 habitat, the
29 certificate holder shall control weeds and enhance habitat on 35 contiguous acres
30 of weed-infested land in the project vicinity. The certificate holder shall carry out
31 enhancement activities as described for habitat improvement areas in the
32 Revegetation Plan included in the final order as Attachment B and as revised
33 from time to time. The certificate holder shall acquire the legal right to create and
34 maintain the enhancement area for the life of the facility by means of an outright
35 purchase, conservation easement or similar conveyance and shall provide a copy
36 of the documentation to the Office of Energy. The certificate holder shall
37 determine the location of this habitat enhancement area in consultation with
38 ODFW and landowners.

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

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

43 (b) Attach the 34.5-kV aboveground collector lines to single-pole wood
44 structures that are typically 42 feet high and with minimum design ground

1 clearance of 25 feet to the lowest conductor as described in the Request for
2 Amendment #2.

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

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

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

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

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

17 (115) To protect raptors, the certificate holder shall design structures for aboveground
18 34.5-kV, 115-kV and 230-kV transmission lines so that electrical conductors are
19 spaced far enough apart to reduce the risk of bird electrocution.

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

29 (117) The certificate holder shall not engage in construction activities for Stateline 3
30 facilities, including the movement of heavy trucks and equipment, within a ¼-
31 mile buffer around known ferruginous hawk nests during the sensitive period of
32 the nesting season from (March 20 to August 15), except as provided in this
33 condition. The certificate holder shall use a protocol approved by the Oregon
34 Department of Fish and Wildlife (ODFW) to determine whether the nest is
35 occupied. The certificate holder may begin construction activities before August
36 15, if the nest is not occupied. If the nest is occupied, the certificate holder shall
37 use a protocol approved by ODFW to determine when the young are fledged
38 (independent of the core nest site). With the approval of ODFW, the certificate
39 holder may begin construction before August 15, if the young are fledged.

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

44 **4. Conditions That Must Be Met During Operation**

1 (119) The certificate holder shall perform frequent maintenance to keep the substation
2 transformer in good repair and in reliable operating condition.

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

9 *At page 24, line 13:*

10 **VIII. SUCCESSORS AND ASSIGNS**

11 *At page 24, line 16:*

12 **IX. SEVERABILITY AND CONSTRUCTION**

13 *At page 24, line 24:*

14 **~~IX.~~ X. GOVERNING LAW AND FORUM**

15 *At page 25, line 1:*

16 **~~X.~~ XI. EXECUTION**

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

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

24 For the requested extension of the construction completion deadline for Stateline 2,
25 OAR 345-027-0070(9) requires the Council to consider: (a) whether the Council has
26 previously granted an extension of the deadline, (b) whether there has been any change of
27 circumstances that affects a previous Council finding that was required for issuance of a site
28 certificate or amended site certificate, and (c) whether the facility complies with all Council
29 standards.¹⁵ The Council may not extend the construction completion deadline for Stateline 2
30 more than two years from the deadline in effect before the amendment (OAR 345-027-
31 0030(4)).

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

¹⁵ OAR 345-027-0070(9) provides an exception to the requirement of considering compliance with all Council standards. However, as discussed herein, the Stateline 2 facility would comply with all Council standards and there is no need to consider the exception criteria.

1 relating to employee health and safety, building code compliance, wage or hour or other labor
2 regulations, or local government fees and charges (ORS 469.401(4)). Some of these non-
3 siting regulations are listed in section VI.2(b). The Council may consider these programs in
4 the context of its own standards to ensure public health and safety, resource efficiency and
5 protection of the environment as discussed below.

6 **1. General Standard of Review**

7 **OAR 345-022-0000**

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

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

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

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

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

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

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

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

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

40 *(b) As used in this rule "overall public benefits" means the public benefits that*
41 *the Council finds are likely to result from construction and operation of the*

1 proposed facility at the proposed site. The Council shall consider factors
2 including, but not limited to, the following in making this finding:

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

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

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

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

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

14 ***

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

19 2. Standards about the Applicant

20 (a) Organizational Expertise

21 OAR 345-022-0010:

22 (1) To issue a site certificate, the Council must find that the applicant has the
23 organizational expertise to construct, operate and retire the proposed facility in
24 compliance with Council standards and conditions of the site certificate. To
25 conclude that the applicant has this expertise, the Council must find that the
26 applicant has demonstrated the ability to design, construct and operate the
27 proposed facility in compliance with site certificate conditions and in a manner
28 that protects public health and safety and has demonstrated the ability to restore
29 the site to a useful, non-hazardous condition. The Council may consider the
30 applicant's experience, the applicant's access to technical expertise and the
31 applicant's past performance in constructing, operating and retiring other
32 facilities, including, but not limited to, the number and severity of regulatory
33 citations issued to the applicant.

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

38 (3) If the applicant does not itself obtain a state or local government permit or
39 approval for which the Council would ordinarily determine compliance but
40 instead relies on a permit or approval issued to a third party, the Council, to issue

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

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

13 Findings of Fact

14 Applicant's Expertise (Sections 1 and 2)

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

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

25 In the request for Amendment #2, FPL states that neither FPL nor FPL Energy has had
26 any regulatory citations to report.¹⁶ In constructing and operating the proposed Stateline 3
27 expansion, FPL would continue to have access to the resources, expertise and personnel of
28 FPL Energy (Condition (28)). FPL proposes to use the same prime contractors for Stateline 3
29 as it used for construction of Stateline 1 and 2 (Condition (46)).

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

31 Third-Party Permits (Sections 3 and 4)

32 In the request for Amendment #2, FPL estimates that up to 17 million gallons of water
33 would be required during construction of Stateline 3.¹⁷ The City of Helix will be able to
34 provide a maximum of 10 million gallons under its water right permit (G-5150).¹⁸ Because
35 this water is available and may be used for industrial use under an existing water right, no
36 further action or approval from the Department of Water Resources is required. However,
37 FPL will need up to 7 million gallons of water in addition to the water available from the City
38 of Helix.

¹⁶ OAR 345-021-0010(1)(d) requires reporting of any regulatory citations in constructing or operating a facility, type of equipment or process similar to the proposed facility.

¹⁷ Request for Amendment #2, page 23.

¹⁸ Request for Amendment #2, Exhibit 3.

1 FPL applied to the Washington Department of Ecology and received authorization for
2 short-term water use.¹⁹ Under the authorization, FPL may use groundwater from a well on
3 private property in Washington, subject to conditions, for construction activities and dust-
4 suppression in Oregon. The authorization expires December 31, 2003. FPL would apply for a
5 new short-term authorization if construction were not completed by that date. The maximum
6 daily use must not exceed 120,000 gallons and total volume used must not exceed 10.2
7 million gallons. This water source would be secondary to the water available from the City of
8 Helix.

9 FPL implies that the need for water during construction is “a construction contractor
10 supply issue, no different than gravel, concrete, gasoline and paint.”²⁰ However, unlike other
11 construction-related permits that are not under Council jurisdiction according to ORS
12 469.401(4), the water requirements of a proposed energy facility may have an impact on
13 availability of water for other purposes in the area. The Council’s Public Services Standard
14 specifically addresses the potential impact of an energy facility on water supply within the
15 analysis area (see ORS 469.501(1)(k)). Thus, a proposed facility’s access to water is a siting
16 issue.

17 Stateline 2

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

22 Conclusions of Law

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

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

¹⁹ Letter, dated January 28, 2003, from Bill Neve, Regional Watermaster, Washington Department of Ecology.

²⁰ Request for Amendment #2, page 22, footnote 11.

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

1 (b) Retirement and Financial Assurance

2 **OAR 345-022-0050:**

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

4 *(1) The site, taking into account mitigation, can be restored adequately to a useful,*
5 *non-hazardous condition following permanent cessation of construction or*
6 *operation of the facility.*

7 *(2) The applicant has a reasonable likelihood of obtaining a bond or letter of*
8 *credit in a form and amount satisfactory to the Council to restore the site to a*
9 *useful, non-hazardous condition.*

10 Findings of Fact

11 Retirement

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

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

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

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

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

²² Because of the low probability of soil contamination, we have not included an additional cost for site remediation in the estimate of site restoration costs below.

1 (62)). These cables could be abandoned in place without causing a hazard to agricultural uses
2 or other allowed uses of the land (Condition (4)). Gravel would be removed from areas
3 surrounding turbine pads. After removal of the structures, soils would be restored and the area
4 would be graded as close as reasonably possible to its original contours. Revegetation would
5 include reseeding with native plant seed mixes or agricultural crops, as appropriate, and
6 would be consistent with a weed control plan approved by the county.

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

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

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

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

24 Estimated Cost of Site Restoration

25 OAR 345-022-0050(2) addresses the possibility that the certificate holder is unable or
26 unwilling to restore the site if the certificate holder permanently ceases construction or
27 operation of the facility at any time. A bond or letter of credit provides a site restoration
28 remedy to protect the State of Oregon and its citizens if the certificate holder fails to perform
29 its obligation to restore the site under any circumstances. To provide a fund that is adequate
30 for the State of Oregon to pay site restoration costs if the certificate holder fails to perform its
31 obligation, the Council assumes circumstances under which the restoration cost would be
32 greatest.

33 In the Final Order on the Application, the Council found that \$1,459,000 (2001
34 dollars) was a reasonable estimate of the cost to restore the Stateline 1 site to a useful, non-
35 hazardous condition. Condition (43) of the site certificate required the certificate holder to
36 submit to the State of Oregon a bond or letter of credit in that amount before beginning
37 construction. Condition (80) allowed the certificate holder to reduce the bond or letter of
38 credit to \$1,161,120 (2001 dollars) after completing restoration of areas temporarily disturbed
39 during construction. The Council based the financial assurance amounts for Stateline 1 on the
40 following estimated costs, which the Council found to be reasonable for restoring the areas of
41 permanent disturbance²³: \$5,800 per turbine for turbine demolition, foundation removal, and

²³ Areas occupied by turbines, turbine pads, met towers and access roads.

1 grading and reseeded; \$3,200 per acre for access road removal and regrading (but not
2 including reseeded); and \$500 per acre for reseeded areas disturbed by equipment operation
3 in the course of the turbine pad demolition and road removal.²⁴

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

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

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

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

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

37 Blattner estimated that dismantling the substation would cost \$117,000. However,
38 Blattner assumed a salvage value for the substation equipment \$100,000, for a net cost of
39 \$17,000. In response to the Office of Energy's request for further information, FPL presented

²⁴ All costs are in 2001 dollars.

²⁵ Request for Amendment #2, Exhibit 4. On January 30, 2003, FPL provided a revised estimate from Blattner, in response to the Office of Energy's request for additional information. FPL provided a further revised estimate on March 17, 2003.

1 evidence from its transformer specialist, Joe Chau, that the current price of substation
2 transformers is \$850,000 for a 115-kV transformer and \$950,000 for a 230-kV transformer.²⁶
3 Chau noted FPL practice to maintain transformers on a more frequent basis than is the
4 practice in other industries. Chau estimated a salvage value of 30 percent of initial cost after
5 20 years of service. FPL also presented further evidence from Blattner.²⁷ Blattner assumed the
6 initial cost of the transformer (voltage unspecified) to be \$1,000,000. Blattner estimated the
7 resale value would be 12 percent (years of service unspecified) or \$120,000, although Blattner
8 noted: “the future market is very unpredictable.” Blattner further assumed a cost of \$20,000
9 for reconditioning and relocation, and thus the net salvage value would be \$100,000.

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

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

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

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

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

²⁶ Anne Walsh, e-mail dated March 17, 2003.

²⁷ Curt Thelen, Associate Estimator, D.H. Blattner and Sons, Inc., letter dated February 28, 2003.

²⁸ Provided on January 30, 2003, in response to the Office of Energy’s request for additional information

²⁹ Area of permanent disturbance, excluding expansions of existing roads.

1 reseeded. It is reasonable to assume that regrading and reseeded these areas would have
 2 similar per-acre cost as regrading and reseeded removed road areas (\$718 pre acre).

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

Cost Estimate for Restoring Areas of Permanent Disturbance³¹

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

10 However, if site restoration were needed when construction was substantially
 11 complete but before the certificate holder had restored temporary laydown and staging areas,
 12 the cost of site restoration would include the cost of restoring 345 acres of temporarily
 13 disturbed area.³² The cost of regrading and reseeded temporarily disturbed areas would be
 14 similar to the cost of road regrading and reseeded (\$718 per acre). Assuming equipment
 15 operation would disturb an area equal to the area being restored, an additional 345 acres
 16 would need restoration.

Cost Estimate for Restoring Laydown and Staging Areas³¹

Temporary area regrading and reseeded @ \$718 per acre	345 acres	247,710
Regrading and reseeded area disturbed during restoration work @ \$718 per acre	345 acres	247,710
Subtotal temporary area restoration		\$ 495,420
Total short-term cost		\$3,322,877

³⁰ Condition (20) requires restoration of temporarily disturbed areas before operation begins.

³¹ All amounts are expressed in 2002 dollars.

³² Request for Amendment #2, Table 2.1.

1 In sum, the cost for restoring temporarily disturbed areas would be \$495,420, and the
2 total “short-term” estimated restoration cost for Stateline 3 would be \$3,322,877. Consistent
3 with the short-term estimates for Stateline 1 and 2, we have added no contingency, based on
4 the assumptions that the estimated costs are reasonable as of the date of issuance of an
5 amended site certificate and that restoration would occur within approximately two years.
6 Unlike the short-term estimates for Stateline 1 and 2, in this case the cost of restoring
7 temporarily disturbed areas is less than the 20-percent contingency applied to the long-term
8 estimate. Thus, the long-term estimate (\$3,392,948) is higher than the short-term estimate
9 (\$3,322,877).

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

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

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

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

30 In the Request for Amendment #2, FPL proposed to provide a letter of credit during
31 construction of Stateline 3 in the amount of \$3,033,347. After construction is complete and
32 the areas of temporary disturbance have been restored, FPL proposed to replace the
33 construction letter of credit with a long-term letter of credit in the amount of \$2,537,927.
34 However, these amounts can be treated as preliminary because they did not reflect subsequent
35 information provided to the Office of Energy. In the Request for Amendment #2, FPL
36 included a letter from SunTrust Banks, Inc., dated October 18, 2002, stating that the bank
37 would “reasonably be likely to issue” letters of credit “in an aggregate amount at any one time
38 outstanding” not to exceed \$4.4 million. SunTrust Banks, Inc, is a well-known, creditworthy
39 financial institution.³³ This amount exceeds both the short-term and long-term financial

³³ Dave Stevens, Senior Loan Officer with the Office of Energy’s loan program, reviewed the financial ratings of SunTrust Banks, Inc., in July 2002 and advised that it would be an acceptable institution for issuing a letter of credit.

1 assurance amounts discussed above. Currently, FPL has submitted to the State of Oregon a
2 letter of credit in the amount required by the First Amended Site Certificate.³⁴

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

11 Stateline 2

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

17 Conclusions of Law

18 The Council finds that the Stateline 3 site, taking into account mitigation, can be
19 restored adequately to a useful, non-hazardous condition following permanent cessation of
20 construction or operation of the facility. The Council finds that \$3,322,900 (in 2002 dollars) is
21 the appropriate financial assurance amount during construction of Stateline 3. The Council
22 further finds that \$3,392,900 (in 2002 dollars) is the appropriate financial assurance amount
23 during the life of the Stateline 3 facility after completion of construction. The Council
24 authorizes the Office of Energy to make adjustments to the value of the bond or letter of
25 credit, subject to the terms of Condition (109). The Council further finds that the certificate
26 holder, subject to the conditions stated in this order, has demonstrated a reasonable likelihood
27 of obtaining a bond or letter of credit, satisfactory to the Council, in an amount adequate to
28 restore the site to a useful, non-hazardous condition. Conditions (4), (15), (19), (41), (43),
29 (62), (80), (98), (102), (109) and (119) relate to these findings. The Council concludes that the
30 certificate holder has met the Retirement and Financial Assurance Standard for Stateline 3.

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

35 **3. Standards about Impacts of Construction and Operation**

36 (a) Land Use

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

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

1 **OAR 345-022-0030**

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

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

6 ***

7 *(b) The applicant elects to obtain a Council determination under ORS*
8 *469.504(1)(b) and the Council determines that:*

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

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

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

21 *(3) As used in this rule, the "applicable substantive criteria" are criteria from the*
22 *affected local government's acknowledged comprehensive plan and land use*
23 *ordinances that are required by the statewide planning goals and that are in effect*
24 *on the date the applicant submits the application. If the special advisory group*
25 *recommends applicable substantive criteria, as described under OAR 345-021-*
26 *0050, the Council shall apply them. If the special advisory group does not*
27 *recommend applicable substantive criteria, the Council shall decide either to make*
28 *its own determination of the applicable substantive criteria and apply them or to*
29 *evaluate the proposed facility against the statewide planning goals.*

30 *(4) The Council may find goal compliance for a proposed facility that does not*
31 *otherwise comply with one or more statewide planning goals by taking an*
32 *exception to the applicable goal. Notwithstanding the requirements of ORS*
33 *197.732, the statewide planning goal pertaining to the exception process or any*
34 *rules of the Land Conservation and Development Commission pertaining to the*
35 *exception process, the Council may take an exception to a goal if the Council*
36 *finds:*

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

39 *(b) The land subject to the exception is irrevocably committed as described by*
40 *the rules of the Land Conservation and Development Commission to uses not*
41 *allowed by the applicable goal because existing adjacent uses and other relevant*
42 *factors make uses allowed by the applicable goal impracticable; or*

1 (c) *The following standards are met:*

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

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

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

10 ***

11 Findings of Fact

12 The proposed Stateline 3 facilities would lie entirely on privately-owned land zoned
13 for Exclusive Farm Use (EFU) within the land use jurisdiction of Umatilla County. The
14 Council applies the Umatilla County land use ordinances in effect on November 15, 2002, the
15 date FPL submitted its revised Request for Amendment #2.³⁵ The land use ordinances in
16 effect then were the same land use ordinances that the Council applied in making land use
17 findings in the Final Order on the Application.³⁶

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

24 The Umatilla County Board of Commissioners found the proposed Stateline 3 to be
25 "consistent with all applicable county land use standards, including those found in the
26 Comprehensive Plan and the Development Ordinance."³⁷ The Commissioners relied on the
27 County Planning Department's Staff Findings and Conclusions, dated December 12, 2002
28 ("Findings"). The Commissioners based their conclusion, in part, on a list of recommended
29 conditions.

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

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

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

³⁷ Letter from the Commissioners, December 18, 2002.

1 Umatilla County Development Code

2 UCDC Section 152.060 – Conditional Uses Permitted

3 In its Findings, the County identified the proposed Stateline 3 as a “commercial utility
4 facility.” Under UCDC § 152.060(F), “commercial utility facilities for the purpose of
5 generating power for public use by sale” are a conditional use in Umatilla County’s EFU
6 zone.³⁸ UCDC § 152.060 makes conditional uses subject to “applicable supplementary
7 regulations in §§ 152.010 through 152.016 and §§ 152.545 through 152.562, and §§ 152.610
8 through 152.616.”³⁹ Further, the ordinance requires a zoning permit, pursuant to § 152.025,
9 following the approval of a conditional use permit.⁴⁰

10 UCDC § 152.611 gives the County the authority to impose conditions to “protect the
11 best interests of the surrounding area or the county as a whole.” Umatilla County has
12 recommended conditions for the proposed Stateline 3, and the substance of those
13 recommendations is incorporated in the conditions that are a part of this order.⁴¹

14 UCDC Section 152.061 – Limitations on Conditional Uses

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

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

20 This section addresses compatibility with “farm use,” which is defined in ORS
21 215.203(2) as “the current employment of land for the primary purpose of obtaining a profit
22 in money by raising, harvesting and selling crops or the feeding, breeding, management and
23 sale of, or the produce of, livestock, poultry, fur-bearing animals or honeybees or for dairying
24 and the sale of dairy products or any other agricultural or horticultural use or animal
25 husbandry or any combination thereof.” This section also addresses compatibility of the
26 proposed use with the “intent and purpose set forth in ORS 215.243.” The referenced statute

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

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

⁴⁰ See page 44 for a discussion of § 152.025.

⁴¹ The County has acknowledged that the site certificate conditions address and accommodate all of the recommended conditions (Dennis Olson, e-mail, dated March 11, 2003).

1 sets forth Oregon's agricultural land use policy, which states, in part: "The preservation of a
2 maximum amount of the limited supply of agricultural land is necessary to the conservation of
3 the state's economic resources and the preservation of such land in large blocks is necessary
4 in maintaining the agricultural economy of the state...."

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

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

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

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

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

⁴³ Letter, dated June 2002, from Robert Cannon of Sandy Cove Ranches, Inc., owner of one of the properties on

1 FPL states that the leases with the landowners require FPL to make reasonable efforts
2 not to disturb farming and ranching activities on the facility site. The leases also preclude FPL
3 from holding the landowners responsible for any damage to the facilities caused by the
4 landowners' livestock.⁴⁴ The leases protect landowners from any increases in property taxes
5 associated with the construction or operation of the facility.⁴⁵

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

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

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

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

34 Under ORS 215.203(2)(c), "accepted farming practice" means a mode of operation
35 that is common to farms of a similar nature, necessary for the operation of such farms to
36 obtain a profit in money and customarily utilized in conjunction with farm use. Stateline 3
37 would have little or no impact on customary farm operations or the cost of accepted farm
38 practices on adjacent lands.⁴⁷ During construction, the project might cause temporary impacts

which the Stateline 3 facilities would be built (Request for Amendment #2, Exhibit 7).

⁴⁴ Request for Amendment #2, pages 34 - 35.

⁴⁵ Request for Amendment #2, page 34.

⁴⁶ Findings, page 5.

⁴⁷ As stated above, the leases with the affected landowners require FPL to make reasonable efforts not to disturb farming and ranching activities on the facility site. The leases protect the landowners from any increases in

1 to farming due to an increase in construction-related traffic. Once operational, however,
2 Stateline 3 would generate little traffic and would not limit access to the affected parcels at
3 any time of year. The location of facility structures might require changes to cropping patterns
4 in the immediate vicinity of the turbine strings, access roads, met towers and support
5 structures for aboveground transmission lines. However, operation of Stateline 3 would cause
6 no impacts on adjacent lands that would significantly interfere with or increase the cost of
7 farm practices on surrounding lands.

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

13 In its Findings, the Umatilla County Planning Department found that Stateline 3
14 would not materially alter the overall land use pattern of the area and that the area would
15 remain in farm use.⁴⁸ We considered the cumulative effect of the proposed expansion
16 facilities along with the existing Stateline and Vansycle Ridge facilities.⁴⁹ As discussed
17 above, the construction and operation of Stateline 3 would be compatible with farming
18 activities, which are the primary use of the land in the area of the proposed facility site.
19 Stateline 3 would create no new lots, parcels or non-farm dwellings to the detriment of
20 agriculture in the area. It would not alter the parcel size or primary use of the property on
21 which the facilities would be located or on other properties in the area.

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

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

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

property taxes associated with the construction or operation of the facility.

⁴⁸ Findings, page 6.

⁴⁹ A letter from the affected landowner states that the Vansycle facility does not significantly hinder farm operations (Site Certificate Application, Attachment K-4).

⁵⁰ See discussion of UCDC § 152.061(A) above.

⁵¹ See the Site Certificate Application, Attachment K-8. See also the discussion of UCDC § 152.061(A) above.

1 Order on the Application, the Council found those leases provided adequate protection for
2 normal farming practices.

3 **UCDC Section 152.615 – Additional Restrictions**

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

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

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

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

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

21 This provision does not apply to the proposed expansion.

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

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

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

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

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

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

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

35 Stateline 3 would not require new parking or loading areas, except at the proposed
36 substation. The two-acre substation site would include a parking area.

1 (G) Limiting or otherwise designating the number, size, location, height and
2 lighting of signs;

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

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

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

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

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

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

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

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

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

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

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

1 UCDC Section 152.616 – Standards for Review of Conditional Uses

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

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

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

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

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

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

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

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

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

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

⁵² See discussion of the Council’s Scenic and Aesthetic Values Standard at page 60.

⁵³ Findings, page 6.

⁵⁴ See discussion of the Council’s Recreation Standard at page 64.

⁵⁵ Request for Amendment #2, page 87.

⁵⁶ See discussion of the Council’s Scenic and Aesthetic Values Standard at page 60.

1 (4) Facility does not constitute an unnecessary fire hazard and consideration be
2 made of minimum fire safety measures if located in a forested area, which can
3 include but are not limited to:

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

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

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

8 In its Findings, the Umatilla County Planning Department found that Stateline 3
9 would not constitute an unnecessary fire hazard.⁵⁷ The proposed expansion is not located in a
10 forested area. The towers and pads would be constructed of fire retardant materials and the
11 turbines would have built-in fire prevention measures (Condition (103)). The proposed
12 substation would be in a remote location, enclosed by a security fence. The substation site
13 would be surfaced with crushed rock and maintained free of litter and debris (Condition (86)).
14 One fire hazard posed by the aboveground transmission lines is the potential for insulator
15 failure or damage by gunshot causing a conductor to drop to the ground. However, line
16 insulators rarely fail, and the 115-kV or 230-kV transmission line would have
17 fiberglass/polymer insulators, which are more resistant to gunshot than porcelain insulators.⁵⁸
18 The certificate holder would not store combustible materials at the facility (Condition (31))
19 and would use only a small amount of combustible material during construction and
20 operation. The certificate holder would implement fire response and prevention measures
21 related to staff training, equipment and coordination with local fire departments (Conditions
22 (34), (58) and (96)). The Helix and Milton-Freewater Rural Fire Protection Districts serve the
23 Stateline 3 area. FPL has confirmed with the fire chiefs of both districts that the construction
24 and operation of Stateline 3 would not constitute a fire hazard. The Milton-Freewater Rural
25 Fire Protection District has also confirmed that it would be able to provide service to the
26 entire Stateline 3 project if necessary.⁵⁹

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

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

⁵⁷ Findings, page 6.

⁵⁸ The aboveground 34.5-kV transmission line insulators would be porcelain. However, because the insulators on these lines would hold the conductors above the crossarm of the support structure, there is a lower fire risk compared to the higher-voltage lines. Damage to an insulator would most often cause the conductor to drop to the crossarm rather than to the ground.

⁵⁹ E-mail from Milton Freewater Fire Chief, dated June 10, 2002 (Request for Amendment #2, Exhibit 7).

1 be respread, and the areas would be revegetated. Areas used for staging, laydown and
2 turnaround areas or disturbed during road construction would be scarified and revegetated.
3 Roads and turbine pads would be covered with gravel immediately upon exposure, thereby
4 limiting wind or water erosion. See Conditions (20), (44), (60), (61), (62) and (68).

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

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

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

11 This criterion is not applicable because Stateline 3 would not affect acreage governed
12 by Oregon Department of Forestry regulations. We address protection of fish and wildlife
13 resources below in the discussion of the Council's Fish and Wildlife Habitat Standard at page
14 75 and Threatened and Endangered Species Standard at page 71.

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

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

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

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

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

33 In its Findings, the Umatilla County Planning Department recommended conditions
34 for Stateline 3, and the substance of those recommendations is incorporated in the conditions
35 that are a part of this order.

1 UCDC Section 152.063 – Development Standards

2 UCDC § 152.063 contains dimensional and development standards applicable in an
3 EFU zone.⁶⁰ Subsections (A) through (C) of the ordinance establish setback requirements
4 from streets, property lines, county roads, public roads, state highways and public or private
5 access easements. Stateline 3 complies with these setback requirements to the extent that they
6 apply. Subsection (D) addresses the distance of a dwelling from aggregate mining operations
7 and does not apply. Stream setback requirements in subsection (E) do not apply because
8 Stateline 3 would not require sewage disposal installations or construction of structures,
9 buildings or similar permanent fixtures along streams.⁶¹

10 Subsection (F) requires compliance with regulations found in §§ 152.010 through
11 152.016, §§ 152.545 through 152.562 and §§ 152.570 through 152.577. With the exception of
12 UCDC § 152.015 (fences), the regulations in §§ 152.010 through 152.016 do not apply to the
13 proposed facility because they address uses that are not part of Stateline 3. UCDC § 152.015
14 requires that fences meet all Oregon Uniform Building Code requirements. As required by
15 Condition (2), the certificate holder must comply with all applicable laws and regulations,
16 including building codes (see page 111). UCDC §§ 152.545 through 152.548 address sign
17 regulations. Any signs erected at site would be signs required by law or for operation and
18 safety (Condition (37)). With respect to the parking and loading requirements of UCDC §
19 152.560 through 152.562, the graveled turbine pads would provide sufficient parking along
20 the turbine strings, and the substation area would include a parking area. No other parking or
21 loading areas are needed. The exceptions described in UCDC §§ 152.570 through 152.577 do
22 not apply to Stateline 3 because they address uses that are not part of the proposed facility.

23 UCDC Section 152.025 – Zoning Permit

24 UCDC § 152.025 addresses the need for a zoning permit⁶²:

25 *(A) Prior to the construction, reconstruction, addition to or change in use of a*
26 *structure, or the change in use of a lot or the installation or replacement of a*
27 *mobile home on a lot, a zoning permit shall be obtained from the County Planning*
28 *Department. Within the flood hazard area, a zoning permit shall be required for*
29 *all other developments including placement of fill, mining, paving, excavation or*
30 *drilling. Structures of 120 square feet or less in area and structures described in*
31 *§ 152.026 [farm uses] do not require a zoning permit except when located in a*
32 *designated flood hazard area. A zoning permit shall be voided after one year*
33 *unless construction has commenced. The Planning Commission or its authorized*
34 *agent may extend the permit for an additional period not to exceed one year upon*
35 *written request.*

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

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

⁶² The County did not include Section 152.025 in its statement of the applicable substantive criteria (see Final Order on Application at page 20). However, we include the section because of a cross-reference to it in § 152.060, one of the identified applicable substantive criteria.

1 (B) Zoning permits shall be issued by the Director according to the provisions of
2 this chapter. The Planning Director shall not issue a zoning permit for the
3 improvement or use of land that has been previously divided or otherwise
4 developed in violation of this chapter, regardless of whether the applicant created
5 the violation, unless the violation can be rectified as part of the development.

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

10 Umatilla County Comprehensive Plan

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

14 Energy Conservation Element – Policy 1

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

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

21 Agricultural Plan Element – Policy 8

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

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

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

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

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

⁶³ Dennis Olson, e-mail, dated March 6, 2003.

⁶⁴ In addition, Umatilla County has issued a conditional use permit for the construction of the “Combine Hills Turbine Ranch,” a wind energy facility proposed by Eurus Oregon Wind Power Development, LLC. The Combine Hills project would consist of up to 104 wind turbines in the general vicinity of Stateline 3.

1 (b) It is the position of the County that the Comprehensive Plan designations and
2 zoning already limit scenic and aesthetic conflicts by limiting land uses or by
3 mitigating conflicts through ordinance criteria. However, to address any specific,
4 potential conflicts, the County shall insure special consideration of the following
5 when reviewing a proposed change of land use:

6 1. *Maintaining natural vegetation whenever possible.*

7 The certificate holder would minimize the areas of disturbance during construction of
8 Stateline 3 to the extent possible. Temporarily disturbed areas would be re-vegetated upon
9 completion of construction. The certificate holder would comply with measures to prevent
10 soil erosion and noxious weed species from taking hold in disturbed areas. See Conditions
11 (20), (30), (44), (60), (61), (62), (68) and (82).

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

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

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

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

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

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

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

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

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

35 As has been discussed above, Stateline 3 would be compatible with development in
36 the surrounding area (farm use). It would retain the open landscape and, to the extent possible,
37 recognize the natural characteristics of the location.

1 7. *Limiting excavation and filling only to those areas where alteration of the*
2 *natural terrain is necessary and revegetating such areas as soon as*
3 *possible.*

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

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

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

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

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

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

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

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

1 Directly Applicable State Provisions⁶⁵

2 Goal 3

3 Umatilla County has not amended its land use regulations to implement amended
4 LCDC rules related to Goal 3 and ORS 215.283. Specifically, the directly applicable LCDC
5 rules are OAR 660-033-0120, 660-033-0130 and 660-012-0065.⁶⁶ The Council must
6 determine whether Stateline 3 complies with these provisions.

7 ORS 215.283 identifies the non-farm uses permitted on EFU-zoned land. Each part of
8 the proposed Stateline 3 expansion must fit within the scope of a use described in ORS
9 215.283(1), (2) or (3). The Stateline 3 expansion includes the energy facility (wind turbines)
10 and its related or supporting facilities (met towers, collector cables, 115-kV or 230-kV
11 transmission line, substation and access roads).

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

16 For example, the Legislature has created a use category for “commercial utility
17 facilities for the purpose of generating power for public use by sale” in ORS 215.283(2)(g).
18 The parts of Stateline 3 that would generate power for public sale are the wind turbines
19 (collectively, the “energy facility”). The energy facility fits within this use category. Thus,
20 ORS 215.283(2)(g) authorizes the energy facility to be located on EFU-zoned land.⁶⁷

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

27 In *Dierking v. Clackamas County*, 38 Or LUBA 106, *affirmed* 170 Or App 683, 688
28 (2000), the Court of Appeals addressed the question whether a component facility should be
29 characterized as a part of the principal use. The Court held that a component should be
30 considered part of the principal use if it (1) was essential to the functioning of the use and (2)
31 had no independent utility. We have applied the *Dierking* test to the Stateline 3 related or
32 supporting facilities to determine whether those components that do not fall within a specific
33 use category may nevertheless be treated as part of the principal use.

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

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

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

1 Substation

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

10 115-kV or 230-kV Transmission Line

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

15 Access Roads

16 ORS 215.283(3) authorizes certain roads that are not otherwise allowed under ORS
17 215.283(1) or (2).⁶⁸ ORS 215.283(3) provides as follows:

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

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

24 *(b) ORS 215.296 for those uses identified by rule of the Land Conservation and*
25 *Development Commission as provided in section 3, chapter 529, Oregon Laws*
26 *1993.*

27 This provision allows public or private roads on EFU lands, subject to the provisions
28 of subsection (a) or (b), as applicable. The Stateline 3 access roads appear to be uses
29 identified by LCDC rule and therefore specifically allowed under subsection (b).⁶⁹ As such,
30 these roads are subject to ORS 215.296. ORS 215.296(1) provides for approval of the use
31 only if the use will not:

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

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

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

⁶⁹ The Council made a similar finding in the Final Order on Amendment #1, page 34.

1 These requirements are substantially similar to the criteria in UCDC § 152.061(B),
2 which we have discussed above at page 37. For the reasons explained in that discussion, the
3 proposed access roads for Stateline 3 would satisfy ORS 215.296.

4 Collector Cables

5 The collector cables could be allowed under ORS 215.283(1)(d) as a “utility facility
6 necessary for public service.”⁷⁰ However, in the context of a wind energy facility, it is
7 reasonable to treat the collector cables as a part of the principal use. The collector cables are
8 necessary for getting the power from the turbines to the “curb” for transmission to the grid.
9 They are necessary for the operation of the facility. They have no utility independent from the
10 operation of the turbines for generating power for public sale. Accordingly, it is reasonable to
11 characterize the collector cables as part of the energy facility under ORS 215.283(2)(g).

12 Met Towers

13 Similarly, we find that the met towers should be evaluated under ORS 215.283(2)(g)
14 as part of the principal use.⁷¹ The thirteen Stateline 3 met towers would occupy a total of
15 approximately 130 square feet and would be located near turbine strings. Although met
16 towers do not relate directly to the generation of power, they are necessary to the operation of
17 the energy facility and have no independent utility. The met towers would be used primarily
18 to verify turbine performance warranties by providing a measure of wind speed unaffected by
19 turbulence caused by the turbines themselves. They are a standard element of all wind
20 projects. The data from the met towers would be accessible only by the certificate holder. The
21 met towers would be removed upon retirement of the facility. Thus, it is reasonable to
22 characterize the met towers as being part of the principal use.⁷²

23 ORS 215.275

24 ORS 215.275 identifies the factors for deciding whether a utility facility is “necessary
25 for public service.” Under ORS 215.275, a utility facility is “necessary” if reasonable
26 alternatives have been considered and if the facility must be located on EFU land due to one
27 or more of the factors. As discussed above, subject to ORS 215.275, the substation and the
28 115-kV or 230-kV transmission lines are utility facilities “necessary for public service” within
29 the scope of ORS 215.283(1)(d). The substation and the 115-kV or 230-kV transmission lines
30 satisfy two of the factors: locational dependence and the lack of available urban and non-
31 resource lands (ORS 215.275(2)(b) and (2)(c)).

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

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

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

⁷² As with the collector cables, the met towers could also be allowed under ORS 215.283(1)(d) as a “utility facility necessary for public service.” If evaluated under ORS 215.283(1)(d), the met towers would satisfy ORS 215.275 for the same reasons described above with respect to the substation and 115-kV or 230-kV transmission line. To serve their intended purpose, met towers must be located in the immediate vicinity of the turbine strings, all of which are located on EFU-zoned land.

1 Stateline 3 turbines. This would take the power farther away from the proposed point of
2 interconnection to the main transmission grid in Washington to the north. Locating the
3 substation in Helix would be impractical because it would require transmitting power from the
4 turbines a long distance to the south by way of the collector cables, with resulting line losses.
5 Locating the substation in Helix would not only require substantially more collector cabling
6 (from turbines to substation), almost all of which would be on EFU land, but would also
7 require a longer 115-kV or 230-kV transmission line on EFU land. In short, practical
8 considerations make the substation locationally dependent, and there are no urban or non-
9 resource lands on which the substation could be located and still serve the project purpose.
10 Thus, there are no reasonable alternatives, and location of the substation on EFU land is
11 “necessary.” The substation is allowable on EFU land under ORS 215.283(1)(d).

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

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

32 LCDC Rules Applicable to the Principal Use

33 The principal use is the energy facility. As discussed above, we evaluate the met
34 towers and collector cables as part of the energy facility under the *Dierking* test.
35 ORS 215.283(2)(g) authorizes “commercial utility facilities for the purpose of generating
36 power for public use by sale” on agricultural land, subject to ORS 215.296. This section
37 discusses applicable LCDC rules. OAR 660-033-0120 (Table 1) lists the “commercial utility
38 facility” use as an “R” (“use may be approved, after required review”) and references the
39 minimum standards found in OAR 660-033-0130(5) and (22).⁷³

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

41 (5) Approval requires review by the governing body or its designate under ORS
42 215.296. Uses may be approved only where such uses:

⁷³ See the discussion of Table 1 in the Final Order on the Application at page 33.

1 (a) Will not force a significant change in accepted farm or forest practices on
2 surrounding lands devoted to farm or forest use; and

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

5 The identical standards appear in ORS 215.296. These standards are substantially
6 similar to the criteria in UCDC § 152.061(B), which we have discussed above at page 37. For
7 the reasons explained in that discussion, the principal use would meet the OAR 660-033-
8 0130(5) and ORS 215.296 standards.

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

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

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

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

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

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

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

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

1 LCDC Rule Applicable to Roads and Transportation Facilities

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

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

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

12 The Stateline 3 access roads are “transportation improvements” allowed under OAR
13 660-012-0065.⁷⁸ OAR 660-012-0065(3)(a) states that “accessory transportation improvements
14 for a use that is allowed or conditionally allowed by...ORS 215.283” are consistent with
15 Goal 3. The proposed access roads are, in this context, “accessory transportation
16 improvements” for the energy facility. This use is allowed by ORS 215.283(2)(g), as
17 described above. Therefore, the construction and improvement of access roads for Stateline 3
18 would not require an exception to Goal 3.

19 Goal 5

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

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

29 Under OAR 660-023-0030, local governments are obliged to inventory and determine
30 the significance of natural resource sites within their jurisdiction. Energy sources “applied for
31 or approved through the Oregon Energy Facility Siting Council” are automatically deemed
32 significant.⁷⁹ The local government is required to adopt a list of significant Goal 5 resources
33 as a part of its comprehensive plan or as a land use regulation.

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

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

⁷⁹ ORS 469.504(7) requires Umatilla County to comply with Goal 5 by amending its comprehensive plan and land use regulations to implement the Council’s decision with respect to Stateline on or before its next periodic review.

1 resources from potential conflicting uses.⁸⁰ The local government must base its Goal 5
2 program on “an analysis of the economic, social, environmental, and energy consequences
3 that could result from a decision to allow, limit, or prohibit a conflicting use.” However, this
4 analysis “need not be lengthy or complex.” Based on the analysis, the local government must
5 decide whether to allow, limit or prohibit conflicting uses for significant resource sites. The
6 local government is then required to adopt comprehensive plan provisions and land use
7 regulations to implement its Goal 5 program.

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

14 Stateline 2

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

19 Conclusions of Law

20 The Council finds that the proposed Stateline 3 facilities comply with applicable
21 substantive criteria and with the LCDC administrative rules and goals and land use statutes
22 directly applicable to the facility under ORS 197.646(3). The Council further finds that the
23 proposed Stateline 3 facilities comply with the statewide planning goals adopted by the Land
24 Conservation and Development Commission. Conditions (2), (20), (29), (30), (31), (33), (34),
25 (37), (38), (40), (44), (58), (60), (61), (62), (64), (65), (68), (72), (75), (76), (81), (82), (86),
26 (96) and (103) relate to these findings. Based on these findings, the Council concludes that the
27 proposed Stateline 3 facilities comply with the Land Use Standard.

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

32 (b) Soil Protection

33 **OAR 345-022-0022**

34 *To issue a site certificate, the Council must find that the design, construction and*
35 *operation of the facility, taking into account mitigation, are not likely to result in a*
36 *significant adverse impact to soils including, but not limited to, erosion and*

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

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

3 Findings of Fact

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

8 The Office reviewed the Soil Survey of Umatilla County⁸¹ and online soil maps⁸² to
9 verify the soil types in the area of the proposed expansion. The principal soil types are
10 Ritzville silt loam, Walla Walla silt loam and Lickskillet very stony loam. For Ritzville and
11 Walla Walla silt loam soils, the risk of water erosion is high on slopes greater than 12 percent.
12 Soil blowing hazard is moderate. Lickskillet very stony loam has a high water erosion hazard.

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

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

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

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

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

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

⁸¹ Johnson and Makinson, *Soil Survey of Umatilla County Area, Oregon*, USDA Soil Conservation Service (November 1988).

⁸² Natural Resources Conservation Service, Pacific Northwest Soil Survey Region (http://www.or.nrcs.usda.gov/soil/mo/mo_reports_or.htm)

⁸³ Request for Amendment #2, Tables 2.1, 3.1, 6a and 6b.

1 prime farmland. Ritzville and Walla Walla silt loams on slopes under 7 percent could qualify
2 as prime farmland when irrigated.

3 Stateline 2

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

8 Conclusions of Law

9 The Council finds that the design, construction and operation of the proposed Stateline
10 3 facilities, taking into account mitigation and subject to the conditions stated in this order, are
11 not likely to result in a significant adverse impact to soils. Conditions (29), (32), (60), (61),
12 (62), (68) and (92) relate to this finding. Based on this finding, the Council concludes that the
13 proposed Stateline 3 facilities comply with the Soil Protection Standard.

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

18 (c) Protected Areas

19 **OAR 345-022-0040**

20 *(1) Except as provided in sections (2) and (3), the Council shall not issue a site*
21 *certificate for a proposed facility located in the areas listed below. To issue a site*
22 *certificate for a proposed facility located outside the areas listed below, the*
23 *Council must find that, taking into account mitigation, the design, construction*
24 *and operation of the facility are not likely to result in significant adverse impact to*
25 *the areas listed below. Cross-references in this rule to federal or state statutes or*
26 *regulations are to the version of the statutes or regulations in effect as of March*
27 *29, 2002:*

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

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

33 *(c) Wilderness areas established pursuant to The Wilderness Act, 16 U.S.C.*
34 *1131 et seq. and areas recommended for designation as wilderness areas pursuant*
35 *to 43 U.S.C. 1782;*

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

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

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

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

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

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

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

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

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

21 (m) Agricultural experimental stations established by the College of
22 Agriculture, Oregon State University, including but not limited to:

23 Coastal Oregon Marine Experiment Station, Astoria

24 Mid-Columbia Agriculture Research and Extension Center, Hood River

25 Agriculture Research and Extension Center, Hermiston

26 Columbia Basin Agriculture Research Center, Pendleton

27 Columbia Basin Agriculture Research Center, Moro

28 North Willamette Research and Extension Center, Aurora

29 East Oregon Agriculture Research Center, Union

30 Malheur Experiment Station, Ontario

31 Eastern Oregon Agriculture Research Center, Burns

32 Eastern Oregon Agriculture Research Center, Squaw Butte

33 Central Oregon Experiment Station, Madras

34 Central Oregon Experiment Station, Powell Butte

35 Central Oregon Experiment Station, Redmond

36 Central Station, Corvallis

1 *Coastal Oregon Marine Experiment Station, Newport*

2 *Southern Oregon Experiment Station, Medford*

3 *Klamath Experiment Station, Klamath Falls;*

4 *(n) Research forests established by the College of Forestry, Oregon State*
5 *University, including but not limited to McDonald Forest, Paul M. Dunn Forest,*
6 *the Blodgett Tract in Columbia County, the Spaulding Tract in the Mary's Peak*
7 *area and the Marchel Tract;*

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

10 *(p) State wildlife areas and management areas identified in OAR chapter 635,*
11 *Division 8.*

12 ***

13 Findings of Fact

14 None of the proposed Stateline 3 facilities would be located within any protected area
15 designated under OAR 345-022-0040(1). The analysis area for Stateline 1 was the area within
16 20 miles from the site of Stateline 1 facilities. Stateline 2 extended the analysis area by
17 approximately 2 miles to the south. The proposed Stateline 3 facilities extend the analysis area
18 approximately 8 miles to the south and a half-mile to the northeast. Within the expanded
19 analysis area, there are no protected areas other than those the Council has already addressed
20 in the Final Orders on the Application and on Amendment #1, with the exception of the
21 Whitman Mission National Historic Site.⁸⁴ In those orders, the Council concluded that
22 construction and operation of Stateline 1 and 2 were not likely to cause significant adverse
23 impact to any protected area.

24 The nearest protected area, the Whitman Mission, is in Washington approximately 8.5
25 miles from the nearest proposed Stateline 3 turbine. The McNary National Wildlife Refuge in
26 Washington is approximately 12 miles from the nearest Stateline 3 turbines.⁸⁵ The nearest
27 potential protected area, the Wallula Habitat Management Unit, is about 5 miles from the
28 nearest Stateline 3 turbines. There are existing turbines (part of the Stateline project in
29 Washington) that are closer to each of these areas. The proposed Stateline 3 facilities are at a
30 greater distance than Stateline 1 turbines from other protected areas and potential protected
31 areas identified in the Final Order on the Application.⁸⁶

32 Noise

33 In previous orders, the Council has found that the anticipated noise from construction
34 and operation of Stateline 1 and 2 was not likely to cause a significant impact on protected
35 areas that are at least 5 miles away.⁸⁷ The proposed Stateline 3 turbines and other construction
36 areas are no closer to identified protected areas than the Stateline 1 and 2 facilities. The Office

⁸⁴ The Whitman Mission is administered by the National Park Service and receives the same protection as a National Park or Monument.

⁸⁵ Turbines in proposed strings HG-S and HG-T.

⁸⁶ Final Order on the Application, page 47.

⁸⁷ Final Order on the Application, page 47; Final Order on Amendment #1, page 40.

1 has received no complaints regarding noise from construction or operation of Stateline 1
2 and 2. Given the distance and intervening topography, noise from construction or operation of
3 Stateline 3 is likely to be inaudible at the nearest protected area. There would be no significant
4 noise impact on any protected area or potential future protected area.

5 Traffic

6 Two U.S. highways pass near protected areas. Highway 730, along the Columbia
7 River, passes near Hat Rock State Park and the Stateline Habitat Management Unit (a possible
8 future protected area). Highway 12 runs near the Whitman Mission, McNary National
9 Wildlife Refuge and three possible future protected areas (Two Rivers, Peninsula and Wallula
10 Habitat Management Units). Construction of Stateline 3 turbine strings HG-S and HG-T could
11 affect traffic on these highways. Construction access for these turbines would follow the
12 North Access Route.⁸⁸ Construction access for all other Stateline 3 facilities would be from
13 the south, along the West, Central and East Access Routes. Highways leading to these access
14 routes do not run near any of the identified protected areas.

15 Proposed turbine strings HG-S and HG-T account for 15 of the 279 Stateline 3
16 turbines. Traffic associated with construction of these turbine strings would be a small
17 fraction of the total construction traffic for Stateline 3. The level of traffic can be estimated
18 based on the analysis done for Stateline 1. In the Final Order on the Application, the Council
19 found that construction of the 127 proposed Stateline 1 turbines would generate 12,707
20 vehicle trips. Based on a compressed construction schedule of 96 days, the Council found that
21 construction would result in average daily traffic (ADT) of 133 vehicle trips. For Stateline 1,
22 the ADT was disbursed over three construction access (transporter) routes.⁸⁹ Assuming that
23 vehicle trips are in direct proportion to the number of turbines being built, construction of the
24 15 proposed HG-S and HG-T turbines would generate about 1,500 vehicle trips. Further
25 assuming a 96-day construction schedule for HG-S and HG-T, the estimated ADT associated
26 with construction of these turbines would be 16.⁹⁰

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

32 Visual Impact

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

⁸⁸ Request for Amendment, Figure 15. This route was identified as Transporter Route 5 in the site certificate application.

⁸⁹ Final Order on the Application, page 71.

⁹⁰ This assumes, conservatively, that construction of Stateline 3 would take place on a schedule similar to construction of Stateline 1. If construction of Stateline 3 takes longer, the ADT would be less.

1 Stateline 2

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

6 Conclusions of Law

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

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

17 (d) Scenic and Aesthetic Values

18 **OAR 345-022-0080**

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

25 ***

26 Findings of Fact

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

36 Visual Features of the Proposed Facility

37 The proposed Stateline 3 site occupies an overall area of approximately 30 square
38 miles. Within that area, 279 wind turbine towers and tower pad areas, approximately 30 miles
39 of new or improved access roads, a new substation and 25 miles of transmission line would
40 cover a total of about 75 acres of land surface. Turbines would be arrayed along natural ridges

1 within the expansion area. The turbine towers would be approximately 165 feet tall at the
 2 turbine hub and 242 feet tall overall including the length of the turbine blades. The towers
 3 would be smooth, tubular steel structures, approximately 14 feet in diameter at the base. The
 4 towers would be painted a neutral light gray color to match existing Stateline turbines west of
 5 Butler Grade Road. Towers east of Butler Grade Road would be painted a neutral white color
 6 to blend with the nearby Vansycle Wind Project. All turbine towers would be of the same type
 7 and appearance throughout the Stateline facility. In addition, thirteen 165-foot meteorological
 8 towers would be built. Lighting required by the Federal Aviation Administration (FAA)
 9 would make the facility visible at night.⁹¹

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

18 Land Use Planning Authorities

19 The analysis area for Stateline 1 was the area within 30 miles from the site of
 20 Stateline 1 facilities. Stateline 2 extended the analysis area by approximately 2 miles to the
 21 south. The proposed Stateline 3 facilities extend the analysis area approximately 8 miles to the
 22 south and a half-mile to the northeast. Within the extended analysis area, FPL considered the
 23 following managed areas⁹² for potential scenic values in addition to those identified during the
 24 review of Stateline 1 and 2:⁹³

Area	Management	Location
McKay Creek National Wildlife Refuge	Federal	Oregon
North Fork Umatilla Wilderness	Federal	Oregon
Wenaha-Tucannon Wilderness	Federal	Oregon
Juniper Dunes Wilderness	Federal	Washington
Charbonneau Park	Federal	Washington
Fishhook Park	Federal	Washington
Levey Park	Federal	Washington
Emigrant Springs State Park	State	Oregon
Morrow County	County	Oregon
Union County	County	Oregon
Wallowa County	County	Oregon
Columbia County	County	Washington
Prescott	City	Washington

⁹¹ At night, the required lights are red-colored, which reduces visual impact. The FAA requires white flashing lights in the daytime.

⁹² OAR 345-022-0080 requires consideration of “applicable federal land management plans,” which would include areas such as National Forests or National Wildlife Refuges, and “local land use plans,” which would include tribal lands, state lands, counties and incorporated cities in the analysis area.

⁹³ The findings under the Scenic and Aesthetic Values Standard as discussed in the Final Order on the Application, pages 60-62, are incorporated herein by this reference.

1 Cities

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

12 Counties

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

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

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

35 State Land Management Plans

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

⁹⁴ The other towns identified were Tollgate (OR), Duncan (OR), Meacham (OR) and Dixie (WA).

⁹⁵ As further evidence to support this conclusion, FPL cited USDA Forest Service, *Landscape Aesthetics, A Handbook for Scenery Management* (Agriculture Handbook 701). The Handbook defines “Background” as a distance ranging from 4 miles to the horizon. In this zone, the Handbook states that landform ridgelines and horizon lines are the dominant visual characteristic. FPL concludes: “At distances of this magnitude, the Facility would be a minor and a subordinate part of the visual environment.” (Request for Amendment #2, page 68).

1 park, the construction and operation of the Stateline 3 facilities would not be likely to result in
2 a significant adverse impact to the scenic value of the park.

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

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

14 Confederated Tribes of the Umatilla Indian Reservation

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

17 Federal Management Plans

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

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

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

31 FPL identified the Whitman Mission National Historic Site, approximately 10 miles
32 north of Stateline 3. However, no federal management plan identifies the Whitman Mission as
33 having any significant or important scenic values.⁹⁶ Some existing Vansycle Wind Project
34 turbines are visible and some Stateline 3 turbines might be visible from the site. However, at a
35 distance of 10 miles, the Stateline 3 turbines would be a minor element of the background and
36 would not result in significant adverse impact to the scenic value of the historic site.

37 Stateline 2

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

⁹⁶ FPL consulted the site supervisor and the site compliance officer for this information.

1 stated in that order. There has been no change of circumstances that affects the Council's
2 findings under this standard as stated in the Final Order on Amendment #1.

3 Conclusions of Law

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

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

15 (e) Recreation

16 **OAR 345-022-0100**

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

23 *(a) Any special designation or management of the location;*

24 *(b) The degree of demand;*

25 *(c) Outstanding or unusual qualities;*

26 *(d) Availability or rareness;*

27 *(e) Irreplaceability or irretrievability of the opportunity.*

28 ***

29 Findings of Fact

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

⁹⁷ The findings under the recreation standard as discussed in the Final Order on the Application, pages 65-66, are incorporated herein by this reference.

1 significant adverse impact to important recreational opportunities in the analysis area, taking
2 into consideration the factors listed in the Council's standard.

3 Stateline 2

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

8 Conclusions of Law

9 The Council finds that the design, construction and operation of the proposed Stateline
10 3 facilities, taking into account mitigation and subject to the conditions stated in this order, are
11 not likely to result in significant adverse impact to important recreational opportunities in the
12 analysis area. There are no conditions specifically related to this finding. However, other
13 conditions may serve to mitigate the impact of the facility on recreational opportunities (for
14 example, Condition (37) related to the Scenic and Aesthetic Values standard). The Council
15 concludes that the proposed Stateline 3 facilities comply with the Recreation Standard.

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

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

21 **OAR 345-024-0010**

22 ***

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

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

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

31 Findings of Fact

32 The proposed Stateline 3 turbines would be located on private property with limited
33 access to the public. The nearest occupied dwelling would be approximately 2,900 feet away
34 from any turbine. The design of the proposed Stateline 3 turbines is the same as the design of
35 the Stateline 1 and 2 turbines. In the Final Orders on the Application and Amendment #1, the
36 Council concluded that the proposed turbine design would exclude members of the public
37 from close proximity to the turbine blades and electrical equipment. The Council concluded

1 that the proposed design and operation of the facility would protect the public from structural
2 failure of the tower or blades.⁹⁸

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

11 Stateline 2

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

17 Conclusions of Law

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

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

33 (g) Siting Standards for Wind Energy Facilities

34 **OAR 345-024-0015**

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

⁹⁸ Council findings and conclusions regarding OAR 345-024-0010 as discussed in the Final Order on the Application (page 78) and in the Final Order on Amendment #1 (pages 51-52) are incorporated herein by this reference.

1 (1) Can design and construct the facility to reduce visual impact by methods
2 including, but not limited to:

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

5 (b) Using the minimum lighting necessary for safety and security purposes and
6 using techniques to prevent casting glare from the site, except as otherwise
7 required by the Federal Aviation Administration or the Oregon Department of
8 Transportation, Transportation Development Branch, Aeronautics Section; and

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

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

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

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

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

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

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

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

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

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

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

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

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

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

38 (B) Electrical equipment boxes on or near the ground that can provide
39 shelter and warmth; and

1 (C) *Horizontal perching opportunities on the towers or related structures.*

2 Findings of Fact

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

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

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

17 Electric transmission lines for Stateline 3 would include 30.5 miles of underground
18 34.5-kV collector lines and 17 miles of aboveground collector lines. Both underground and
19 aboveground lines would follow road rights-of-way as much as possible. An aboveground
20 collector line would carry the electric output from the turbines in the center and south turbine
21 string clusters to the proposed new substation. From the substation, an aboveground 115-kV
22 or 230-kV transmission line would carry the combined electrical output to the main power
23 grid by an interconnection with an existing transmission line in Washington. The 115-kV or
24 230-kV line would run 8.5 miles from the substation to the Washington border.

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

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

39 Stateline 2

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

1 Conclusions of Law

2 The Council finds that the certificate holder, taking into account mitigation and subject
3 to the conditions stated in this order, can design and construct the Stateline 3 facilities to
4 reduce visual impact, to restrict public access and to reduce cumulative adverse environmental
5 impacts in the vicinity to the extent practicable. Conditions (30), (37), (38), (44), (60), (61)
6 (64), (65), (103), (114) and (115) relate to these findings. The Council concludes that the
7 proposed Stateline 3 facilities comply with the Siting Standards for Wind Energy Facilities.

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

12 (h) Siting Standards for Transmission Lines

13 **OAR 345-024-0090**

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

16 (1) *Can design, construct and operate the proposed transmission line so that*
17 *alternating current electric fields do not exceed 9 kV per meter at one meter above*
18 *the ground surface in areas accessible to the public;*

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

22 Findings of Fact

23 This standard addresses electric fields and induced currents produced by electric
24 transmission lines. We discuss magnetic fields created around electrical conductors under
25 Public Health and Safety at page 108. Electric fields form around electrical conductors in
26 proportion to the voltage of the line. The proposed Stateline 3 facility would include about
27 30.5 miles of underground 34.5-kV transmission lines (collector lines) and 17 miles of
28 aboveground 34.5-kV collector lines. In addition, the facility would include an 8.5-mile
29 aboveground 115-kV or 230-kV transmission line from the proposed new substation to the
30 Washington border. The certificate holder would be required to design and construct the
31 transmission lines to meet the standards for electric fields and induced currents that are
32 incorporated in OAR 345-024-0090 (Condition (113)). The certificate holder would design
33 the transmission lines in compliance with applicable codes and standards after consultation
34 with the Oregon Public Utility Commission (Condition (110)).

35 The underground collector system would be installed at a depth of at least 3 feet in a
36 manner similar to the underground collector system for Stateline 1 and 2. In the Final Order
37 on the Application, the Council found the design and construction of the underground
38 collector system proposed for Stateline 1 would reduce any measurable electric field below
39 the 9 kV per meter threshold at one meter above ground and that induced currents would be

1 insignificant.⁹⁹ For the same reasons discussed in the Final Order on the Application, the
2 electric field produced by the underground 34.5-kV collector lines proposed for Stateline 3
3 would also meet the standards of OAR 345-024-0090.

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

13 The aboveground 115-kV or 230-kV line would be attached to H-frame wooden
14 structures that consist of two poles connected by cross-members (Condition (113)). The
15 typical overall height of the H-frame structures is 70 feet, and the minimum design ground
16 clearance would be 30 feet to the lowest conductor. Using the same model described above,
17 FPL estimated maximum electric field at one meter above ground for each option. As shown
18 in the table below, the electric field strength would be well below the standard of 9 kV per
19 meter under either option¹⁰¹:

OPTION	Voltage	Electric Field Strength (kV/m)		
		Left (100')	Centerline	Right (100')
1	115-kV	0.089	0.289	0.089
2	230-kV	0.259	1.188	0.259

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

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

31 Stateline 2

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

⁹⁹ The findings under the siting standards for transmission lines in the Final Order on the Application, pages 78-79, are incorporated herein by this reference.

¹⁰⁰ Request for Amendment #2, Exhibit 22.

¹⁰¹ Response to the Office of Energy's request (30) for additional information, February 20, 2003.

1 conditions stated in that order. There has been no change of circumstances that affects the
2 Council's findings under this standard as stated in the Final Order on Amendment #1.

3 Conclusions of Law

4 The Council finds that the certificate holder can design, construct and operate the
5 proposed underground and aboveground transmission system for Stateline 3 so that
6 alternating current electric fields do not exceed 9 kV per meter at one meter above the ground
7 surface in areas accessible to the public. The Council further finds that the certificate holder
8 can design, construct and operate the Stateline 3 transmission system so that induced currents
9 will be as low as reasonably achievable. These conclusions take into account mitigation and
10 are subject to the conditions stated in this order. Conditions (2), (6), (62), (110) and (113)
11 relate to these findings. The the Council concludes that the proposed Stateline 3 facilities
12 comply with the Siting Standards for Transmission Lines.

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

17 **4. Standards to Protect Wildlife**

18 (a) Threatened and Endangered Species

19 **OAR 345-022-0070**

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

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

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

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

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

1 Findings of Fact

2 Threatened and Endangered Species - Plants

3 The amendment request included a report on rare plant species in the Stateline 3 area
4 prepared by Eagle Cap Consulting.¹⁰² The Office of Energy received no comments from the
5 Oregon Department of Agriculture (ODA) regarding the certificate holder's amendment
6 request. There are no applicable protection and conservation programs adopted under ORS
7 564.105(3).

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

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

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

25 Threatened and Endangered Species - Wildlife

26 The amendment request included a wildlife investigation and habitat assessment report
27 performed by Karen Kronner, Northwest Wildlife Consultants, Inc.¹⁰³ In addition, the
28 amendment request included a baseline avian study for portions of the proposed Stateline 3
29 facility outside the boundary of the original study area for the Stateline Wind Project
30 (Stateline 1).¹⁰⁴ The Oregon Department of Fish and Wildlife (ODFW) has reviewed the
31 amendment request and has expressed no disagreement with the certificate holder's
32 assessment of the potential for occurrence of threatened and endangered species in the
33 Stateline 3 area.

34 Based on the analysis done for Stateline 1, there are only three threatened or
35 endangered wildlife species that might be affected by the Stateline facilities.¹⁰⁵ The
36 *Washington ground squirrel* is a state endangered and federal candidate species that occupies

¹⁰² Request for Amendment #2, Exhibit 25, *Rare Plant Investigation, Stateline Expansion Project*, Eagle Cap Consulting (August 26, 2002).

¹⁰³ Request for Amendment #2, Exhibit 12, *Pre-construction Wildlife Investigation, Stateline 3 Part A and Part B Wind Project*, Northwest Wildlife Consultants, Inc. (October 14, 2002).

¹⁰⁴ Request for Amendment #2, Exhibit 15, *Baseline and other Relevant Wildlife Data For Portions of Stateline 3 Wind Power Project*, WEST and Northwest Wildlife Consultants, Inc. (October 8, 2002).

¹⁰⁵ See further discussion in Application for Site Certificate (January 2001), Exhibit Q.

1 shrub-steppe habitat. The *bald eagle* is listed as threatened by both state and federal wildlife
2 agencies. Bald eagles nest in trees or on cliffs and occasionally forage on small mammals and
3 carrion in upland areas. The *peregrine falcon* is listed as endangered in Oregon but was
4 recently removed from the federal endangered species list.

5 Kronner's report addressed other federal candidate species and species of concern.
6 Investigation of potential impacts to these species is appropriate because of the possibility that
7 they might become federally listed as threatened or endangered in the future.¹⁰⁶ However, the
8 habitat in the Stateline 3 area is unsuitable for most of these species, and the Council's
9 Threatened and Endangered Species Standard does not apply to them.

10 Washington Ground Squirrel

11 The current range of the Washington ground squirrel (WGS) is reduced and
12 fragmented compared to the known, historic distribution. There are scattered small clusters of
13 use throughout the Stateline area in Oregon and Washington.¹⁰⁷ Parts of the proposed
14 Stateline 3 site contain grassland habitat suitable for the WGS. However, much of the
15 Stateline 3 area is cultivated land that does not support the species.

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

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

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

¹⁰⁶ Further discussion of federal candidate species and species of concern and their potential for occurrence in the Stateline 1 area is found in the Application for Site Certificate (January 2001), Exhibits P and Q. Potential for occurrence in the Stateline 3 area is the same, given the proximity and similar habitat, elevation and topography.

¹⁰⁷ See Request for Amendment #2, Exhibit 14, Figure 4 (Known WGS Sites in the Project Area).

1 The certificate holder would implement a plan to avoid or mitigate for impacts to
2 WGS habitat (Condition (107)).¹⁰⁸ Implementation of the plan would help ensure that the
3 Stateline 3 facility would not cause any significant reduction in the likelihood of survival of
4 the WGS. Based on the small area of direct impact on WGS habitat, the existence of the WGS
5 in other suitable habitat throughout the Stateline project area and the measures described in
6 the mitigation plan, the Council finds that the construction, operation and retirement of the
7 proposed Stateline 3 facilities are not likely to cause a significant reduction in the likelihood
8 of survival or recovery of the WGS.

9 Bald Eagle

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

21 Peregrine Falcon

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

35 Stateline 2

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

¹⁰⁸ We discuss the impact on Category 1 habitat and the Council's balancing authority below at page 84.

1 Conclusions of Law

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

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

13 (b) Fish and Wildlife Habitat

14 **OAR 345-022-0060**

15 *To issue a site certificate, the Council must find that the design, construction,*
16 *operation and retirement of the facility, taking into account mitigation, are*
17 *consistent with the fish and wildlife habitat mitigation goals and standards of OAR*
18 *635-415-0025 in effect as of September 1, 2000.*

19 Findings of Fact

20 Mitigation Goals and Standards

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

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

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

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

40 “Habitat Category 3” is essential habitat for fish and wildlife, or important habitat for
41 fish and wildlife that is limited on either a physiographic province or site-specific basis,

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

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

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

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

22 Stateline 3 Habitat and Potential Impacts

23 Temporary and Permanent Impacts from Construction and Operation

24 FPL contracted with an expert, Karen Kronner, of Northwest Wildlife Consultants,
25 Inc., to conduct a habitat assessment. Kronner had conducted earlier habitat assessments for
26 Stateline 1 and 2. Kronner conducted field surveys of the Stateline 3 area at various times in
27 the spring and summer of 2002. The results of the habitat assessment are included in a report
28 entitled “Pre-Construction Wildlife Investigation, Stateline 3 Part A and Part B Wind
29 Project.”¹⁰⁹

30 All of the proposed Stateline 3 facilities would be located on privately-owned land.
31 The permanent structures¹¹⁰ would occupy approximately 75 acres. Construction activities
32 would temporarily disturb an additional area of approximately 345 acres.¹¹¹ Figures 10 at
33 Exhibit 10 of the amendment request, incorporated here by reference, show the habitat
34 categories in the Stateline 3 area, as identified by FPL. ODFW has reviewed the amendment
35 request and has concurred with FPL’s classifications. The following table summarizes the
36 affected habitat:

¹⁰⁹ Request for Amendment #2, Exhibit 12.

¹¹⁰ Permanent structures include the turbine pads, met tower pads, transmission poles, substation, new and expanded access and turbine string roads and turn-around areas.

¹¹¹ Details of the areas permanently occupied and temporarily disturbed are shown in the Request to Amend Site Certificate, pages 8-13, Tables 2 and 3, incorporated herein by this reference.

Category	Vegetation Types	Acres of temporary disturbance ¹¹²	Acres of permanent impact ¹¹²
1	Grassland Steppe	7.7	4.6
2	Grassland Steppe; Riparian	41.5	10.2
3	Grassland Steppe; CRP ¹¹³	57.9	8.5
5	New CRP Seeded Grassland	46.7	5.9
6	Dry Agriculture; Developed	191.4	46
	Totals ¹¹⁴	345	75

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

9 The potential for proposed expansion of the Stateline Wind Project to affect
10 Category 1 habitat was first identified during the review of the site certificate application in
11 2001. At that time, FPL withdrew 27 turbines from the Council’s consideration after spring
12 wildlife surveys detected the presence of the WGS. Since then, FPL, the Office of Energy and
13 ODFW have had ongoing and extensive discussions about this issue. One outcome of these
14 discussions was specific ODFW guidance on the identification of Category 1 habitat. FPL has
15 applied that guidance in preparation of the Request for Amendment #2. FPL has more
16 precisely identified the extent of Category 1 habitat and has designed the proposed BG-B and
17 BG-C turbine strings to minimize direct impact on the habitat. FPL proposes to locate the
18 turbines and access roads in the shallow soil areas of the WGS use area. This would create
19 less of an impact to the core colony than construction in deeper soils where burrowing is
20 possible and more use occurs throughout active periods.

21 Near proposed string BG-E, habitat suitable for the WGS was plowed and reseeded in
22 2002 to meet new Conservation Reserve Program (CRP) standards. No squirrels were
23 observed during surveys conducted in April and May of 2002 at BG-E. However, one was
24 observed in January 2002 near proposed turbines 13 and 14. The old field supported a small
25 WGS colony in 2001, and a few scattered active holes were located in 2001 in native
26 bunchgrass outside of the CRP field. For mapping current Category 1 habitat, Kronner drew a
27 buffer around the active holes identified in 2001 to establish a use area. The soil is
28 predominantly shallow Licksillet stony loam with small patches of deeper soil. Most of the
29 17 proposed BG-E turbines would be located in this shallow rocky soil, in the newly planted
30 CRP or along and adjacent to an existing farm road. The certificate holder would avoid native
31 bunchgrass habitat to the west of BG-E because the area could function as connecting habitat
32 for WGS that return to the historic site or move through the area.

¹¹² Rounded to the nearest 0.1 acre.

¹¹³ Conservation Reserve Program

¹¹⁴ Rounded to the nearest acre.

¹¹⁵ OAR 636-100-0125 and table available from ODFW.

1 Raptor nesting sites are generally considered Category 1 habitat. Two sensitive status
2 raptors (Swainson's hawk and ferruginous hawk) nest within two miles of proposed Stateline
3 3 turbines. Based on surveys in 2002, there were two Swainson's hawk and three ferruginous
4 hawk nests within two miles. Among all raptor species, the closest nest site relative to a
5 proposed turbine is approximately 600 feet (great horned owl). Potential nest sites for long-
6 eared owl are within approximately 1,300 feet of GB-1. The closest red-tailed hawk nest is
7 approximately 1,100 feet from a proposed turbine, and the closest Swainson's hawk nest is
8 approximately 1,300 feet from a proposed turbine. The closest ferruginous hawk nest is
9 approximately 1,000 feet from the nearest proposed turbine.

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

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

20 Proposed Stateline 3 facilities would permanently occupy approximately 8.5 acres of
21 Category 3 habitat. In addition, approximately 58 acres of this habitat category would be
22 temporarily affected during construction. Grassland steppe is the predominant vegetation type
23 of the affected Category 3 habitat. However, temporary impact would affect almost 18 acres
24 of established CRP grassland, and the permanent footprint would occupy 3 acres of
25 established CRP. Category 3 habitat is considered "essential" for wildlife.¹¹⁶ The proposed
26 Stateline 3 facilities would not affect any Category 4 habitat, which is considered "important"
27 habitat for fish and wildlife species.

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

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

36 **Indirect Effects**

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

¹¹⁶ Category 2 and Category 3 grassland and CRP habitat in the Stateline area is important habitat for wildlife species including but not limited to grasshopper sparrow, savannah sparrow, vesper sparrow, short-eared owl, burrowing owl, northern harrier, horned lark, western meadowlark, long-billed curlew, ring-necked pheasant, Hungarian partridge, chukar partridge, California quail and Swainson's hawk.

1 indirect effects on essential or important wildlife habitat within the analysis area; that is,
2 effects on the quality of habitat identified within Categories 1, 2 and 3.

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

16 Impacts During Retirement

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

26 Mitigation

27 General Mitigation

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

34 Category 1

35 As described above, the proposed Stateline 3 would have a permanent impact on 4.6
36 acres of Category 1 habitat and a temporary impact during construction on an additional 7.7
37 acres of Category 1 habitat. Under the fish and wildlife habitat mitigation goals and standards
38 of OAR 635-415-0025, the "mitigation goal" for Category 1 habitat is no loss of either habitat
39 quantity or quality. This is achieved through avoidance of impacts. If impacts cannot be
40 avoided, then the goal cannot be achieved. Construction and operation of turbine strings BG-
41 B, BG-C and BG-E, as proposed in the amendment request, would be inconsistent with the
42 habitat mitigation goals and standards of OAR 635-415-0025 because of the direct permanent
43 and temporary impacts on Category 1 habitat.

1 Therefore, the Council concludes that the proposed Stateline 3 does not comply with
2 the Council's habitat standard. However, the Council may approve construction and operation
3 of Stateline 3 based on the Council's balancing authority under ORS 469.501(3). We discuss
4 the Council's balancing authority below at page 84.

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

16 Mitigation of Permanent Impacts

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

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

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

36 The certificate holder would improve habitat conditions on a 35-acre habitat
37 enhancement area (Condition (112)). The enhancement area would provide both "no net loss"
38 and "net benefit" mitigation for the permanent losses of Category 2, 3 and 5 habitat.¹¹⁷ This
39 enhancement area would be in one contiguous parcel. The certificate holder would maintain it
40 for the life of the Stateline facility. Habitat enhancement procedures, monitoring and success

¹¹⁷ The proposed Stateline 3 facilities would have a permanent impact on 24.6 acres of Category 2, 3 and 5 habitat combined. Thus, the 35-acre enhancement area would include 10.4 additional acres of improved habitat to achieve the "net benefit" goal for Category 2 and 5 impacts.

1 criteria are described in the *Revegetation Plan (Revised)*, Attachment B, incorporated in this
2 order.

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

8 Mitigation of Temporary Impacts

9 In addition to the permanent impacts, construction of the proposed Stateline 3 facilities
10 would have temporary impact on Category 2, 3, 5 and 6 habitat.¹¹⁸ The ODFW standard
11 requires mitigation for temporary impacts as well as permanent impacts, and the same
12 mitigation goals apply.

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

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

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

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

39 Construction of Stateline 3 would have a temporary impact on 47.4 acres of Category
40 5 habitat. This area is identified as “New CRP Seeded Grassland.” The ODFW standard for

¹¹⁸ Stateline 3 also would have temporary impacts on Category 1 habitat. Any impact to Category 1 habitat violates OAR 345-022-0060. We discuss the Council’s balancing authority below at page 84.

1 Category 5 requires a “net benefit” in habitat quantity or quality. To meet this standard, the
2 certificate holder would implement the *Revegetation Plan*, which would result in an overall
3 “net benefit” in habitat quality in the Stateline area. The certificate holder would revegetate
4 the temporarily affected Category 5 areas as described in the *Revegetation Plan* (Condition
5 (65)). Revegetation methods would be consistent with CRP requirements. The seed mixture
6 listed in the *Revegetation Plan* meets or exceeds the standard “native” seed mixtures for CRP
7 land in the Stateline project area, and the reseeding rate (lbs./acre) exceeds the current CRP
8 standards. The success criteria described in the *Revegetation Plan* would satisfy the success
9 criteria requirements under the CRP program.

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

15 Mitigation of Indirect Effects

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

22 Retirement

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

28 Oregon Wildlife Monitoring Plan

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

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

37 The details of the monitoring components, statistical analysis and data reporting are
38 described in the *Oregon Wildlife Monitoring Plan (Revised)*, Attachment A, incorporated in
39 this order.¹¹⁹ The requirement of monitoring during the operation of the Stateline facilities is a
40 necessary part of finding compliance with the fish and wildlife standard. Adequate monitoring
41 provides data necessary to evaluate the impacts of facility operation. If monitoring reveals

¹¹⁹ The plan may be revised from time to time, as provided in Section 13 of the plan.

1 significant unforeseen impacts, additional mitigation may be needed to ensure that operation
2 of the facility is consistent with the habitat mitigation goals and standards. If the data show
3 significant impacts to wildlife or wildlife habitat, the certificate holder would mitigate for the
4 loss of habitat quality by measures approved by the Office (Condition (94)).

5 General Findings of Consistency

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

- 10 ▪ Design: By location of the proposed wind turbines and structural design, the
11 proposed facility avoids impacts to wildlife and to essential and important habitat
12 to the extent reasonably possible.
- 13 ▪ Construction: Construction of the proposed Stateline 3 turbines and related or
14 supporting facilities would have a direct impact on 12.3 acres of Category 1
15 habitat. Therefore, the proposed Stateline 3 does not comply with OAR 345-022-
16 0060.

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

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

26 The certificate holder would restore all areas of temporary disturbance to Category
27 2, 3, and 5 habitat (Condition (65)) as described in the *Revegetation Plan*
28 (*Revised*), Attachment B. Implementation of the *Revegetation Plan* would result in
29 an overall improvement of habitat quality, which would meet the "net benefit"
30 requirement for temporary impacts to Category 2 and 5 habitat.

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

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

- 38 ▪ Operation: The certificate holder would mitigate for indirect impacts to wildlife
39 and wildlife habitat, as described in Conditions (89), (90) and (91). Operational
40 monitoring as described in the *Oregon Wildlife Monitoring Plan (Revised)* would
41 provide data necessary to evaluate the operational impacts of the facility. Analysis
42 of monitoring data might indicate impacts to wildlife or wildlife habitat that the

1 certificate holder has not adequately addressed by mitigation. If these impacts
2 result in a loss of habitat quality, further mitigation may be required (Condition
3 (94)).

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

8 Stateline 2

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

17 Conclusions of Law

18 In addressing impacts on habitat other than Category 1 habitat, the Council finds that
19 the design, construction, operation and retirement of the proposed Stateline 3 facilities, taking
20 into account mitigation and subject to the conditions stated in this order, are consistent with
21 the fish and wildlife habitat mitigation goals and standards of OAR 635-415-0025. Conditions
22 (7), (8), (14), (52), (63), (65), (68), (82), (89), (90), (91), (93), (94), (98), (101), (104), (112),
23 (114), (115), (116) and (117) relate to this finding. However, due to an unavoidable impact on
24 Category 1 habitat, the Council concludes that the proposed Stateline 3 facilities do not
25 comply fully with the Fish and Wildlife Habitat Standard.

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

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

32 As described above, the construction and operation of the proposed Stateline 3
33 facilities would have unavoidable impacts on Category 1 habitat. Under the ODFW wildlife
34 habitat standard, incorporated in OAR 345-022-0060, the mitigation goal for Category 1 is
35 "no loss of either habitat quantity or quality." This can be achieved only by avoidance; the
36 ODFW standard allows no other means of mitigation. Because the proposed Stateline 3
37 cannot avoid direct impacts to Category 1 habitat, the construction and operation of Stateline
38 3 would not be "consistent" with the ODFW standard. Accordingly, the proposed Stateline 3
39 does not comply with the Council's Fish and Wildlife Habitat Standard.

40 Therefore, to issue an amended site certificate that would allow construction and
41 operation of Stateline 3, the Council must determine whether to allow an exception to the Fish
42 and Wildlife Habitat standard under the Council's "balancing" authority described in OAR

1 345-022-0000(2), quoted above at page 22. To allow an exception, the Council must
2 determine whether the overall public benefits of the facility at the proposed site outweigh the
3 damage to the resource that is protected by the standard the facility does not meet.

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

6 In this case, the “resource that is protected by the standard the facility does not meet”
7 is Category 1 habitat within the site of the proposed Stateline 3. The potential damage to the
8 resource is a loss of quantity of Category 1 habitat that, by definition, is irreplaceable and
9 essential to the Washington ground squirrel (WGS). The WGS is a state-listed endangered
10 species. The following table summarizes the estimated acreage impacts on the Category 1
11 habitat resource¹²⁰ at BG-B, BG-C and BG-E.

Turbine Strings	Total area of Category 1 Resource (acres)	Area of temporary disturbance (acres)	Area of permanent disturbance (acres)	Total area of disturbance (acres)
BG-B and BG-C	479	7	4.2	11.2
BG-E	26	0.7	0.4	1.1
Total	505	7.7	4.6	12.3

12 Construction and operation of the proposed Stateline 3 would have a direct and
13 permanent impact on 4.6 acres of Category 1 habitat and a direct but temporary impact on 7.7
14 acres of Category 1 habitat. FPL proposes to construct 46 turbines, along with access roads
15 and underground collector cables, in Category 1 habitat at BG-B, BG-C and BG-E. In
16 addition, the certificate holder would conduct appropriate pre-construction surveys for the
17 presence of WGS in suitable habitat (Condition (56)) at other proposed turbine strings.¹²¹ If
18 squirrel activity were detected, the certificate holder would establish no-construction areas in
19 consultation with ODFW and implement other appropriate mitigation measures. Below, we
20 have analyzed the factors set out in OAR 345-022-0000(2) for weighing the potential damage
21 to the identified Category 1 resource against the overall public benefit likely to result from
22 construction and operation of the proposed Stateline 3 facilities.

23 Damage to the Resource

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

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

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

¹²⁰ Based on Request for Amendment #2, Exhibit 14, and Anne Walsh, e-mail dated March 17, 2003.

¹²¹ Suitable habitat at other turbine strings has not been classified as Category 1 habitat because WGS have not been found in those locations.

1 forage, shelter (burrows) and dispersal corridors for an active WGS colony. Proposed turbine
2 string BG-E would affect an area historically occupied by a WGS colony but that is not
3 currently occupied. A large portion of the suitable habitat at BG-E has been plowed to meet
4 new CRP standards. It is therefore Category 5 habitat (having high potential to become either
5 essential or important wildlife habitat). Although it is not suitable for WGS in its current
6 condition, it could become WGS habitat in the future.

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

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

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

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

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

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

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

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

¹²² The Oregon Endangered Species Act, by itself, does not require a private landowner to take action to protect a threatened species or endangered species. ORS 496.192. However, it is illegal to kill an endangered species. ORS 498.026.

1 to decrease the generation capacity of the Stateline 3 project by 30.4 MW. It is not a simple
2 matter to relocate wind turbines. Effective wind power development is location-dependent.
3 That is, turbines must be placed where there is a significant wind resource and as near as
4 possible to existing transmission lines. Wind turbines cannot be located on slopes that are too
5 steep or unstable. In addition, landowners must agree to the location of the turbines, access
6 roads and construction disturbances. Wind facilities on farmland must be located so that there
7 is minimal interference with agricultural activities.

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

9 FPL's wildlife consultant surveyed all habitat within 1,000 feet of the centerline of
10 proposed turbines and access roads at BG-B, BG-C and BG-E. Based on consultations with
11 ODFW regarding the characteristics of suitable habitat for the WGS, the consultant identified
12 all Category 1 habitat within the survey area. All active WGS sites were mapped and buffered
13 by a 785-foot use area.¹²³ Potential connecting corridors to other WGS sites were included in
14 the classification of Category 1 habitat. Following these procedures, the consultant estimated
15 the acreage of Category 1 habitat at BG-B and BG-C to be 479 acres. At BG-E, the consultant
16 established a 785-foot use area buffer around active sites identified in 2001 and estimated the
17 acreage to be 26 acres.

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

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

28 At BG-E, the proposed facilities would permanently occupy less than one-half acre of
29 Category 1 habitat out of a 26-acre identified resource. Construction would temporarily affect
30 an additional 0.7 acres. The combined temporary and permanent impacts would affect about
31 1.1 acres, which is about 4 percent of the known Category 1 habitat in the survey area near
32 BG-E.

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

¹²³ The "use area" was defined by ODFW in guidance provided to the certificate holder for determining Category 1 habitat.

1 plan also includes monitoring of the existing WGS colony, an inventory of WGS distribution
2 dear BG-E and support for scientific research on the habitat requirements and behaviors of the
3 WGS.

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

13 Overall Public Benefits

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

19 *(A) The contribution of the proposed facility toward maintaining reliable energy* 20 *delivery to an area in the state*

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

29 *(B) The expected effect of the proposed facility on total resource cost, as defined in* 30 *OAR 345-001-0010¹²⁵, and average delivered price of energy to end users*

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

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

¹²⁵ OAR 345-001-0010 defines "total resource cost" as follows: "Total resource cost" shall be calculated using consistent financial assumptions between resource types. "Total resource cost" means the sum of:

(a) The direct cost of conservation or other non-generation resources;
(b) 1.1 times the direct cost of generation facilities, including incremental transmission and distribution costs; and

(c) The discounted sum of the net emissions of pollutants listed in Table 1 of the definition of "net emissions" in this rule, multiplied by their respective monetary values.

1 estimates developed by the Northwest Power Planning Council. In estimating the total
2 resource cost of the CCCT alternative, the Office included the monetary value of carbon
3 dioxide emissions at \$10 per ton and assumed a natural gas price ranging from \$3.50 to \$4.50
4 per million Btu. This analysis resulted in a total resource cost for a wind energy facility of
5 \$0.046 per kilowatt-hour, compared with the CCCT cost ranging from \$0.043 to \$0.051 per
6 kilowatt-hour. The total resource cost of a CCCT, therefore, varies significantly with fuel
7 cost, making long-term predictions uncertain. This analysis shows that the total resource cost
8 of a wind facility may be equal to, or less than, the cost of the alternative resource when the
9 price of natural gas is \$4.00 per million Btu or higher. In addition, the public would benefit
10 from the stable cost of wind generation, which is not subject to fuel cost uncertainty.

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

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

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

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

27 ORS 469.010 describes Oregon energy policy as follows:

28 **469.010 Policy.** *The Legislative Assembly finds and declares that:*

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

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

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

40 *(b) That through state government example and other effective*
41 *communications, energy conservation and elimination of wasteful and*

1 *uneconomical uses of energy and materials be promoted. This conservation must*
2 *include, but not be limited to, resource recovery and materials recycling.*

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

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

9 *(e) That energy-efficient modes of transportation for people and goods shall be*
10 *encouraged, while energy-inefficient modes of transportation shall be*
11 *discouraged.*

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

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

17 This statement of Oregon energy policy begins by declaring that the growth in demand
18 for nonrenewable energy sources is a serious problem. To address this problem, ORS
19 469.010(2) sets out the twin goals of promoting both energy efficiency and development of
20 “permanently sustainable energy resources.” The policy does not define “permanently
21 sustainable” except in contrast with “nonrenewable energy resources.” By implication, the
22 Legislature has established the promotion of renewable energy sources such as wind power as
23 a policy goal for the state.

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

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

37 The Special Advisory Group for the Stateline Wind Project is the Umatilla County
38 Board of Commissioners. The Commissioners submitted comments on the proposed
39 Amendment #2 in a letter dated December 18, 2002. In their comments, the Commissioners
40 found that the proposed Stateline 3 expansion “appears to be consistent with applicable
41 county land use standards.” The Commissioners have not commented specifically on the issue
42 of the overall public benefit of the proposed BG-B, BG-C and BG-E wind turbines or the
43 potential damage to the Category 1 habitat resource. However, the Commissioners based their

1 finding of consistency with the county land use standards on the Planning Department staff
2 review of the proposed expansion. The staff review included a finding that the expansion “is a
3 renewable resource project that addresses and conforms to the Governor’s Executive Order on
4 Sustainability (No. EO-00-07).”¹²⁶ The staff review also found that the proposed expansion
5 would provide economic benefits to the county. The economic benefits would include
6 construction jobs, purchases from area businesses and property tax revenues.

7 Findings under OAR 345-022-0000(2)

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

18 Conclusions of Law

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

27 **6. Standards Not Applicable to Site Certificate Eligibility**

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

¹²⁶ The Executive Order calls for the state to “develop and promote policies and programs that will assist Oregon to meet a goal of sustainability within one generation – by 2025.” The full text of EO-00-07 is at www.oregonsolutions.net/execorder/sustain_eo.cfm.

¹²⁷ This statute provides that the Council may not impose certain standards “to approve or deny an application for an energy facility producing power from wind.” ORS 469.300 defines an “application” as “a request for approval of a particular site or sites for the construction and operation of an energy facility or the construction and operation of an additional energy facility upon a site for which a certificate has already been issued, filed in accordance with the procedures established pursuant to ORS 469.300 to 469.563, 469.590 to 469.619, 469.930 and 469.992.” Although ORS 469.501(4) does not explicitly refer to a request for a site certificate amendment, we assume that the Legislature intended it to apply.

1 (a) Structural Standard

2 **OAR 345-022-0020**

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

5 (a) The applicant, through appropriate site-specific study, has adequately
6 characterized the site as to seismic zone and expected ground motion and ground
7 failure, taking into account amplification, during the maximum credible and
8 maximum probable seismic events; and

9 (b) The applicant can design, engineer, and construct the facility to avoid
10 dangers to human safety presented by seismic hazards affecting the site that are
11 expected to result from all maximum probable seismic events. As used in this rule
12 "seismic hazard" includes ground shaking, landslide, liquefaction, lateral
13 spreading, tsunami inundation, fault displacement, and subsidence;

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

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

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

24 ***

25 Background Information

26 CH2M HILL performed a site-specific characterization of seismic, geologic and soil
27 hazards for Stateline 1. The Office of Energy consulted with a qualified earthquake engineer,
28 Douglas R. Schwarm, P.E., GeoEngineers, Inc., to review that analysis. The Final Order on
29 the Application included site characterization and assessment of seismic, geologic and soil
30 hazards in the Stateline 1 area.¹²⁸ The Council found that the FPL had adequately
31 characterized the Stateline 1 site in compliance with the Structural Standard and that Stateline
32 1 could be designed, engineered and constructed adequately to avoid potential dangers to
33 human safety presented by seismic hazards. Although the Council did not require compliance
34 with the structural standard when it reviewed the Request for Amendment #1, the Council
35 applied the conditions related to the structural standard to the Stateline 2 expansion.

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

¹²⁸ The findings under the structural standard in the Final Order on the Application, pages 37-40, are incorporated herein by this reference.

1 varies in thickness. On some of the steeper ridges, bedrock is exposed at the surface and the
2 loess layer is a foot or less in thickness, but in other areas the loess layer may be greater than
3 30 feet thick. FPL intends to conduct additional hollow-stem auger and air trac explorations to
4 support the design of the turbine foundations.

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

12 The aboveground transmission lines and pole structures provide sufficient structural
13 capacity to resist earthquake ground motions. The aboveground lines, including single-pole
14 and H-frame support structures, would be designed according to the current National Electric
15 Safety Code C2-2002.

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

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

24 Proposed Conditions

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

27 (b) Historic, Cultural and Archaeological Resources

28 **OAR 345-022-0090**

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

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

35 *(b) For a facility on private land, archaeological objects, as defined in ORS*
36 *358.905(1)(a), or archaeological sites, as defined in ORS 358.905(1)(c); and*

37 *(c) For a facility on public land, archaeological sites, as defined in ORS*
38 *358.905(1)(c).*

39 *(2) The Council may issue a site certificate for a facility that would produce power*
40 *from wind, solar or geothermal energy without making the findings described in*

1 *section (1). However, the Council may apply the requirements of section (1) to*
2 *impose conditions on a site certificate issued for such a facility.*

3 ***

4 Background Information

5 The project area is within the lands ceded to the United States by the Confederated
6 Tribes of the Umatilla Indian Reservation (CTUIR) as part of the Walla Walla Treaty of June
7 1855. The CTUIR conducted cultural resource surveys of the Stateline 3 area. The surveys
8 included ground searches in areas proposed for ground disturbance along transects spaced a
9 maximum of 30 meters apart. These field surveys, conducted in July 2002, identified six
10 cultural resource sites and two isolated finds in Oregon.¹²⁹ Previous surveys have identified
11 two additional sites in Oregon.

12 The certificate holder would avoid each of these features during construction, except
13 that trenching for underground collector cables would cross an historic railroad grade in six
14 locations. The certificate holder would flag the sites in the field and create a buffer of at least
15 50 feet from any construction activities (Condition (75)). A cultural resource expert would be
16 on site during construction to monitor the construction activities (Condition (75)). The State
17 Historic Preservation Officer (SHPO) reviewed the amendment request and found no
18 significant issues.

19 Proposed Conditions

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

22 (c) Public Services

23 **OAR 345-022-0110**

24 *(1) Except for facilities described in sections (2) and (3), to issue a site certificate,*
25 *the Council must find that the construction and operation of the facility, taking*
26 *into account mitigation, are not likely to result in significant adverse impact to the*
27 *ability of public and private providers within the analysis area described in the*
28 *project order to provide: sewers and sewage treatment, water, storm water*
29 *drainage, solid waste management, housing, traffic safety, police and fire*
30 *protection, health care and schools.*

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

35 ***

¹²⁹ Steinmetz, *Stateline Wind Project Phase 2a and 3 Cultural Resource Inventory, Walla Walla County, Washington and Umatilla County, Oregon*, January 13, 2003.

1 Background Information

2 In the Final Order on the Application, the Council found that the construction and
3 operation of Stateline 1, taking into account mitigation, was not likely to cause significant
4 adverse impact to the ability of communities within 30 miles of the facility to provide the
5 services listed in the standard.¹³⁰ The Office of Energy has not received any reports of adverse
6 public service impacts from construction and operation of Stateline 1 and 2. Construction and
7 operation of Stateline 3, as discussed below, are unlikely to have significant adverse impact
8 on the ability of local communities to provide these services.

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

	Stateline 1	Stateline in Washington*	Combined	Stateline 3
Wind turbines	126	305	431	279
Meteorological towers	4	15	19	13
Miles of expanded roads	4.3	11.7	16	9
Miles of new roads	12.2	15.8	28	21.5
Miles of underground collector line	17	10	27	30.5
Miles of aboveground collector line	0	1	1	17
Miles of 115-kV transmission line	0	5.5	5.5	8.5**
Miles of 230-kV transmission line	0	2.6	2.6	8.5**
Substations	0	1	1	1
Acres of temporary disturbance	93	127	220	345
Acres of permanent disturbance	58	104	162	75

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

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

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

17 Water use

18 The certificate holder estimates water use during construction of Stateline 3 would be
19 15,000 to 120,000 gallons per day. Overall, a maximum of 17 million gallons of water would
20 be needed. The City of Helix would be the primary source for this water, under the city's
21 existing water right permit (G-5150). The certificate holder would obtain an additional 7
22 million gallons of water from a source in Washington. We discuss water use further at page
23 24. During operation, water needs for the facility would be low and would not significantly
24 affect water resources in the area.

¹³⁰ The findings under the former "Socio-Economic Impacts Standard" in the Final Order on the Application, pages 66-75, are incorporated herein by this reference.

1 Sewers and Sewage Treatment

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

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

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

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

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

30 Traffic Safety

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

34 The number of vehicle trips associated with construction of Stateline 3 can be
35 estimated based on the analysis done for Stateline 1. In the Final Order on the Application, the
36 Council found that construction of the 127 proposed Stateline 1 turbines would generate
37 12,707 vehicle trips.¹³³ Based on a compressed construction schedule of 96 days, the Council
38 found that construction would result in average daily traffic (ADT) of 133 vehicle trips. For

¹³¹ Request for Amendment #2, Figure 15.

¹³² Rick Saager, MFRFD Chief, e-mail dated June 10, 2002; Virgil Brooks, HRFD Chief, letter dated January 10, 2003.

¹³³ This estimate includes vehicle trips associated with construction of all related or supporting facilities.

1 Stateline 1, the ADT was disbursed over three construction access (transporter) routes.¹³⁴
2 There have been no traffic safety problems or incidents reported to the Office of Energy
3 during construction of Stateline 1 or 2.

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

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

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

¹³⁴ Final Order on the Application, page 71.

¹³⁵ Request for Amendment #2, Figure 15.

¹³⁶ Final Order on the Application, pages 71-72.

¹³⁷ Exceptions may include transport of bulldozers and substation transformers, which would be subject to permits issued by the Oregon Department of Transportation.

1 certificate holder would write traffic control procedures into the contract specifications for
2 construction of Stateline 3. Flaggers would be used at appropriate locations and times during
3 construction to direct traffic and to ensure minimal conflicts among harvest and construction
4 vehicles (Condition (77)).

5 Proposed Conditions

6 The Council finds that the construction and operation of Stateline 3 should be subject
7 to conditions (31), (32), (33), (34), (35), (45), (48), (58), (60), (61), (71), (72), (73), (74), (77),
8 (81), (85), (86), (87), (88), (96) and (103).

9 (d) Waste Minimization

10 **OAR 345-022-0120**

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

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

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

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

25 ***

26 Background Information

27 In the Final Order on the Application, the Council made findings regarding the solid
28 waste and wastewater likely to be generated during the construction, operation and retirement
29 of Stateline 1 and the impact on surrounding communities.¹³⁸ Solid waste and wastewater
30 generated by construction, operation and retirement of Stateline 3 are likely to be similar in
31 type to that generated by Stateline 1 and 2. Because construction of Stateline 3 includes more
32 wind turbines than Stateline 1 and 2 combined plus construction of a substation and
33 aboveground transmission lines, the volume of waste is likely to be proportionally greater.
34 Operation of the facility generates very little waste, although the volume of such waste would
35 increase somewhat when the Stateline 3 facilities are built. The certificate holder would meet
36 the same conditions regarding waste minimization and disposal for Stateline 3 as are required
37 for both Stateline 1 and 2.

¹³⁸ The findings under the waste minimization standard in the Final Order on the Application, pages 76-77, are incorporated herein by this reference.

1 Proposed Conditions

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

4 **VI. OTHER APPLICABLE REGULATORY REQUIREMENTS: FINDINGS AND**
5 **CONCLUSIONS**

6 **1. Requirements under Council Jurisdiction**

7 Under ORS 469.503(3), the Council must determine that the proposed facility
8 complies with “all other Oregon statutes and administrative rules identified in the project
9 order, as amended, as applicable to the issuance of a site certificate for the proposed facility.”
10 Applicable Oregon statutes and administrative rules that are not addressed in section V of this
11 order include the Department of Environmental Quality’s (DEQ) noise control regulations,
12 the Division of State Lands’ regulations for disturbance to wetlands, the Water Resources
13 Department’s (WRD) regulations for appropriating groundwater and the Council’s statutory
14 authority to consider protection of public health and safety.

15 (a) Noise

16 The Office has received no complaints about noise produced by the operation of
17 Stateline 1 and 2 wind turbines. Stateline 3 would expand the Stateline Wind Project into
18 areas to the south and east of the existing facilities to properties currently unaffected by the
19 noise produced by wind turbines. Because the new turbines would be an expansion of the
20 existing Stateline energy facility, the Council must consider the cumulative effects of noise
21 from all three phases of the project. In Oregon, noise is subject to regulation “to provide
22 protection of the health, safety and welfare of Oregon citizens from the hazards and
23 deterioration of the quality of life imposed by excessive noise emissions.”¹³⁹ The applicable
24 noise standard is OAR 340-035-0035(1)(b)(B):

25 **OAR 340-035-0035**

26 *(1) Standards and Regulations:*

27 ***

28 *(b) New Noise Sources:*

29 ***

30 *(B) New Sources Located on Previously Unused Site:*

31 *(i) No person owning or controlling a new industrial or commercial noise source*
32 *located on a previously unused industrial or commercial site shall cause or permit*
33 *the operation of that noise source if the noise levels generated or indirectly caused*
34 *by that noise source increase the ambient statistical noise levels, L₁₀ or L₅₀, by*
35 *more than 10 dBA in any one hour, or exceed the levels specified in Table 8, as*
36 *measured at an appropriate measurement point, as specified in subsection (3)(b)*
37 *of this rule.*

¹³⁹ ORS 467.010.

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

5 Findings of Fact

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

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

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

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

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

41 A variance is not necessary for Stateline 3, however. Based on the analysis below, the
42 Council finds that Stateline 3 complies with the noise standard. In addition, the Council finds
43 that the special circumstances and characteristics of wind facilities warrant consideration and

1 issuance of a variance, if it were necessary for an applicant to request a variance in a
2 particular case.

3 The Council has found that both Stateline 1 and Stateline 2 would comply with the
4 noise standard.¹⁴⁰ To comply with OAR 340-035-0035, Stateline 3 must meet both the
5 “ambient degradation” and “Table 8” tests, based on estimated noise levels at the “appropriate
6 measurement point.” The “appropriate measurement point” is the point on a “noise sensitive
7 property” that is 25 feet toward the noise source from the “noise sensitive building” or the
8 point on the noise sensitive property line nearest the noise source, whichever is farther.¹⁴¹
9 “Noise sensitive property” is real property normally used for sleeping, or normally used for a
10 school, church, hospital or public library.¹⁴²

11 The nearest noise sensitive property to any proposed Stateline 3 turbine is a residence
12 identified as M-1.¹⁴³ M-1 is approximately 2,900 feet west of proposed turbine string V-A.
13 The next nearest noise sensitive property, R-7, is approximately 4,000 feet southeast of
14 proposed turbine strings SH-C and V-B. A third noise sensitive property, M-2, is
15 approximately 5,000 feet southeast of proposed turbine string HG-S. M-2 was also the
16 appropriate measurement point for both Stateline 1 and 2.¹⁴⁴

17 The “Table 8” Test

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

Statistical Noise Limits for Industrial and Commercial Sources		
Maximum Permissible Statistical Noise Levels (dBA)		
Statistical Descriptor	Daytime (7:00 AM - 10:00 PM)	Nighttime (10:00 PM - 7:00 AM)
L ₅₀	55	50
L ₁₀	60	55
L ₁	75	60

The hourly L₅₀, L₁₀ and L₀₁ noise levels are defined as the noise level equaled or exceeded 50 percent, 10 percent and 1 percent of the hour, respectively.

21 The facility must meet the “Table 8” test under conditions of maximum turbine noise.
22 Applying the same analysis the Council applied for Stateline 1, we assume that maximum
23 turbine noise would occur at a wind speed of 56 mph. At wind speeds above 56 mph, the
24 turbine blades feather to avoid damage to the turbines. To meet the Table 8 test, turbine noise

¹⁴⁰ The findings regarding Stateline 1 in the Final Order on the Application, pages 80-82, are incorporated herein by this reference. The findings regarding Stateline 2 in the Final Order on Amendment #1, pages 60-62, are incorporated herein by this reference.

¹⁴¹ OAR 340-035-0035(3)(b).

¹⁴² OAR 340-035-0015(38).

¹⁴³ The location and designation of noise sensitive properties is shown in the Request for Amendment #2, Exhibit 20, Figures 17a and 17b.

¹⁴⁴ The residence is approximately 2,000 feet nearest Stateline 1 turbine and 4,000 feet from the nearest Stateline 2 turbine.

1 at a wind speed of 56 mph must not exceed the levels specified in Table 8. In the site
2 certificate application for Stateline 1, FPL provided a statistical correlation of turbine noise to
3 wind speed over the range of wind speeds within which the turbines operate. The correlation
4 was based on sound level measurements of the V47-660 kW turbine carried out by acoustical
5 engineers for the turbine manufacturer, Vestas.

6 The applicable noise limit from Table 8 is the hourly L_{50} nighttime noise level of
7 50 dBA. To meet this standard, the combined noise radiating from Stateline 1, 2 and 3
8 turbines must not exceed 50 dBA. Assuming that all turbines were operating with a wind
9 speed of 56 mph, the hourly L_{50} noise levels generated by the Stateline wind turbines would
10 be 43 dBA at M-1, 44 dBA at R-7 and 49 dBA at M-2, based on FPL's modeling
11 calculations.¹⁴⁵ Each of these levels is below the maximum allowable nighttime limit of
12 50 dBA. Therefore, the Council finds that the proposed Stateline 3 expansion would meet the
13 Table 8 test.

14 Ambient Degradation Test

15 Under the "ambient degradation" test, noise from the cumulative effects of Stateline 1,
16 2 and 3 turbines must not increase the ambient hourly L_{10} or L_{50} noise levels at the appropriate
17 measurement point "by more than 10 dBA in any one hour."¹⁴⁶ Under the DEQ regulations,
18 "ambient noise" means "the all-encompassing noise associated with a given environment,
19 being usually a composite of sounds from many sources near and far."¹⁴⁷

20 For Stateline 1 and 2, the Council analyzed the ambient degradation test by assuming
21 that if the facility met the test under "worst-case" conditions, it would meet the test under all
22 conditions. The Council assumed that the "worst case" would be during low wind speed
23 conditions when the ambient noise level is likely to be the lowest but when there is sufficient
24 wind speed to produce noise from the operation of the wind turbines (the "cut-in" speed). The
25 Stateline wind turbines start rotating (and producing noise) at a wind speed of approximately
26 7.9 mph, measured at 10 meters above ground.¹⁴⁸ Therefore, the Council assumed that
27 maximum ambient degradation ("worst-case" conditions) would occur at a wind speed of 7.9
28 mph.

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

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

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

¹⁴⁷ OAR 340-035-0015(5).

¹⁴⁸ In the application for a site certificate, FPL noted that the "cut-in" wind speed is about 9 mph at the 50-meter hub height, which is about 7.9 mph at a typical 10-meter met tower height.

1 establishing a Council policy to apply a higher test or more stringent standard to wind energy
2 facilities than is applied to other types of energy facilities. It should be understood that
3 “worst-case” conditions are hypothetical conditions and not conditions that could be expected
4 to occur typically in nature.

5 For Stateline 1, the Council found that turbine noise (the predicted hourly L₅₀ noise
6 level) would be 37.8 dBA at M-2 with a wind speed of 7.9 mph. The Council reasoned that
7 the facility would meet the ambient degradation test if background noise (ambient noise at the
8 noise sensitive property in the absence of wind turbines) were always greater than 28.3 dBA
9 when the wind speed at the turbines was at the cut-in speed. If the background noise level
10 were greater than 28.3 dBA, the addition of 37.8 dBA would result in an increase in the
11 ambient sound level of less than 10 dBA (logarithmic addition), and the facility would meet
12 the ambient degradation test. The Council found it reasonable to assume that the wind-
13 generated background noise at M-2 would be at least at 28.3 dBA when the wind was 7.9 mph
14 at the turbines.

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

21 For Stateline 3, FPL considered ambient noise degradation at M-1, R-7 and M-2. M-1
22 and R-7 are the closest noise sensitive properties to any Stateline 3 turbines.¹⁴⁹ FPL included
23 M-2 because it is the closest noise sensitive property to the northern cluster of Stateline 3
24 turbines (strings HG-T and HG-S). M-2 is affected by the cumulative noise from Stateline 1
25 and 2.

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

31 FPL measured the ambient noise and wind speed at R-7 over a 10-day period. The
32 Office of Energy’s consultant on the DEQ noise standard, Kerrie G. Standlee, P.E., analyzed
33 the FPL data. Based on the data, Standlee concluded that a reasonable average background
34 noise level during the quiet hours of midnight to 6:00 AM was 26 dBA when the wind speed
35 at turbine hub-height is at or near the cut-in speed. At hub-height, the cut-in speed is about
36 9 mph. FPL’s modeling calculations predict that turbine noise at R-7 ranges from 34 dBA to
37 35 dBA at hub-height wind speeds of 9 to 15 mph. The logarithmic addition of 34 dBA
38 (turbine noise) to 26 dBA (background) would result in a combined ambient noise level of 35
39 dBA, or an increase of 9 dBA. The addition of 35 dBA (turbine noise) to 26 dBA

¹⁴⁹ FPL also considered the property designated R-8, which is approximately 3,700 feet from the nearest Stateline 3 turbine. However, R-8 is located in Washington. The DEQ noise regulation is premised on a policy to “protect the health, safety, and welfare of Oregon citizens.” OAR 340-035-0005(1).

¹⁵⁰ M-1 is approximately 1,800 feet from the nearest Vansycle turbine and 2,900 feet from the nearest proposed Stateline 3 turbine.

1 (background) would result in a combined ambient noise level of 36 dBA, or an increase of 10
2 dBA. The data show that as turbine wind speed increases above 15 mph, the wind speed at R-
3 7 also increases and raises the ambient background noise level above 26 dBA. Based on this
4 analysis, Standlee concluded that the operation of Stateline 3 would not cause the ambient
5 hourly L₅₀ noise level to increase by more than 10 dBA. Therefore, the ambient degradation
6 test is met.

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

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

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

18 Post-Construction Measurement

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

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

41 In contrast, the characteristics of wind energy facilities are quite different. In the case
42 of wind power, each turbine is a single noise source located on top of a high tower. The noise
43 radiating from each turbine with varying wind speeds can be determined with reasonable

1 accuracy from noise data supplied by the turbine manufacturer. Because the placement of
2 individual turbines does not significantly influence the noise radiating patterns of the turbines,
3 relatively simple and accurate prediction of the total noise radiating to a nearby noise
4 sensitive property is possible. Thus, there is less need for the added level of confidence
5 provided by post-construction noise measurements.

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

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

29 Our analysis of the compliance of Stateline 3 with the DEQ noise standard relies on
30 the correlation of turbine noise to wind speed provided by the turbine manufacturer. The
31 turbine manufacturer, Vestas, warrants that the sound power level of the V47 turbine will not
32 exceed 104 dBA with a wind speed at 33 feet of about 18 mph.¹⁵¹ The Council, therefore,
33 adopts a condition to require the certificate holder to include verification of compliance with
34 the manufacturer’s sound level warranty in the first annual report following construction of
35 any Stateline 3 turbines. This verification may consist of field measurement or other means of
36 verification satisfactory to the Office of Energy (Condition (120)).

37 Stateline 2

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

¹⁵¹ Application for Site Certificate (Supplement), Exhibit X, page X-9.

1 Conclusions of Law

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

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

9 (b) Wetlands

10 Under ORS 196.810 and the Division of State Lands Removal-Fill rules (OAR
11 Chapter 141, Division 85) a permit is needed if 50 cubic yards or more of material is
12 removed, filled or altered within any "waters of the state." Under the law, "waters of the
13 state" include wetlands. Exemptions to the permit requirement are given in OAR 141-085-
14 0020. Specifically, the rules do not apply to removal-fill activities for maintenance (OAR
15 141-085-0020(12)) or to maintenance of farm roads on EFU land (OAR 141-085-0020(5)(b)).

16 Findings of Fact

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

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

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

¹⁵² Request for Amendment #2, Exhibit 21.

¹⁵³ Request for Amendment #2, Figures 19 and 20.

1 qualify as “maintenance” and that no permit would be required because the amount of new fill
2 would be less than 50 cubic yards (Condition (118)).¹⁵⁴

3 Conclusions of Law

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

5 (c) Water Rights

6 Through the provisions of the Ground Water Act of 1955, ORS 537.505 to 537.796,
7 and OAR Chapter 690, the Oregon Water Resources Commission administers the rights of
8 appropriation and use of the ground water resources of the state. Under OAR 345-022-
9 0000(1), the Council must determine whether the proposed expansion complies with these
10 statutes and administrative rules.

11 Findings of Fact

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

20 During operation of the facility, water use would be insignificant. ORS 537.545(1)(f)
21 provides that a new water right is not required for industrial and commercial uses of up to
22 5,000 gallons per day. During operation, a contractor would perform occasional blade
23 washing (Condition (88)). The contractor would purchase water from a private or municipal
24 source with an existing water right. The Water Resources Department has reviewed the
25 amendment request and has concluded that no permit is required.

26 Stateline 2

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

31 Conclusions of Law

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

¹⁵⁴ Kevin Herkamp, DSL, e-mail dated March 4, 2003.

¹⁵⁵ FPL has received authorization from the Washington Department of Ecology for short-term use of up to 10.2 million gallons of water from a private well. Letter, dated January 28, 2003, from Bill Neve, Regional Watermaster.

1 The Council finds that there has been no change of circumstances that that would
2 affect the Council's conclusions regarding Stateline 2. The Council concludes that no new
3 water right would be required for Stateline 2 if the requested extension of the construction
4 completion deadline were allowed.

5 (d) Public Health and Safety

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

10 Findings of Fact

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

13 Electric and Magnetic Fields

14 The proposed facility would include a network of underground and aboveground
15 34.5-kV electric transmission lines (collector cables) and an aboveground 115-kV or 230-kV
16 transmission line. Electric transmission lines create electric and magnetic fields. The electric
17 field standard is addressed above at page 69, and for the reasons discussed there, the proposed
18 transmission lines would not exceed the Council's standard of 9 kV per meter at one meter
19 above the ground surface in areas accessible to the public.

20 The proposed design and construction of underground collector lines for Stateline 3
21 would be similar to the underground collector lines for Stateline 1 and 2. However, FPL
22 would use lower amp conductors but wider conductor spacing for the Stateline 3 underground
23 collector lines. The estimated magnetic field strength at the ground surface directly above the
24 center conductor would be 84 milli-Gause (mG).¹⁵⁶ For Stateline 1 and 2, the estimated
25 magnetic field strength directly over the underground collector cables was 60 mG.¹⁵⁷ The
26 nearest residence to any Stateline 3 underground collector line is 2,500 feet away. At that
27 distance, the magnetic field exposure would be no higher than background levels.¹⁵⁸

28 In addition to new underground collector lines, the proposed Stateline 3 facility would
29 include approximately 17 miles of aboveground 34.5-kV collector lines and 8.5 miles of
30 aboveground 115-kV or 230-kV transmission line. The applicant estimated the magnetic
31 fields that the transmission lines would produce using a model developed by the Bonneville
32 Power Administration. The table below shows the estimated magnetic field strength directly
33 below the lines and at 100 feet left and right of the centerline.¹⁵⁹ The nearest residence to any
34 aboveground 34.5-kV line is approximately 2,200 feet away and the nearest residence to the

¹⁵⁶ Response to the Office of Energy's request (71) for additional information, February 25, 2003, and follow-up response dated March 7, 2003.

¹⁵⁷ The findings regarding electric and magnetic fields in the Final Order on the Application, pages 85-86, are incorporated herein by this reference.

¹⁵⁸ The strength of a magnetic field decreases with distance from the source. The magnetic field is down to background levels at a distance of 1,000 feet from a transmission line.

¹⁵⁹ Request for Amendment #2, Exhibit 22, Table 1, and response to the Office of Energy's request (30) for additional information, February 20, 2003.

1 proposed higher-voltage transmission line is approximately 4,600 feet away. At these
2 distances, the magnetic field exposure would be no higher than background levels.

Voltage	Magnetic Field Strength (mG)		
	Left (100')	Centerline	Right (100')
34.5-kV	5.65	67.92	5.65
115-kV	14.32	173.70	14.32
230-kV	11.48	107.96	11.48

3 The strength of a magnetic field is a function of the current in the electric transmission
4 line: the higher the current, the greater the strength of the magnetic field. FPL calculated the
5 magnetic fields based on assumed current levels for each of the transmission lines. For 34.5-
6 kV underground lines, the assumed maximum current was 343 amps per conductor.¹⁵⁶ For
7 34.5-kV aboveground lines, the assumed maximum current was 1,200 amps per conductor.¹⁶⁰
8 For the 115-kV line, the assumed maximum current was 1,064 amps per conductor.¹⁶¹ For the
9 230-kV line, the assumed maximum current was 535 amps per conductor.¹⁶² The certificate
10 holder would design and operate the transmission lines so that these maximum currents would
11 not be exceeded (Condition (108)).

12 The Council has previously considered the issue of whether exposure to magnetic
13 fields might cause health risks.¹⁶³ This issue has been the subject of considerable scientific
14 research and discussion. Based on its review in other cases, the Council has concluded that the
15 credible evidence of a health risk from low levels of exposure to magnetic fields is
16 inconclusive. The Council has not found sufficient information upon which to set health-
17 based limits for exposure to magnetic fields. However, given the uncertainty about possible
18 health consequences, the Council has encouraged applicants to propose low-cost ways to
19 reduce or manage public exposure to magnetic fields from transmission lines under the
20 Council's jurisdiction. This approach is sometimes referred to as "prudent avoidance."

21 Under the 1992 Energy Policy Act, the U.S. Congress authorized the Electric and
22 Magnetic Fields Research and Public Information Dissemination Program. The program led
23 to a report in 1999 by the National Institute of Environmental Health Sciences (NIEHS) on
24 human exposure to extremely low frequency electric and magnetic fields ("ELF-EMF").¹⁶⁴
25 The report was based on an assessment of scientific evidence by an international panel of 30
26 scientists. Using criteria developed by the International Agency for Research on Cancer
27 (IARC), none of the scientists considered the evidence strong enough to label magnetic field
28 exposure as a "known human carcinogen" or even a "probable human carcinogen." However,

¹⁶⁰ Response to the Office of Energy's request (72) for additional information, February 25, 2003.

¹⁶¹ Request for Amendment #2, Exhibit 22, and follow-up dated March 7, 2003.

¹⁶² Response to the Office of Energy's request (30) for additional information, February 20, 2003, and follow-up response dated February 28, 2003.

¹⁶³ Final Order for the Summit/Westward Project, October 2002; Final Order for the Port Westward Generating Project, November 2002; Final Order for the Hermiston Power Project, March 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.

¹⁶⁴ NIEHS, *Health Effects from Exposure to Power-Line Frequency Electric and Magnetic Fields*, NIH Publication No. 99-4493, May 1999, www.niehs.nih.gov/emfrapid/html/EMF_DIR_RPT/Report_18f.htm.

1 a majority of the scientists concluded that exposure to power-line frequency ELF-EMF is a
2 “possible” human carcinogen. This decision was based on “limited evidence” of an increased
3 risk or childhood leukemia with *residential* exposure and of an increased occurrence of
4 chronic lymphocytic leukemia associated with *occupational* exposure.¹⁶⁵ The NIEHS
5 concluded that there is insufficient evidence of a risk of any other cancers or non-cancer
6 health outcomes and that the probability that ELF-EMF exposure is “truly a health hazard” is
7 “small.”

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

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

32 Coordination with the PUC

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

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

1 Stateline 2

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

7 Conclusions of Law

8 Based on the findings above, the Council concludes that the siting, construction and
9 operation of the proposed Stateline 3 facilities, subject to the conditions stated in this order,
10 are consistent with protection of public health and safety. Conditions (2), (6), (21), (22), (36),
11 (38), (62), (95), (108), (110) and (113) relate to the protection of public health and safety.

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

16 **2. Requirements That Are Not Under Council Jurisdiction**

17 (a) Federally-Delegated Programs

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

24 Water Quality

25 The Oregon Department of Environmental Quality (DEQ), Water Quality Program,
26 administers the National Pollutant Discharge Elimination System (NPDES) permit program
27 and regulations regarding stormwater discharge. On November 14, 2002, the certificate holder
28 submitted a 1200-C NPDES permit application and an Erosion and Sediment Control Plan to
29 address handling of stormwater during construction of Stateline 3. DEQ has issued the
30 permit.¹⁶⁶ In addition, DEQ has advised the Office that the certificate holder is exempt from
31 the requirement of an industrial wash-water permit if blade washing is done with high-
32 pressure cold water only, without chemicals, brighteners or cleansers (Condition (88)).

33 (b) Requirements That Do Not Relate to Siting

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

¹⁶⁶ Amy Verley, Pendleton DEQ office, e-mail dated 1/30/03.

1 issued by these state agencies and local governments in deciding whether the facility meets
2 other standards and requirements under its jurisdiction.

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

- 7 1) Regulations of building, structure design and construction practices by the Oregon
8 Building Codes Division under ORS Chapters 447, 455, 460, 476, 479 and 480
9 and OAR Chapter 918, Divisions 225, 290, 301, 302, 400, 440, 460, 750, 770 and
10 780
- 11 2) Various programs addressing fire protection and fire safety and the storage, use,
12 handling, and emergency response for hazardous materials and community right to
13 know laws for hazardous materials, administered by the Oregon State Fire
14 Marshal's Office, under ORS Chapters 453, 476 through 479; OAR Chapter 837,
15 Divisions 40, 85 and 90
- 16 3) Programs addressing reporting, design and safety standards for electric
17 transmission lines administered by the Oregon Public Utilities Commission, Safety
18 Section under ORS 757.035 and OAR Chapter 860, Divisions 24 and 28
- 19 4) Registration requirements for underground facilities administered by the Oregon
20 Public Utilities Commission under ORS 757.542 through 757.562 and OAR
21 Chapter 952
- 22 5) Electric Service Supplier certification requirements administered by the Oregon
23 Public Utilities Commission under ORS 756.040, ORS 757.600 through 757.667
24 and OAR 860-038-0400
- 25 6) Regulations on the size and weight of truck loads on state and federal highways
26 administered by the Oregon Department of Transportation under ORS Chapter
27 818; OAR Chapter 734, Division 82
- 28 7) Regulations of domestic water supply systems administered by the Health Division
29 of the Oregon Department of Human Resources under ORS Chapter 448 and OAR
30 Chapter 333, Division 61
- 31 8) Conditional use permits for concrete batch plants required and administered by
32 Umatilla County

33 VII. GENERAL APPLICATION OF CONDITIONS

34 The conditions referenced in this order include conditions that are specifically required
35 by OAR 345-027-0020 (Mandatory Conditions in Site Certificates), OAR 345-027-0023 (Site
36 Specific Conditions), OAR 345-027-0028 (Monitoring Conditions) or OAR Chapter 345,
37 Division 26 (Construction and Operation Rules for Facilities). The conditions referenced in
38 this order, or added to the site certificate by this order, include conditions based on
39 representations in the request for amendment and the supporting record that the Council
40 deems to be binding commitments made by the certificate holder. Also included are

1 conditions the Council finds necessary to ensure compliance with the siting standards of OAR
2 Chapter 345, Divisions 22 and 24, or to protect public health and safety.

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

6 In addition to all other conditions referenced or included in this order, the site
7 certificate holder is subject to all conditions and requirements contained in the rules of the
8 Council and in local ordinances and state law in effect on the date the amended site certificate
9 is executed.¹⁶⁷ However, under ORS 469.401(2), upon a clear showing of a significant threat
10 to the public health, safety or the environment that requires application of later-adopted laws
11 or rules, the Council may require compliance with such later-adopted laws or rules.

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

16 VIII. GENERAL CONCLUSION

17 The proposed amendment would enlarge the site of the Stateline Wind Project and
18 would extend the construction completion deadline for Stateline 2. Under OAR 345-027-
19 0070(9), to issue an order approving an amendment that enlarges the site, the Council must
20 consider, within the area added to the site by the amendment, whether the facility complies
21 with all Council standards. To issue an order extending the deadline for completing
22 construction of Stateline 2, the Council must consider: (a) whether the Council has previously
23 granted an extension of the deadline, (b) whether there has been any change of circumstances
24 that affects a previous Council finding that was required for issuance of a site certificate or
25 amended site certificate and (c) whether the Stateline 2 facility complies with all Council
26 standards. As discussed above at page 22, the Council's General Standard of Review requires
27 the Council to base its conclusions on a preponderance of the evidence on the record.

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

- 31 1. The proposed Stateline 3 facilities comply with the requirements of the Oregon
32 Energy Facility Siting statutes, ORS 469.300 to ORS 469.570 and 469.590 to
33 469.619.
- 34 2. The proposed Stateline 3 facilities comply with the standards adopted by the
35 Council pursuant to ORS 469.501, except that proposed turbine strings BG-B,
36 BG-C and BG-E do not comply with the Fish and Wildlife Habitat Standard, OAR
37 345-022-0060.
- 38 3. The overall public benefits of the Stateline 3 facility including proposed turbine
39 strings BG-B, BG-C and BG-E, subject to the conditions described in this order,

¹⁶⁷ However, in making land use findings, the Council applies the applicable local criteria in effect on the date the certificate holder submitted the request for amendment.

1 outweigh the damage to the resources protected by the standard the facility does
2 not meet (specifically, the damage to the Category 1 habitat resource protected by
3 the Fish and Wildlife Habitat Standard).

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

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

- 10 1. The Council has not previously granted an extension of the deadlines for
11 beginning or completing construction of Stateline 2.
- 12 2. There has not been any change of circumstances that affects a previous Council
13 finding that was required for issuance of a site certificate or amended site
14 certificate.
- 15 3. The proposed Stateline 2 facilities comply with the standards adopted by the
16 Council pursuant to ORS 469.501.

17 Based on the findings of fact, reasoning and conclusions of law in this order and
18 subject to the conditions described in this order, the Council concludes that an amendment of
19 the site certificate for the Stateline Wind Project may be issued. The approved amendment
20 would allow construction of the proposed Stateline 3 facilities and would extend the
21 construction completion deadline for Stateline 2. The approved amendment incorporates the
22 specific changes to the site certificate set forth in this order in Section IV.2 beginning at page
23 11 above.


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

1 **IX. ORDER**

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

Issued this 6 day of June, 2003.

THE OREGON ENERGY FACILITY SITING COUNCIL

By: 
Dr. Roslyn Eims-Sutherland
Chair

Attachments

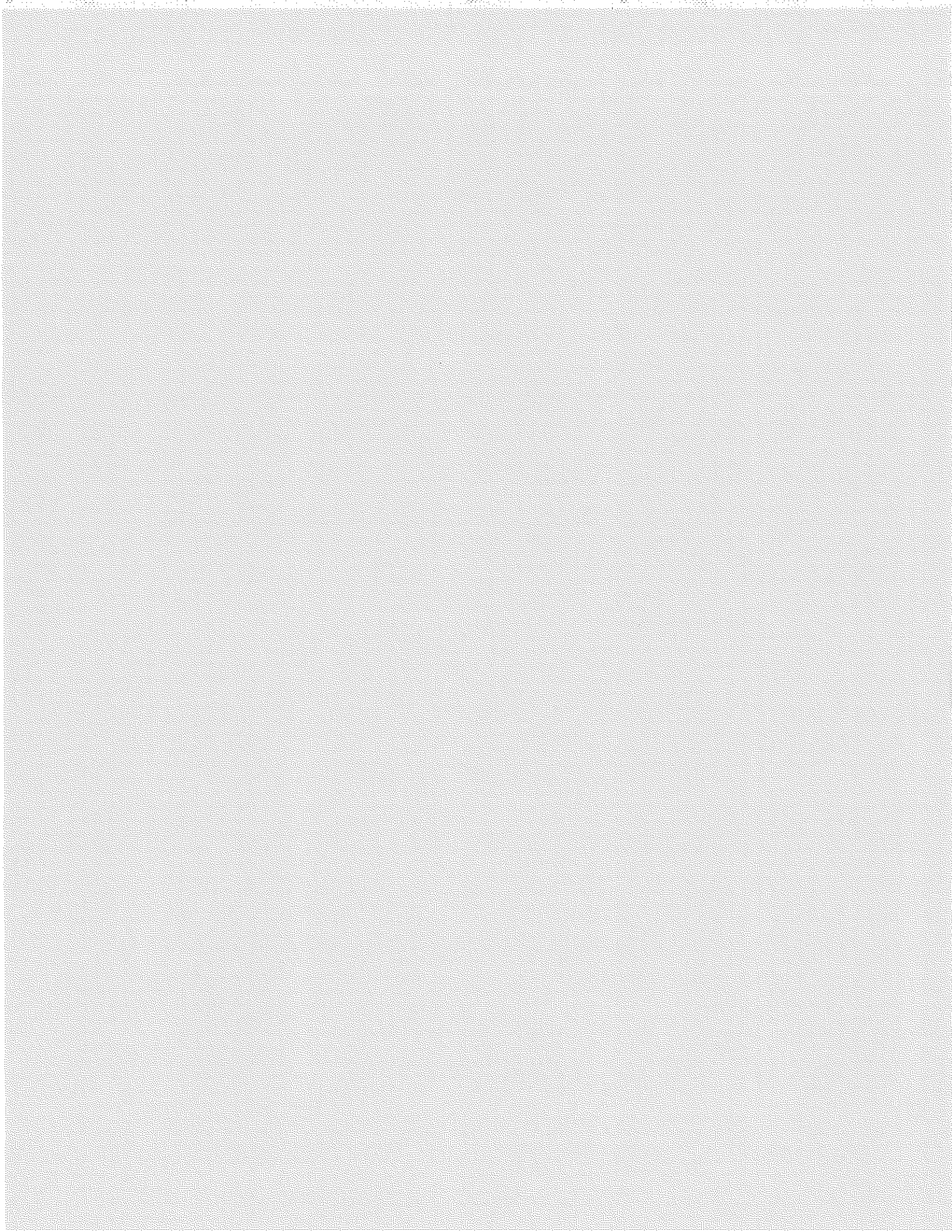
Attachment A: *Oregon Wildlife Monitoring Plan (Revised)*

Attachment B: *Revegetation Plan (Revised)*

Attachment C: *Resource Impact Avoidance and Mitigation Plan*

Notice of the Right to Appeal

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



Stateline Wind Project: Oregon Wildlife Monitoring Plan

[Revised June 6, 2003]

1 This plan describes wildlife monitoring the certificate holder shall conduct during
2 operation¹ of the Stateline Wind Project facility in Oregon. The monitoring objectives are to
3 determine whether the facility causes significant fatalities of birds and bats and to determine
4 whether the facility results in a loss of habitat quality. This plan addresses the facility as
5 permitted under the Oregon site certificate, as amended.

6 The Stateline Wind Project facility² consists of:

- 7 • Stateline 1: no more than 127 wind turbines, four meteorological (met) towers
8 and other related or supporting facilities as described in the Final Order on the
9 site certificate application (September 14, 2001).³
- 10 • Stateline 2: no more than 60 wind turbines, two met towers and other related or
11 supporting facilities as described in the Final Order on Site Certificate
12 Amendment #1.
- 13 • Stateline 3: no more than 279 wind turbines, 13 met towers, a substation,
14 approximately 17 miles of aboveground 34.5-kV transmission line,
15 approximately 8.5 miles of aboveground 115-kV or 230-kV transmission line,
16 and other related or supporting facilities as described in the Final Order on
17 Amendment #2.

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

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

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

- 29 1) Fatality monitoring program involving:
 - 30 a) Removal trials
 - 31 b) Searcher efficiency trials

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

² As used herein "facility" includes Stateline 1, 2 and 3.

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

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

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

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

1. Definitions and Methods

Seasons

This plan uses the following dates for defining seasons:

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

Search Plot Selection

The certificate holder shall conduct standardized carcass searches within search plots. The certificate holder, in consultation with the Oregon Department of Fish and Wildlife (ODFW), shall select search plots based on a systematic sampling design (in general, every other plot is sampled in a monitoring year). Turbine strings will be broken into rectangular search plots that contain two to four turbines each. The edge of plots will be no closer than 63 meters from the nearest turbine or, if guyed meteorological (met) towers are used, no closer than 63 meters from the nearest guyed met tower. The certificate holder shall provide maps of the search plots to the Office of Energy before beginning fatality monitoring at the facility. The certificate holder shall use the same search plots for each search conducted during a monitoring year.

Scheduling and Sampling Frequency

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

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

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

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

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

4 Sample Size for Standardized Carcass Searches

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

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

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

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

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

28 Duration of Fatality Monitoring

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

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

34 Stateline 3: The certificate holder may terminate the fatality monitoring of
35 Stateline 3 turbines after completing one monitoring year, subject to the approval of the
36 Office of Energy.

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

1 For both Stateline 1 and Stateline 2, the certificate holder shall use a worst-case analysis
2 to resolve any uncertainty in the results based on the first two years of data and to determine
3 whether the first two years of data indicate that mitigation is required.⁴ In lieu of approving the
4 termination of the fatality monitoring program for either Stateline 1 or Stateline 2 after two
5 years, the Office of Energy may require additional, targeted monitoring if the first two years of
6 data indicate the potential for unexpected impacts of a type that cannot be resolved appropriately
7 by worst-case analysis and appropriate mitigation.

8 For Stateline 3, the certificate holder shall use a worst-case analysis to resolve any
9 uncertainty in the results and to determine whether mitigation is required. In lieu of approving
10 the termination of the fatality monitoring program for Stateline 3 after one year, the Office of
11 Energy may require additional, targeted monitoring if the data indicate the potential for
12 unexpected impacts of a type that cannot be resolved appropriately by worst-case analysis and
13 appropriate mitigation.

14 **2. Removal Trials**

15 The objective of the removal trials is to estimate the length of time avian and bat
16 carcasses remain in the search area. Carcass removal studies will be conducted during each
17 season in the vicinity of the search plots. Estimates of carcass removal will be used to adjust
18 carcass counts for removal bias. "Carcass removal" is the disappearance of a carcass from the
19 search area due to predation, scavenging or other means such as farming activity.

20 The certificate holder shall conduct carcass removal trials within each of the seasons
21 defined above for Stateline 1 and 2 in those years in which the certificate holder performs fatality
22 monitoring. This monitoring plan does not require removal trials for Stateline 3. Planted
23 carcasses will not be placed in the carcass search plots because they might be confused with
24 wind turbine-related fatalities, especially if they have been scavenged. Planted carcasses will be
25 placed in the vicinity of search plots but not so near as to attract scavengers to the search plots
26 themselves. The planted carcasses will be located randomly within the carcass removal trial
27 plots.

28 Each season, approximately 10 carcasses of birds of two size classes (20 total carcasses)
29 will be distributed in each of two habitat types (grassland/shrub-steppe and cultivated
30 agriculture).⁵ The total number of trial carcasses may vary. Small carcasses (e.g., house
31 sparrows, starlings, commercially available game bird chicks) will simulate passerines and large
32 carcasses (e.g., raptor carcasses provided by agencies, commercially available adult game birds
33 or cryptically colored chickens) will simulate large birds such as raptors, game birds and
34 waterfowl. If fresh bat carcasses are available, they may also be used.

35 The certificate holder shall conduct ten removal trials per monitoring year: two in the
36 spring season, three in summer, two in fall and three in winter.⁶ In each trial in the spring and
37 fall, at least five carcasses from each size class (10 total carcasses) will be placed in each of the
38 two habitat types. In each trial in the summer and winter, at least three carcasses from each size

⁴ The certificate holder shall make this determination separately for Stateline 1 and 2; that is, based on two years of data on the Stateline 1 turbines and, separately, based on two years of data on the Stateline 2 turbines.

⁵ This means that approximately 160 trial carcasses would be used in carcass removal trials during one monitoring year.

⁶ For Stateline 1 and Stateline 2 monitoring years.

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

1 class (6 total carcasses) will be placed in each of the two habitat types. Trials will be spread
2 throughout the year to incorporate the effects of varying weather, climatic conditions, farming
3 practices and scavenger densities.

4 Carcasses will be placed in a variety of postures to simulate a range of conditions. For
5 example, birds will be: 1) placed in an exposed posture (e.g., thrown over the left shoulder), 2)
6 hidden to simulate a crippled bird (e.g., placed beneath a shrub or tuft of grass), and, 3) partially
7 hidden.

8 It is expected that carcasses will be checked as follows, although actual intervals may
9 vary. Carcasses will be checked for a period of 40 days to determine removal rates. They will be
10 checked every day for the first 4 days, and then on day 7, day 10, day 14, day 20, day 30 and day
11 40. This schedule may vary depending on weather and coordination with the other survey work.
12 At the end of the 40-day period, the trial carcasses will be removed. Trial carcasses will be
13 marked discreetly (markers to be determined) for recognition by searchers and other personnel.
14 Trial carcasses will be left at the location until the end of the carcass removal trial. The entire
15 carcass may be marked with a substance that fluoresces under a black light as some carcasses
16 may be reduced to feather spots.

17 Carcass searchers can check carcasses during their regular schedule of searches and
18 additionally on days they are not conducting the searches. Properly trained personnel will
19 conduct the removal trials.

20 **3. Searcher Efficiency Trials**

21 The objective of searcher efficiency trials is to estimate the percentage of bird and bat
22 fatalities that searchers are able to find.

23 The certificate holder shall conduct searcher efficiency trials in the same area in which
24 carcass searches occur in both grassland/shrub-steppe and cultivated agriculture habitat types.
25 Trials will be conducted in each season for Stateline 1 and 2 in those years in which the
26 certificate holder performs fatality monitoring. The certificate holder will conduct searcher
27 efficiency trials for Stateline 3 during the spring, summer and fall seasons. Searcher efficiency
28 will be estimated by habitat type and season. Estimates of searcher efficiency will be used to
29 adjust the number of carcasses found, correcting for detection bias.

30 Each season, approximately 10 carcasses of birds of two size classes (20 total carcasses)
31 will be distributed in each of two habitat types (grassland/shrub-steppe and cultivated
32 agriculture).⁷ The certificate holder shall conduct ten searcher efficiency trials per monitoring
33 year for Stateline 1 and 2: two in the spring season, three in summer, two in fall and three in
34 winter.⁸ In each trial in the spring and fall, at least five carcasses from each size class (10 total
35 carcasses) will be placed in each of the two habitat types. In each trial in the summer and winter,
36 at least three carcasses from each size class (6 total carcasses) will be placed in each of the two
37 habitat types. For Stateline 3, the certificate holder shall conduct searcher efficiency trials as
38 described in this paragraph, except for the winter season.

⁷ This means that approximately 160 trial carcasses would be used in searcher efficiency trials during one monitoring year.

⁸ For Stateline 1 and Stateline 2 monitoring years.

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

1 Personnel conducting searches will not know when trials are conducted; nor will they
2 know the location of the trial carcasses. If suitable trial carcasses are available, trials during the
3 fall season will include several small brown birds to simulate bat carcasses. Legally obtained bat
4 carcasses will be used if available.

5 On the day of a standardized carcass search (described below) but before the beginning of
6 the search, efficiency trial carcasses will be placed at random locations within areas to be
7 searched. If scavengers appear attracted by placement of carcasses, the carcasses will be
8 distributed before dawn.

9 Efficiency trials will be spread over the entire season to incorporate effects of varying
10 weather and vegetation growth. Carcasses will be placed in a variety of postures to simulate a
11 range of conditions. For example, birds will be: 1) placed in an exposed posture (thrown over the
12 left shoulder), 2) hidden to simulate a crippled bird, and 3) partially hidden. Each carcass will be
13 discreetly secured at its location to discourage removal by scavengers.

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

19 If new searchers are brought into the search team, additional detection trials will be
20 conducted to insure that detection rates incorporate searcher differences.

21 **4. Standardized Carcass Searches**

22 The objective of the standardized carcass searches (“fatality monitoring”) is to estimate
23 the number of bird and bat fatalities that are attributable to facility operation. The goal of bird
24 and bat fatality monitoring is to obtain a precise estimate of the fatality rate and associated
25 variances.

26 On an annual basis, the certificate holder shall report an estimate of fatalities in six
27 categories: 1) all birds, 2) small birds, 3) large birds, 4) raptors, 5) bats and 6) grassland birds.
28 The certificate holder shall base these estimates on search data from the entire Stateline Wind
29 Project in Oregon and Washington. In addition, the certificate holder shall report fatalities of
30 Washington ground squirrels observed during the carcass searches and shall record and
31 document detections of Washington ground squirrels (scat, holes and live detections).

32 The certificate holder shall estimate the number of avian and bat fatalities attributable to
33 operation of the facility based on the number of avian and bat fatalities found at the facility site
34 whose death appears related to facility operation. All carcasses located within areas surveyed,
35 regardless of species, will be recorded and, if possible, a cause of death determined based on
36 blind necropsy results. Total number of avian and bat carcasses will be estimated by adjusting for
37 removal and searcher efficiency bias. If the cause of death is not apparent, the mortality will be
38 attributed to facility operation.

39 The certificate holder shall conduct two years of fatality monitoring for Stateline 1 area
40 and two years of fatality monitoring for Stateline 2.⁹ For Stateline 3, the certificate holder shall

⁹ Years may run concurrently.

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

1 conduct three seasons (spring, summer and fall) of fatality monitoring. If analysis of the fatality
2 data collected after any two monitoring years¹⁰ indicates that a significant impact on wildlife and
3 wildlife habitat has occurred, the certificate holder shall implement appropriate mitigation,
4 subject to the approval of the Office of Energy. Mitigation is discussed in Section 12 below.

5 Personnel trained in proper search techniques (“the searchers”) will conduct the carcass
6 searches by walking parallel transects. The searchers will search rectangular search plots with the
7 long axis of the plot centered on the turbine string. All area within a minimum of 63 meters from
8 turbines or permanent guyed met towers will be searched. Transects will be initially set at 6
9 meters apart in the area to be searched. A searcher will walk at a rate of approximately 45 to 60
10 meters per minute along each transect searching both sides out to three meters for casualties.
11 Search area and speed may be adjusted by habitat type after evaluation of the first searcher
12 efficiency trial. It should take approximately 45 to 90 minutes to search each turbine (each search
13 plot contains multiple turbines), depending on the habitat type.

14 The searchers will record the condition of each carcass found, using the following
15 condition categories:

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

23 All carcasses (avian and bat) found during the standardized carcass searches will be
24 photographed, recorded and labeled with a unique number. Each carcass will be bagged and
25 frozen for future reference and possible necropsy. A copy of the data sheet for each carcass will
26 be kept with the carcass at all times. For each carcass found, searchers will record species, sex
27 and age when possible, date and time collected, location, condition (e.g., intact, scavenged,
28 feather spot) and any comments that may indicate cause of death. Searchers will photograph each
29 carcass as found and will map the find on a detailed map of the search area showing the location
30 of the wind turbines and associated facilities. The certificate holder shall coordinate collection of
31 state endangered, threatened or protected species with the Oregon Department of Fish and
32 Wildlife (ODFW). The certificate holder shall coordinate collection of federal endangered,
33 threatened or protected species with the U.S. Fish and Wildlife Service (USFWS). The certificate
34 holder shall obtain appropriate collection permits from ODFW and USFWS.

35 The searchers might discover carcasses incidental to formal carcass searches (e.g., while
36 driving within the project area). If the incidentally discovered carcasses are found at turbines that
37 are not part of the formal search sample, the searchers will identify, photograph and collect the
38 carcasses as is done for carcasses within the formal search sample during scheduled searches. If
39 the incidentally discovered carcasses are within the formal search plots, the searchers will leave
40 the carcasses undisturbed, unless the carcass is a state or federally threatened or endangered
41 species. The certificate holder shall coordinate collection of state endangered, threatened or

¹⁰ After three seasons (spring, summer and fall) for Stateline 3.

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

1 protected species with ODFW. The certificate holder shall coordinate collection of federal
2 endangered, threatened or protected species with the USFWS. The searchers will record the
3 location of all incidentally discovered carcasses or injured birds on a detailed map of the study
4 area showing the location of wind turbines and associated facilities such as power lines and met
5 towers. Any injured native birds found will be carefully captured by a trained Project Biologist
6 or technician and transported to Blue Mountain Wildlife Center in Pendleton in a timely fashion.
7 The certificate holder shall follow a protocol for handling injured birds that has been developed
8 with Lynn Thompkins of Blue Mountain Wildlife.

9 **5. Established Monitoring Transect Surveys**

10 The objective of surveys of established monitoring transects is to determine whether the
11 operation of the facility results in a loss of habitat quality. A reduction in use by grassland/steppe
12 avian species near the facility would indicate a loss of habitat quality.

13 Stateline 1 transects: The certificate holder has established 20 transects
14 perpendicular to the turbine strings in non-agricultural grassland steppe and CRP
15 habitats.¹¹

16 Stateline 2 transects: No additional transects could be established because the
17 turbine strings are located in cultivated land.

18 Stateline 3 transects: The certificate holder shall establish six new transects (four
19 on turbine strings BG-A, BG-B or BG-C, and two on turbine string G-B).¹²

20 The transects will be a maximum of 1000 feet (300 meters) long, but, if no alternative
21 exists, some transects may be shorter due to access problems or a change of habitat type from
22 non-agricultural habitats to cultivated agricultural habitats. The certificate holder will provide to
23 the Office of Energy a map or other clear indication of locations where landowners refuse access
24 and a map of the locations of the established monitoring transects before beginning the
25 monitoring transect surveys for Stateline 1.

26 A qualified observer will walk the pre-established transects and record observations of
27 grasshopper sparrows (singing males and perched birds), long-billed curlews and other
28 grassland/steppe avian species. The approximate distance along the transect will be recorded for
29 each detection, and the habitat type will be recorded for each 50 meter (m) segment of the
30 transect (6 segments).

31 Three searches will be conducted between mid-April and late June. The searches will
32 occur at times spread throughout the period, and the same timing of searches will be used for
33 each monitoring year. Observers will record observations of grassland/steppe avian species
34 within 50 m on either side of the transect. Numbers of individual birds (if possible to determine)
35 for each species will be recorded for each transect. Observers will map the locations where

¹¹ The original Oregon Wildlife Monitoring Plan (9/14/01) required the certificate holder to survey 24 transects that had been established before construction of Stateline 1. However, due to changes in project layout between the initial monitoring plan and the final layout as shown in the site certificate and changes in habitat due to landowner uses, the number of suitable transects for this survey has been reduced to 20.

¹² Transects on turbine strings BG-A, BG-B and BG-C were surveyed in 2001 or 2002. In 2003, the certificate holder shall conduct pre-construction surveys of all six transects that will be used for post-construction surveys.

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

1 individual birds are first observed. During each transect search, observers will record detections
2 of Washington ground squirrels (scat, holes and live detections).

3 The certificate holder shall conduct a gradient analysis, using regression analysis or other
4 appropriate statistical methods, to determine the relationship between density of grassland/steppe
5 avian species and distance from turbines. A “gradient analysis” means an analysis that assesses
6 whether a significant or a biologically substantial relationship exists between distance from
7 project structures and abundance or use of the area.

8 The certificate holder shall conduct post-construction established transect surveys on the
9 20 Stateline 1 transects in 2002 and 2006. If any Stateline 3 turbines are built, the certificate
10 holder shall conduct an additional year of transect surveys on the 20 Stateline 1 transects and
11 shall survey the six Stateline 3 turbines in 2008. The Office of Energy may require a second year
12 of transect surveys on the Stateline 3 transects if first-year data suggest effects inconsistent with
13 the results of the Stateline 1 transect surveys.

14 Based on the results of the Stateline 1 and Stateline 3 transect surveys, the certificate
15 holder shall determine whether the gradient analysis indicates that the energy facility structures
16 are causing reduced wildlife use of nearby habitat. If the analysis indicates any displacement of
17 grassland/steppe avian species has occurred, the certificate holder shall implement appropriate
18 mitigation, subject to the approval of the Office of Energy. If the gradient analysis suggests that
19 displacement has occurred but lacks statistical power, the certificate holder shall make the worst-
20 case assumption that displacement has occurred to the extent demonstrated in available scientific
21 literature (Leddy et al. 1999) and shall mitigate accordingly. Such mitigation may include the
22 enhancement of an amount of habitat necessary to support the estimated number of grasshopper
23 sparrows and other grassland nesting passerines displaced by the wind turbines and the
24 protection of that enhanced habitat for the life of the facility. The certificate holder shall estimate
25 the displacement effect and distance using the gradient analysis described above.

26 The Office of Energy may require additional, targeted surveys if the data from transect
27 surveys indicate the potential for unexpected impacts of a type that cannot be resolved
28 appropriately by worst-case analysis and appropriate mitigation.

29 **6. Raptor Nest Surveys**

30 The objectives of raptor nest surveys are to estimate the size of the local breeding
31 populations of tree-nesting raptor species in the vicinity of the facility and to determine whether
32 operation of the facility results in a reduction of nesting activity or nesting success in the local
33 populations of “target raptor species”: Swainson’s hawk, ferruginous hawk, golden eagle and
34 prairie falcon.

35 Aerial and ground surveys will be used to gather nest success statistics on active nests,
36 nests with young and young fledged. The certificate holder will share the data with state and
37 federal biologists.

38 During each survey year, the certificate holder shall conduct at least one helicopter
39 survey and additional surveys as described in this section. All nests will be given identification
40 numbers, and nest locations will be recorded on U.S. Geological Survey 7.5-minute quadrangle
41 maps. Global positioning system coordinates will be recorded for each nest. Locations of
42 inactive nests will also be recorded as they may become occupied during future years. All new

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

1 nests not previously mapped, whether active or inactive, will be given an identification number
2 and their locations (coordinates) will be recorded. Ground surveys are subject to access.

3 For Stateline 1, the certificate holder conducted aerial surveys between May 5 and 17,
4 2002, and between June 8 and 28, 2002. Surveys were conducted within a 5-mile buffer of the
5 Stateline 1 turbines. In addition, active ferruginous hawk and Swainson's hawk nests within two
6 miles of Stateline 1 turbines were surveyed from the ground to determine nesting success.

7 In 2003, the certificate holder shall conduct an aerial survey within a 2-mile buffer of
8 Stateline 1 and 2 turbines to determine nest occupancy. In addition, the certificate holder shall
9 conduct a minimum of one ground survey to determine species, number of young and nesting
10 success. "Nesting success" means that the young have successfully fledged (the young are
11 independent of the core nest site). In the ground surveys, the certificate holder shall target
12 Swainson's hawk and ferruginous hawk nests and any nests of the target raptor species not
13 observed during the aerial survey.

14 In 2006, the certificate holder shall conduct an aerial survey to determine nest occupancy
15 and a minimum of one ground survey to determine species, number of young and nesting
16 success. The survey area will be within a 2-mile buffer around Stateline 2 turbines. However, if
17 any Stateline 3 turbines are built, the survey area will cover a 2-mile buffer around all Stateline
18 1, 2 and 3 turbines. In the ground surveys, the certificate holder shall target Swainson's hawk
19 and ferruginous hawk nests and any nests of the target raptor species not observed during the
20 aerial survey.

21 In 2008, if any Stateline 3 turbines are built, the certificate holder shall conduct an aerial
22 survey within a 2-mile buffer of Stateline 1, 2 and 3 turbines to determine nest occupancy by
23 ferruginous hawks. In addition, the certificate holder shall conduct a minimum of one ground
24 survey of ferruginous hawk nests to determine number of young and nesting success.

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

30 If analysis of the raptor nesting data indicates any reduction in nesting success by the
31 target raptor species within two miles of the facility, the certificate holder shall implement
32 appropriate mitigation, subject to the approval of the Office of Energy. At a minimum, if the
33 surveys reveal that a target raptor species has abandoned a nest or territory within ½ mile of the
34 facility, or has not fledged any young over any two survey years, the certificate holder shall
35 assume the abandonment or unsuccessful fledging is the result of the project unless another cause
36 can be demonstrated conclusively. Based on that assumption, the certificate holder shall
37 implement appropriate mitigation. In addition, if the data indicate clear evidence of displacement
38 or disturbance of target raptor nesting species between ½ mile and 2 miles from the facility, the
39 certificate holder shall implement appropriate mitigation.

40 For ferruginous hawks, appropriate mitigation may include creation, maintenance and
41 monitoring of nesting platforms; specifically, eight nesting platforms would be created a
42 minimum of 2 miles away from turbines for every ferruginous hawk nest assumed or shown to
43 be affected.

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

1 Due to the difficulty in replacing nesting habitat for Swainson's hawks, appropriate
2 mitigation may include determining the status of the tree structures currently supporting
3 Swainson's hawks within three miles of the turbines and, with landowner approval,
4 implementing protection measures to retain those structures and to protect existing nest trees.
5 This may include fencing to protect existing trees or spraying black locust trees for insect
6 infestation. It may be appropriate to recruit native tree species.

7 **7. Burrowing Owl Surveys**

8 The objectives of owl surveys are to estimate the size of the local breeding population of
9 burrowing owls in the vicinity of the facility and to determine whether operation of the facility
10 results in a reduction of nesting activity or nesting success in the local burrowing owl population.

11 Given the expected small sample size of active burrowing owl nests within 1000 feet of
12 the facility, impacts may have to be judged based on trends in the data, results from other wind
13 energy facility monitoring studies and literature on what is known regarding the populations in
14 the region. No burrowing owls were observed within 1000 feet of the proposed Stateline 1
15 turbines during the 2001 spring pre-construction surveys. Therefore, there is no ability to make
16 any statistical or descriptive inferences on burrowing owl displacement or disturbance impacts to
17 burrowing owls in Oregon.

18 For Stateline 1 and 2 facilities, the certificate holder shall conduct burrowing owl surveys
19 during the breeding season within suitable grassland habitat in association with the fatality
20 monitoring described above in section 4. For each monitoring year, the certificate holder shall
21 conduct a minimum of two surveys for burrowing owls to obtain estimates of burrowing owl nest
22 density near the turbines. For these surveys, the certificate holder shall follow a protocol
23 developed in consultation with ODFW. Taped burrowing owl vocalizations will be played to
24 enhance the ability to detect burrowing owls. Two historic nest sites within the Oregon project
25 area will be checked for use. The burrow and an adjacent 100 meters will be surveyed for sign of
26 activity and alternate nest sites. Based on the results of these surveys after any two years¹³ and
27 data from the standardized carcass searches, the Office of Energy may require the certificate
28 holder to conduct additional burrowing owl nest surveys or other related surveys (e.g., radio-
29 tagging owls) or to provide mitigation. During the burrowing owl surveys, observers shall record
30 and document detections of Washington ground squirrels (scat, holes and live detections).

31 For Stateline 3 facilities, the certificate holder shall conduct a burrowing owl survey in
32 2006 for known active or historic burrowing owl nests and any newly discovered nests within
33 1000 feet of the Stateline 3 wind turbines.

34 **8. Avian Use Surveys**

35 During each standardized carcass search, as described in section 4 above, observers will
36 record birds detected in a ten-minute period at approximately one-third of the turbines within the
37 carcass search plots (e.g., one point count station per carcass search plot which may consist of two
38 to four turbines) using standard variable circular plot point count survey methods. Additional
39 observations of species of concern will be made if observed during the carcass searches, but

¹³ For Stateline 1 or 2.

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

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

3 For Stateline 3, observers shall record observations of birds perching on aboveground
4 transmission line conductors and support structures in the vicinity of the turbines being searched.
5 Observers shall document number of perching birds observed, species, location and whether the
6 perching was on a pole or a conductor. Observers shall report any fatalities observed below or near
7 transmission lines.

8 **9. FPL's Stateline Wind Project Wildlife Response and Reporting System**

9 FPL's Stateline Wind Project Wildlife Response and Reporting System is a monitoring
10 program set up for searching for and handling avian and bat casualties found by maintenance
11 personnel. A description of this system and associated data forms used for the Vansycle Ridge
12 Wind Project are found in FPL's application for a site certificate (Attachment P-6, Appendices B
13 and C).

14 This system has been in place at the Vansycle project since early 2000, and a similar
15 system is in place for Stateline 1 and Stateline 2. Construction and maintenance personnel will be
16 trained in the methods. This monitoring program includes both reporting of carcasses discovered
17 incidental to construction and maintenance operations ("incidental finds") and reporting of
18 carcasses discovered under a standardized search protocol for an area within approximately 50
19 meters of the turbines, measured from the base of the tower ("protocol searches").

20 For Stateline 1, a sample of approximately 45 turbines not included in the standardized
21 carcass searches will be chosen to be included in protocol searches in each Stateline 1
22 monitoring year. The certificate holder shall select this sample from the overall Stateline Wind
23 Project in Oregon and Washington, with at least 13 of the sampled turbines located in Oregon.

24 For Stateline 2, the certificate holder shall select a sample of seven Stateline 2 turbines
25 not included in the standardized carcass searches to include in protocol searches in each Stateline
26 2 monitoring year.

27 For Stateline 3, the certificate holder shall select a sample of approximately 15 percent of
28 the Stateline 3 turbines that are built by December 31, 2005, and that are not included in the
29 standardized carcass searches.

30 All carcasses discovered by maintenance personnel will be photographed and recorded. If
31 maintenance personnel find carcasses within the search plots for protocol searches, they will
32 notify a project biologist who will collect the carcasses. If maintenance personnel discover
33 incidental finds at turbines that are not within search plots for the standardized carcass searches
34 described in section 4, they will notify a project biologist who will collect the carcasses. If
35 maintenance personnel discover carcasses within search plots for the standardized carcass
36 searches described in Section 4, they will leave the carcasses undisturbed, unless the carcass is a
37 state or federally threatened or endangered or otherwise protected species. The certificate holder
38 shall coordinate collection of state endangered, threatened or protected species with ODFW. The
39 certificate holder shall coordinate collection of federal endangered, threatened or protected
40 species with the USFWS.

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

10. Statistical Analysis Methods for Fatality Data

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

- (1) Observed number of carcasses found during standardized carcass searches for which the cause of death is either unknown or is attributed to the facility.
- (2) Searcher efficiency expressed as the proportion of planted carcasses found by searchers
- (3) Non-removal rates expressed as the length of time a carcass is expected to remain in the study area and be available for detection by the searchers

Definition of Variables

The following variables are used in the equations below:

c_i	the number of carcasses detected at plot i for the study period of interest ¹⁴ for which the cause of death is either unknown or is attributed to the facility
n	the number of search plots
k	the number of turbines searched (includes the turbines centered within each search plot and a proportion of the number of turbines adjacent to search plots to account for the effect of adjacent turbines on the 63-meter search plot buffer area)
\bar{c}	the average number of carcasses observed per turbine per year
s	the number of carcasses used in removal trials
s_c	the number of carcasses in removal trials that remain in the study area after 40 days
se	standard error (square of the sample variance of the mean)
t_i	the time (days) a carcass remains in the study area before it is removed
\bar{t}	the average time (days) a carcass remains in the study area before it is removed
d	the total number of carcasses placed in searcher efficiency trials
p	the estimated proportion of detectable carcasses found by searchers
I	the interval between searches in days
$\hat{\pi}_i$	the estimated probability that a carcass is both available to be found during a search and is found ($i = 1$ and 2 ; two estimators)
m_i	the estimated annual average number of fatalities per turbine per year, adjusted for removal and observer detection bias ($i = 1$ and 2 ; two estimators)

¹⁴ The study period is one year, except for fatality monitoring of Stateline 3 turbines. For Stateline 3, the study period includes only the spring, summer and fall seasons.

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

1 Observed Number of Carcasses

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

4
$$\bar{c} = \frac{\sum_{i=1}^n c_i}{k}$$

5 The final estimate of \bar{c} and its standard error are to be calculated using bootstrapping
6 (Manly *et al.* 1997¹⁵). Bootstrapping is a computer simulation technique that is useful for
7 calculating point estimates, variances and confidence intervals for complicated test statistics. The
8 certificate holder shall calculate the mean of at least 5000 bootstrap estimates. The standard
9 deviation of the bootstrap estimates of \bar{c} is the estimated standard error of \bar{c} (that is, $se(\bar{c})$).

10 Estimation of Carcass Removal

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

14
$$\bar{t} = \frac{\sum_{i=1}^s t_i}{s - s_c}$$

15 This estimator is the maximum likelihood estimator assuming that the removal times
16 follow an exponential distribution and that there is right-censoring of data. Any trial carcasses
17 still remaining at 40 days are collected, yielding censored observations at 40 days. If all trial
18 carcasses are removed before the end of the trial, then s_c is 0, and \bar{t} is just the arithmetic average
19 of the removal times.

20 The certificate holder shall use bootstrapping to calculate the final estimate of \bar{t} , the
21 estimated standard error and 90% confidence limits. At least 5000 bootstrap iterations will be
22 used. The standard deviation of the bootstrap estimates of \bar{t} is the estimated standard error of
23 \bar{t} (that is, $se(\bar{t})$). Removal rates will be estimated by major habitat, carcass size (large and
24 small) and season.

25 Estimation of Searcher Efficiency

26 Searcher efficiency rates (that is, the rate of observer detection) are expressed as p , the
27 proportion of trial carcasses that are detected by searchers. The standard error (square of variance
28 of mean) and 90% confidence limits will be calculated by bootstrapping. At least 5000 bootstrap
29 iterations will be used. Observer detection rates will be estimated by major habitat, carcass size
30 and season.

31 Estimation of Total Number of Facility-Related Fatalities

32 The certificate holder shall provide two estimators for the mean number of fatalities per
33 turbine per year. Both estimators adjust the observed number of fatalities by dividing the
34 number of observed carcasses by an estimate of the probability that a carcass is available to be

¹⁵ Manly, B.F.J., *Randomization, Bootstrap and Monte Carlo Methods in Biology* (2nd edition), Chapman and Hall, New York (1997).

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

1 picked up during a fatality search (i.e, the probability the carcass is not removed by a scavenger)
2 and is observed (the probability of detection).

3 The first estimator of total number of annual facility-related fatalities (m_1) is calculated
4 by:

$$5 \quad m_1 = \frac{\bar{c}}{\hat{\pi}_1}$$

6 where

$$7 \quad \hat{\pi}_1 = \begin{cases} \frac{\bar{t} * p}{I} & \text{if } I > \bar{t} \\ p & \text{if } I \leq \bar{t} \end{cases}$$

8 This first estimator appears to provide an underestimate of true mortality when the
9 interval between searches is similar to the mean carcass removal time. For this reason, the
10 certificate holder shall calculate the mean number of fatalities per turbine per year¹⁶ using a
11 second estimator, as follows:

$$12 \quad m_2 = \frac{\bar{c}}{\hat{\pi}_2} \text{ where } \hat{\pi}_2 \text{ includes adjustments for both observer detection and scavenging bias}$$

13 and assuming that the carcass removal times t_i follow an exponential distribution.

14 This second estimator does not underestimate true mortality when the mean removal time
15 is similar to or larger than the interval between searches. This estimator will be used when
16 comparisons are made to determine if mitigation should be implemented as described in Section
17 12.

18 The certificate holder shall calculate this estimate separately for each of five categories:
19 1) all birds, 2) small birds, 3) large birds, 4) raptors, 5) bats and 6) grassland birds.¹⁷ Estimates
20 will be provided separately for turbines and any permanent guyed met towers. The certificate
21 holder shall calculate the “all birds” estimate and the “small birds” estimate for all species and,
22 separately, for only those species protected by law. Modifications to these estimates will be made
23 to incorporate the varying search efforts by season (monthly in winter and summer, twice
24 monthly in fall and spring). In addition, the certificate holder shall estimate the number of
25 facility-related fatalities separately for turbines that are located on land that does not support
26 grassland steppe or low shrub/shrub steppe habitat and for turbines that are located on land that
27 does support grassland steppe or low shrub/shrub steppe habitat. Additional modifications may
28 be made, subject to approval by the Office of Energy.

¹⁶ In the case of Stateline 3, the calculation would be the mean number of fatalities per turbine during the study period (spring, summer and fall seasons). This will also be expressed as the mean number of fatalities per turbine per year for comparison purposes by assuming the Stateline 1 and 2 winter fatality rates apply to the Stateline 3 sampled turbines.

¹⁷ Grassland nesting species include grasshopper sparrow, savannah sparrow, vesper sparrow, short-eared owl, burrowing owl, northern harrier, horned lark, western meadowlark, long-billed curlew, ring-necked pheasant, Hungarian partridge, chukar partridge, California quail and any other resident grassland nesting bird species that is found in the area.

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

1 The variance of m is difficult to estimate due to the products and ratios of random
2 variables in the equation above. The certificate holder may estimate the variance and confidence
3 intervals using the computer intensive technique of bootstrapping (Manly 1997, Barnard 2000).

4 **11. Data Reporting**

5 The certificate holder will report the monitoring data and analysis to the Council. This
6 report may be included in the annual report required under OAR 345-026-0080 or may be
7 submitted as a separate document at the same time the annual report is submitted. In addition, the
8 certificate holder shall provide to the Council any data or record generated in carrying out this
9 monitoring plan upon request by the Council.

10 The certificate holder shall notify USFWS and ODFW immediately in the event that any
11 federal or state endangered or threatened species are taken.

12 The public will have an opportunity to receive information about monitoring results and
13 to offer comment. Within 30 days after receiving the annual report of monitoring results, the
14 Office of Energy will give reasonable public notice and make the report available to the public.
15 The notice will specify a time in which the public may submit comments to the Office. The
16 Technical Advisory Committee established under the Walla Walla County conditional use permit
17 may offer comments about the results of monitoring programs in Oregon.

18 **12. Mitigation**

19 The selection of the mitigation actions that the certificate holder may be required to
20 implement under this plan should allow for flexibility in creating appropriate responses to
21 monitoring results that cannot be known in advance. If mitigation is needed, the certificate holder
22 shall propose appropriate mitigation actions to the Office of Energy and shall carry out
23 mitigation actions approved by the Office of Energy. In addition to mitigation described above,
24 possible mitigation actions include but are not limited to the measures discussed in this section.

25 *Grassland Nesting Species*

26 Grassland nesting species include grasshopper sparrow, savannah sparrow, vesper
27 sparrow, short-eared owl, burrowing owl, northern harrier, horned lark, western meadowlark,
28 long-billed curlew, ring-necked pheasant, Hungarian partridge, chukar partridge, California quail
29 and any other resident grassland nesting bird species that is found in the area. The certificate
30 holder shall determine significant impact to grassland nesting species based on the fatality
31 monitoring program discussed above. The certificate holder shall calculate the average annual
32 fatality rate separately for turbines and, if permanent guyed met towers are used, for permanent
33 guyed met towers. If the average annual fatality rate¹⁸ is greater than 1.25 fatalities per turbine or
34 guyed met tower per year for all species combined or if the average annual fatality rate is greater
35 than 0.5 fatalities per turbine or guyed met tower per year for a single grassland nesting bird
36 species, then the certificate holder shall assume that a significant impact on habitat has occurred
37 and shall implement appropriate mitigation. The certificate holder shall include in this estimate
38 any grassland nesting species fatality that is observed, even if it is observed during the non-
39 nesting period. The certificate holder shall include in the estimate all carcasses unidentified as to

¹⁸ The "average annual fatality rate" is the average of the two annual estimates of fatalities.

Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

1 species and for which there is no evidence to rule out the carcass as one of the grassland species
2 listed above.

3 The certificate holder shall determine the need for mitigation for turbine towers and
4 guyed meteorological towers separately. If the analysis of turbine fatality data indicates that
5 mitigation for grassland nesting species is required, the certificate holder shall enhance sufficient
6 habitat to support the number of grassland nesting birds affected. The number of birds affected
7 includes the number of fatalities above the all species threshold (1.25 fatalities/turbine/year) and
8 the number of fatalities above the single species threshold (0.5 fatalities/turbine/year). The
9 certificate holder shall protect that enhanced habitat for the life of the facility. The certificate
10 holder shall propose the amount of habitat enhancement based on expected densities and habitat
11 requirements of these species as described in the literature and studies of the Stateline facility
12 and other wind energy facilities in the Northwest. If the analysis of guyed met tower fatality data
13 indicates that mitigation for grassland nesting species is required, the certificate holder shall
14 implement appropriate mitigation such as 1) enhancing sufficient habitat to support the number
15 of grassland nesting birds affected (determined as above for turbine-related fatalities), 2) moving
16 the guyed met towers associated with high fatalities or 3) changing the design of the met towers
17 to reduce fatality risk.

18 If the mitigation threshold for grassland nesting species is not met but fatalities of a
19 sensitive species, such as grasshopper sparrow, burrowing owl or long-billed curlew are at a
20 level of concern, the Office of Energy may require the certificate holder to implement mitigation
21 for that species.

22 Raptors

23 The certificate holder shall determine significant impact to raptors (excluding burrowing
24 owls, short-eared owls and northern harriers, which are considered under grassland nesting
25 species) based on the fatality monitoring program data and any other raptor fatalities found. If
26 more than an average of two raptor fatalities are found per year, then the certificate holder shall
27 assume that a significant impact on raptor habitat has occurred and shall implement appropriate
28 mitigation.

29 To mitigate for a significant impact on raptor habitat, the certificate holder shall provide
30 funding to fence draw bottom areas. The certificate holder shall fence draw bottom areas within
31 the facility site or up to 15 miles away within Oregon. The objective of fencing is to retain or
32 establish recruitment of deciduous trees for future raptor nesting. The certificate holder shall
33 include funding for annual monitoring and maintenance of the fencing for the life of the facility.
34 For each raptor fatality above the mitigation threshold, the linear length of fencing, at a
35 minimum, shall be sufficient to fence 1,000 feet of draw bottom¹⁹ that has trees or the potential
36 to grow trees. If no suitable nesting structures are present in the fenced areas, the certificate
37 holder shall plant 10 trees in each fenced area.

38 If the mitigation threshold is not met but fatalities of a sensitive raptor species, such as
39 ferruginous hawk or Swainson's hawk are at a level of concern, the Office of Energy may
40 require the certificate holder to implement mitigation for that species.

¹⁹ The fenced area would be about 50 feet wide for most intermittent streams in the area.

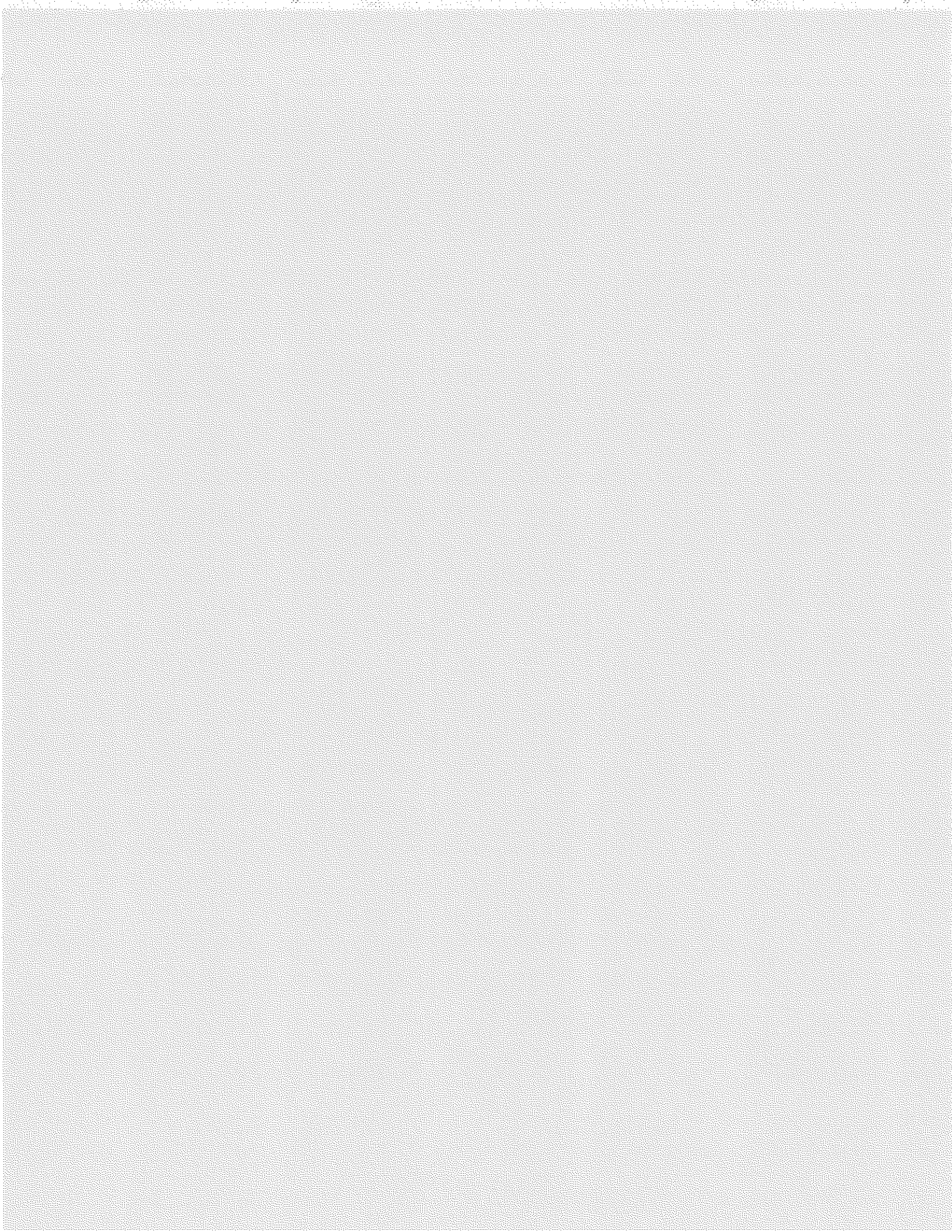
Oregon Wildlife Monitoring Plan
[REVISED JUNE 6, 2003]

1 Other Bird Species and Bats

2 Mitigation measures for grassland nesting birds and for raptors, if implemented, would
3 also benefit other bird species and bats. There is no mitigation threshold for these species.
4 However, if fatalities to these species are higher than expected and are at a level of concern, the
5 Office of Energy may require the certificate holder to implement mitigation for these species.

6 **13. Amendment of the Plan**

7 This Oregon Wildlife Monitoring Plan may be amended from time to time by agreement
8 of the certificate holder and the Council. Such amendments may be made without amendment of
9 the site certificate. The Council authorizes the Office of Energy to agree to amendments to this
10 plan and to mitigation actions that may be required under this plan. The Office of Energy shall
11 notify the Council of all amendments and mitigation actions, and the Council retains the
12 authority to approve, reject or modify any amendment of this plan or mitigation action agreed to
13 by the Office.



Stateline Wind Project: Revegetation Plan

[REVISED JUNE 6, 2003]

1. Introduction

The certificate holder is operating a wind power project in Oregon known as the “Stateline Wind Project” or “Stateline Energy Center.” This Revegetation Plan addresses only the parts of the project that are located in Oregon, although there are associated wind energy facilities in Washington that are part of the overall project. The turbine strings are spread out along several ridgecrests located approximately six miles southwest of the town of Touchet, Washington. In addition to the turbine strings, additional facilities such as access roads, underground and overhead transmission lines and a substation are part of the project.

In the site certificate, the certificate holder agrees to mitigate impacts associated with the loss of grassland and shrub-steppe habitats and Conservation Reserve Program (CRP) lands. This Revegetation Plan addresses both the revegetation of areas temporarily disturbed by construction of the project and mitigation for permanent loss of habitat by vegetation improvement within Habitat Enhancement Areas. The goal for temporarily disturbed areas (such as road shoulders, underground electric cable trenches and the temporarily disturbed area around tower sites) is to return the disturbed habitat to pre-construction (or better) conditions.

In addition to areas temporarily disturbed during construction of the project, certain areas are permanently affected by the placement of project facilities for the life of the project. These permanently disturbed areas include the location of new or widened roads, the turbine pad areas and the substation area. Some of these areas are located in areas cultivated for winter wheat or other grain crops. No mitigation is proposed for the long-term loss of these agricultural areas (although the landowner is compensated through wind lease payments).

The Oregon portion of the project has three parts:

- Stateline 1: no more than 127 wind turbines and related or supporting facilities as described in the Final Order on the Application.
- Stateline 2: no more than 60 wind turbines and related or supporting facilities as described in the Final Order on Amendment #1.
- Stateline 3: no more than 279 wind turbines, 13 met towers, a substation and other related or supporting facilities as described in the Final Order on Amendment #2.

The tables below show the areas of temporary and permanent disturbance and the affected habitat types for each part of the Oregon facility (excluding agricultural areas rated Category 6):

Revegetation Plan
[REVISED JUNE 6, 2003]

Stateline 1

Category	Vegetation Types	Acres of temporary disturbance	Acres of permanent impact
2	Grassland Steppe	0.7	0.5
3	Grassland Steppe; CRP	77.3	47.8
	Total Stateline 1	78	48.3

Stateline 2

Category	Vegetation Types	Acres of temporary disturbance	Acres of permanent impact
3	Grassland Steppe; CRP	10	<1
4	Grassland	1	<1
	Total Stateline 2	11	>1

Stateline 3

Category	Vegetation Types	Acres of temporary disturbance	Acres of permanent impact
1	Grassland Steppe	7.7	4.6
2	Grassland Steppe; Riparian	41.5	10.2
3	Grassland Steppe; CRP	57.9	8.5
5	New CRP Seeded Grassland	46.7	5.9
	Total Stateline 3	153.8	29.2

1 Thus, for Stateline 1, 2 and 3, the certificate holder shall mitigate for permanent impact
 2 on a total of approximately 79 acres of grassland steppe and CRP habitats in Oregon. Section 4
 3 describes habitat improvement procedures for degraded habitat that the certificate holder shall
 4 revegetate to mitigate for areas of permanent impact. In addition, the certificate holder shall
 5 restore the areas of temporary disturbance upon completion of construction of each phase of the
 6 project, as shown in the tables. Section 3 below describes revegetation procedures for restoring
 7 areas of temporary disturbance.

8 In order to achieve these habitat mitigation objectives, this plan has been prepared to
 9 guide the revegetation efforts. Seed mixes, planting methods and weed control techniques have
 10 been developed specifically for the project area through consultations with the Oregon
 11 Department of Fish and Wildlife (ODFW), reviews of current literature and site visits by
 12 revegetation specialists. The plan also specifies monitoring procedures to evaluate the success of
 13 the revegetation efforts, including recommended remediative action should initial revegetation
 14 efforts prove unsuccessful in certain areas.

15 **2. Project Area**

16 **2.1. Project Description**

17 The Stateline wind power project consists of a number of turbine strings, with Vestas 660
 18 kW wind turbine structures. Each structure is approximately 242 feet (ft.) tall (including the
 19 turbine blades), with a rotor diameter of 154 ft. Each turbine is supported on a concrete pad
 20 approximately 40 ft. by 40 ft. The turbines are linked by access roads and underground and

Revegetation Plan
[REVISED JUNE 6, 2003]

1 aboveground 34.5 kV transmission lines. In addition, the project includes a substation and an
2 8.5-mile 115-kV or 230-kV transmission line.

3 Access roads are needed in several areas to transport equipment and personnel to the
4 facilities. In many cases, existing roads are adequate to provide access, but some new roads and
5 expansion of some existing roads are needed. Overhead transmission lines are used to conduct
6 electricity from the turbine strings to a substation and from the substation to existing
7 transmission lines in the Washington.

8 If the certificate holder constructs all approved Stateline 1, 2 and 3 facilities, the
9 permanent facilities would occupy approximately 165 acres in Oregon. However, a large portion
10 of this total area (approximately 86 acres) is cultivated land.

11 In addition, areas of temporary disturbance occur during construction of the project.
12 Laydown areas and equipment work areas at the tower sites are needed to construct the turbines.
13 Construction of access roads also requires the temporary disturbance of habitat in addition to
14 permanent disturbance of the roadbed. In addition, construction of powerlines, both above and
15 below ground, temporarily affects habitat. For the underground lines, temporary impacts are
16 similar to pipeline installation, while for the overhead lines, disturbance is primarily limited to
17 the tower bases. Additionally, miscellaneous facilities such as staging areas, parking lots and
18 turnouts are temporarily disturbed during construction. In total, if the certificate holder constructs
19 all approved Stateline 1, 2 and 3 facilities, temporary disturbance would affect approximately
20 565 acres. However, a large portion of the temporarily disturbed area (approximately 322 acres)
21 is on cultivated land.

22 **2.2. Physiography, Geology, and Soils**

23 The turbine string sites are located on ridgetops that generally run along northwest-
24 southeast lines. Slopes along the strings themselves are gentle, typically ranging from 0° to 10°.
25 Slopes down from the ridgetops are variable, generally ranging from 5° to 30°.

26 Elevations of the turbines strings range from 1,760 ft. above mean sea level to 1,100 ft.
27 Elevations for the access roads and proposed transmission line near Ninemile Canyon range from
28 1,100 ft. down to 385 ft.

29 Soils within the project area are primarily basalt-derived loams (NRCS 1994, NRCS
30 1988). The ridgetops, where the turbines will be located, are typically shallow lithosols. Other
31 areas have deeper soils, which have often been cultivated for small grain production or seeded as
32 grazing lands.

33 **2.3. Climate**

34 The project area averages 10 to 15 inches of precipitation annually, most of which falls
35 from October through March. The average annual air temperature is 50° to 53° Fahrenheit, and
36 the average frost-free period is 135 to 170 days (NRCS 1988). Strong winds are often present
37 along the ridgetops.

38 **2.4. General Vegetation**

39 Potential vegetation communities in the project vicinity are primarily bunchgrass and
40 shrub-steppe associations. On the deeper-soiled habitats, *Agropyron spicatum* (bluebunch

Revegetation Plan
[REVISED JUNE 6, 2003]

1 wheatgrass) and *Festuca idahoensis* (Idaho fescue) are the dominant climax native grasses, and
2 *Artemisia tridentata* (big sagebrush) is the climax shrub associate. Along some of the ridgetops
3 shallow-soiled lithosol communities are present, dominated by *Poa secunda* (Sandberg's
4 bluegrass) and various forb species such as *Eriogonum compositum* (northern buckwheat) and
5 *Phlox hoodii* (Hood's phlox).

6 Actual vegetation in the general vicinity, however, is heavily disturbed and modified in
7 many places. Much of the area has been cultivated with monoculture crops of wheat and other
8 small grains. Most of the remaining habitat is maintained at an early seral stage due to a number
9 of disturbance factors. Weedy species are prevalent throughout, and extensive habitat
10 modification has taken place. *Bromus tectorum* (cheatgrass) and other annual grasses are the
11 dominant species on many of the deeper-soiled habitats. *Chrysothamnus* spp. (rabbitbrushes) are
12 the dominant shrubs in many of the shrub-steppe habitats. The shallow-soiled communities have
13 also been heavily modified over the years.

14 2.5. Land Use

15 The project area is privately owned by several agricultural operators. As mentioned
16 above, much of the area is used for cattle grazing and agricultural activities. The cultivated land
17 is used for production of small grain crops such as wheat or barley. The grazed land is either
18 native shrub-steppe or land previously set aside in the federal Conservation Reserve Program.
19 Some of the native habitats on shallow soils receive little or no grazing.

20 2.6. Environmental Conditions

21 A variety of environmental conditions within the project area make the establishment of
22 desirable plant species difficult. Low precipitation and sandy soils provide very little available
23 moisture for germinating seeds. In addition, extensive past and present disturbance to the
24 vegetative communities has created many areas dominated by non-native, weedy species. These
25 species could spread to areas disturbed by construction activities and compete with planted
26 species for the limited resources. The noxious weed *Centaurea solstitialis* (star thistle) is
27 particularly abundant in the project area. Finally, high winds in the area further complicate
28 efforts to establish desirable vegetation.

29 3. Revegetation Procedures (Temporarily Disturbed Areas)

30 The following methods are recommended for all areas of temporary disturbance in the
31 upland habitats throughout the project area. Section 3.3 addresses restoration of temporarily
32 disturbed riparian habitat.

33 3.1. Seed Mixture (Temporarily Disturbed Areas)

34 One seed mixture was developed for use in revegetating all temporarily disturbed upland
35 habitats within the project area (Table 1). Because the project area takes in a variety of different
36 habitats (e.g. deep-soiled habitats, shallow-soiled lithosol communities) it was necessary to use
37 several different species groups, each adapted to a different soil type. The development of a
38 separate species mix for each habitat was considered, but rejected as being impractical in the
39 project area due to the close intermingling of habitat types within the facilities corridors. In order
40 to re-establish plant communities of most value to wildlife, only native species are used. Species

Revegetation Plan
[REVISED JUNE 6, 2003]

1 were selected based on their tolerance to xeric (low-moisture) conditions, the availability of their
2 seed, and a variety of other factors.

3 **3.2. Seed Planting Methods**

4 The choice of methods should be based on site-specific factors such as slope, erosion
5 potential and the size of the area in need of revegetation. Planting should be done at the
6 appropriate time of year based on weather conditions and timing of the disturbance. Disturbed,
7 unseeded ground may require chemical or mechanical weed control before weeds have a chance
8 to go to seed.

9 **3.2.1 Broadcast Method**

- 10 1. Obtain the seed from a reputable source to avoid contamination.
- 11 2. Broadcast the seed mixture at the given rate.
- 12 3. Apply locally obtained, weed free straw at a rate of 2 tons per acre immediately after
13 broadcasting the seed.
- 14 4. Crimp straw into the ground using a tractor-mounted straw crimper.

15 **3.2.2 Hydroseed Method**

- 16 1. Obtain the seed from a reputable source to avoid contamination.
- 17 2. Broadcast the seed mixture at the given rate.
- 18 3. Apply wood cellulose fiber mulch (mixed with a tackifier) at a rate of 1 ton per acre
19 immediately after broadcasting the seed.

20 **3.2.3 Drill Method**

- 21 1. Obtain the seed from a reputable source to avoid contamination.
- 22 2. Plant seed mixture at ½ the rate given in Table 1 using a seed drill.
- 23 3. Apply locally obtained, weed free straw at a rate of 2 tons per acre immediately after
24 broadcasting the seed.
- 25 4. Crimp straw into the ground using a tractor-mounted straw crimper.

26 **3.3. Restoration of Riparian Areas**

27 The certificate holder shall seed all temporarily disturbed riparian areas (stream bed
28 alterations associated with road crossings) with grass species using seed mixtures and seeding
29 methods appropriate for the site. In addition, at the road crossing located immediately west of the
30 Stateline 3 substation, the certificate holder shall plant bare root willow shrub stock. The
31 certificate holder shall plant twenty shrubs along the disturbed stream bank to provide shrub
32 cover for wildlife and for moderating stream temperatures.

Revegetation Plan
[REVISED JUNE 6, 2003]

4. Habitat Improvement Procedures (Habitat Enhancement Areas)

4.1. Introduction

To mitigate for permanent loss of habitat due to placement of facilities (e.g. turbines, access roads), the certificate holder shall rehabilitate habitat on a like number of acres located in the vicinity of the project. The total amount of non-agricultural land estimated to be permanently disturbed by the project, and for which mitigation is needed, is approximately 79 acres. For Stateline 1 and 2, the certificate holder has acquired the legal right to create and maintain an enhancement area of 50 acres for the life of the facility.¹ For Stateline 3, the certificate holder shall acquire the legal right to create and maintain the enhancement area of 35 acres for the life of the facility.² The habitat enhancement areas are chosen based on a number of factors including:

- the condition of the plant communities (the heavily disturbed habitats are preferred due to the greater potential for improvement);
- accessibility and slope;
- soil type (deeper soils are preferred to aid establishment of desirable grass species);
- distance from the proposed turbine strings (the enhancement areas must be located away from turbine strings to avoid attracting additional avian species to the turbine areas);
- proximity to other functioning wildlife habitat such as the slopes of Vansycle Canyon, native grassland or shrub habitat, CRP grassland; and
- willingness of the landowner to participate in the mitigation activity.

4.2. Habitat Improvement Procedures

The certificate holder shall implement the following measures within the designated enhancement areas. The certificate holder has the ultimate responsibility for implementation and maintenance of these mitigation measures, although other parties may be subcontracted to carry out the procedures.

4.2.1 Fencing

The enhancement areas will be fenced prior to treatment to exclude cattle and other domestic ungulates, if the adjacent land use includes grazing. No domestic grazing will take place within the enhancement areas for the first five years while native vegetation is being established. Once the inspector certifies that all success criteria have been met and predominantly native vegetation is established (see Section 5.2 below), limited domestic grazing may occur. This grazing will be kept to levels that do not significantly degrade the native habitat. It is expected that regular maintenance will be required to keep the fences functioning. Gates will be installed at regular intervals along the perimeter to allow for the regulation of grazing activities. No livestock supporting facilities (such as watering and mineral sites, corrals, etc.) will be allowed in the enhancement areas.

¹ See site certificate conditions (66), (67) and (104).

² See site certificate condition (112).

Revegetation Plan
[REVISED JUNE 6, 2003]

1 **4.2.2 Preparation of Habitat**

2 The recommended preparation procedure is to chemically treat the enhancement areas in
3 March or April of the first year to suppress or eliminate weedy species as needed prior to seed
4 set. The goal is to remove competing non-native vegetation from the parcel to assist in the later
5 establishment of desirable species. Depending on seedbed conditions, tilling may be necessary in
6 the fall prior to the spring spraying.

7 **4.2.3 Revegetation**

8 The entire parcel will be seeded using the seed mixture given in Table 2. The
9 recommended procedure is to plant the mixture in October or November at the rate given in
10 Table 2 using a no-till seed drill (five to ten inch row spacing, 1/2 inch planting depth).

11 **4.2.4 Shrub Plantings**

12 The recommended seed mixture contains big sagebrush seeds. However, shrub
13 establishment from seed is often unsuccessful in xeric conditions, such as those found within the
14 project area. Should revegetation monitoring determine that shrub re-establishment within all or
15 part of the habitat improvement parcel has been unsuccessful, shrubs will be planted in those
16 areas.

17 The certificate holder or designated contractor will obtain containerized (10 cubic inch)
18 big sagebrush from a regional source. The seedlings will be planted within 1 week of delivery,
19 and the unplanted seedlings will be stored in a shaded area and watered as needed. Ten percent
20 of the acres within the parcel will be randomly selected for shrub planting. The seedlings will be
21 planted in clumps of three, with the clumps approximately 20 feet apart (100 clumps per acre).
22 Depending on seasonal moisture during the following spring, irrigation may be necessary to
23 achieve satisfactory establishment. This may be accomplished by watering each clump to
24 saturation once in late May and again in late June.

25 **4.2.5 Maintenance**

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

32 **5. Monitoring**

33 **5.1. Monitoring Procedures (Temporarily Disturbed Areas)**

34 In the fall of the year following each seeding and continuing annually for five years, a
35 qualified independent botanist or revegetation specialist will examine all reseeded riparian areas
36 and a representative cross-section of the revegetated upland sites and report to the Oregon Office
37 of Energy. Care will be taken to survey areas in all the major habitat types and throughout the
38 geographic extent of the project area. At least 20% of the revegetated acreage will be examined.

39 In consultation with the ODFW, the certificate holder shall choose reference sites near
40 the revegetated areas to represent the target conditions for the revegetation effort. For each

Revegetation Plan
[REVISED JUNE 6, 2003]

1 revegetated area, the certificate holder shall choose a reference site in the immediate vicinity that
2 represents the realistically attainable vegetative conditions for that area. The certificate holder
3 shall choose these reference sites based on factors including land use patterns in the area, soil
4 type, aspect and noxious weed densities. The goal in choosing these reference sites is to identify
5 areas that provide a realistically attainable goal that will determine the success threshold level for
6 a particular revegetated area. It is anticipated that it will be necessary to choose several reference
7 sites to adequately represent all the various habitat conditions within the project area.

8 The certificate holder shall choose the reference sites during or after field visits by the
9 revegetation monitoring specialist and ODFW personnel. Once the reference sites are chosen,
10 they will be used for comparison during all subsequent monitoring visits, unless some event
11 (such as wildfire) significantly changes habitat conditions so that a particular reference site no
12 longer represents a realistically attainable habitat goal for the associated revegetated area. In that
13 case, the certificate holder shall choose a new reference site.

14 At each monitoring location, the investigator shall evaluate the following parameters
15 (both within the revegetated area and within the reference site):

- 16 • Degree of erosion due to construction activities (high, moderate or low).
- 17 • Average stems of desirable vegetation per square foot.

18 The investigator shall evaluate the revegetated area and the reference site separately to
19 allow for later determination of revegetation success.

20 **5.2. Monitoring Procedures (Habitat Enhancement Areas)**

21 In the fall of the year following the seedings, a qualified independent botanist or
22 revegetation specialist will examine a representative cross-section of plots within the revegetated
23 parcel. These visits will occur yearly for the first five years and then take place every five years
24 for the life of the project (although additional monitoring visits may be performed as noted
25 below). Care will be taken to survey areas in all the major habitat types and throughout the
26 geographic extent of the revegetated parcel. At least 10% of the revegetated acreage will be
27 examined. After each survey, the qualified independent botanist or revegetation specialist will
28 report to the Oregon Office of Energy.

29 At each plot, the investigator shall evaluate the following parameters:

- 30 • Percent survival of the shrub plantings (if applicable).
- 31 • Average stems of desirable vegetation per square foot.

32 In addition to the regular monitoring schedule (every year for the first five years, and then
33 once every five years after that), a qualified investigator shall conduct additional monitoring
34 visits in the habitat enhancement areas if grazing levels are changed significantly. In particular, if
35 domestic grazing is introduced in the parcel or if the grazing regime is changed significantly, the
36 investigator shall monitor the parcel every fall for two years following the grazing change. This
37 is intended to make sure that domestic grazing activities do not significantly degrade habitat
38 quality such that the parcel fails to meet the success criteria defined below.

Revegetation Plan
[REVISED JUNE 6, 2003]

5.3. Success Criteria (Temporarily Disturbed Areas)

A temporarily disturbed area is successfully revegetated when the average desirable vegetation stem density within the revegetated area is greater than, or equal to, that observed in the comparable reference site.

For riparian areas, the success criterion for willow shrub establishment is survival of 10 of the 20 planted willow shrubs. Revegetation success for seeded grass species is based on a comparison with a nearby riparian reference area (selected by the certificate holder and approved by ODFW). A reseeded riparian area is successfully revegetated when the stem density of desirable species (stems per square foot) in the reseeded area is equal to or greater than the density observed in the reference area.

If success criteria are not met for a site at the time of a monitoring inspection, the investigator may recommend reseeding. In small areas (less than 0.2 acres) where weed encroachment may make native seed establishment impossible, additional reseedings may be optional if erosion from construction activities is moderate or low and total vegetative cover (of native and non-native species together) exceeds 30%.

5.4. Success Criteria (Habitat Enhancement Areas)

The habitat enhancement areas are successfully revegetated when the average stem densities of desirable species are greater than 0.5 stems per square foot. Shrub plantings will be considered successful when at least 25% of the sagebrush seedlings have survived. If success criteria are not met for a site at the time of a monitoring inspection, the investigator may recommend reseeding or replanting.

After predominantly native vegetation has been established in a habitat enhancement area, the investigator will verify, during subsequent visits, that the plant communities within the parcel continue to meet the success criteria described above. In particular, if domestic grazing is allowed within the enhancement area, the investigator shall determine whether stocking levels or length of the grazing season are significantly degrading the native habitat. If all or part of the habitat within the parcel has fallen below the success levels described above, the investigator shall recommend remediative measures, which may include replanting selected areas, lowering stocking levels or restricting grazing in the enhancement area.

6. Amendment of the Plan

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

References

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

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

Revegetation Plan
[REVISED JUNE 6, 2003]

Table 1: Revegetation Seed Mixture (Temporarily Disturbed Areas)

Common Name	Scientific Name	lbs/acre PLS*
Secar Bluebunch Wheatgrass	<i>Pseudoroegneria spicata</i> ssp. <i>Spicata</i>	12
Sherman Big Bluegrass	<i>Poa ampla</i> (<i>secunda</i>)	6
Critana Thickspike Wheatgrass	<i>Elymus lanceolatus</i>	6
Sandberg's Bluegrass	<i>Poa sandbergii</i> (<i>secunda</i>)	0.4
Basin Big Sagebrush	<i>Artemisia tridentata</i>	0.4
Total		24.8

Notes: *PLS (Pure Live Seed)

(The above seed mixture is for use in revegetating all upland areas of temporary ground disturbance within the project area.)

Table 2: Revegetation Seed Mixture (Habitat Enhancement Areas)

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

Notes: *PLS (Pure Live Seed) **Optional in areas where ongoing or expected application of broad-leafed herbicides to control weedy species would limit the establishment of blue flax

(The above mixture is for use in seeding habitat within the specific habitat enhancement areas set aside as mitigation for permanent project ground disturbance. This mix should not be used to revegetate areas temporarily disturbed by project construction.)

Stateline Wind Project:
Resource Impact Avoidance and Mitigation Plan
[JUNE 6, 2003]

1 This plan describes measures that the certificate holder shall implement during
2 construction and operation of facilities located in Category 1 habitat associated with the Stateline
3 Wind Project in Oregon. This plan addresses the potential impacts to Category 1 habitat in and
4 around turbine strings BG-B, BG-C and BG-E, as identified in the Final Order on Amendment
5 #2. This plan acknowledges that construction and operation of the facility cannot avoid all
6 impacts to Category 1 habitat within the energy facility site. The plan describes a framework of
7 avoidance and mitigation measures. These measures assure that the certificate holder avoids
8 impact to the resource to the extent possible and provides reasonable mitigation for those impacts
9 that are unavoidable. This plan has been developed in consultation with the Oregon Department
10 of Fish and Wildlife and the Oregon Office of Energy.

11 The avoidance and mitigation measures described in this plan are designed to offset
12 unavoidable direct and indirect impacts on Category 1 habitat during construction and operation.
13 The overall goal is to achieve a net benefit to the Washington ground squirrel (WGS), an
14 endangered species under Oregon law. The plan has the following five elements:

- 15 ■ Avoidance of direct and indirect habitat impacts during construction
- 16 ■ On-site conservation of WGS habitat for the life of the energy facility
- 17 ■ Monitoring of the existing WGS colony
- 18 ■ Inventory of additional nearby suitable or occupied WGS habitat
- 19 ■ Support for research on the WGS at Boardman, Oregon.

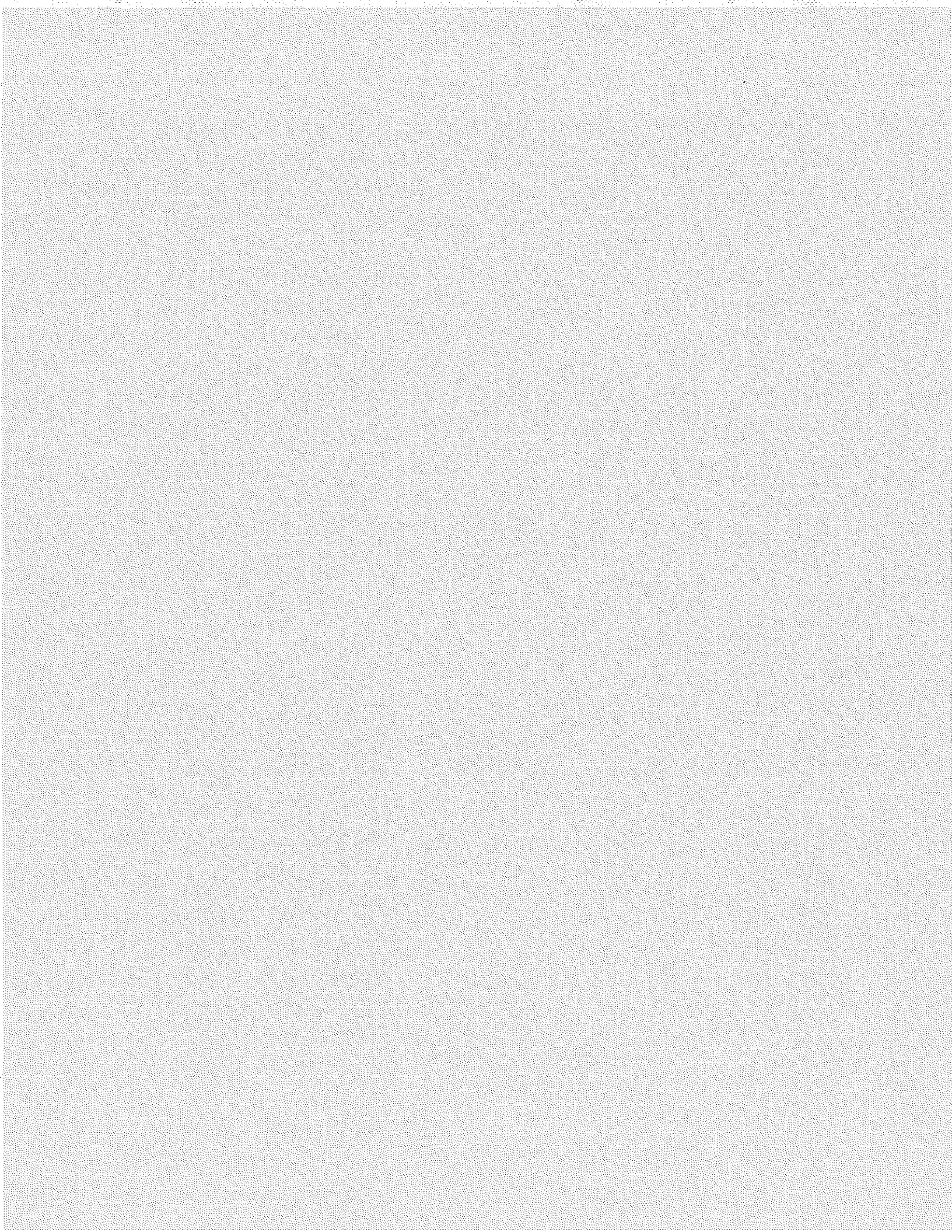
20 **1. Avoidance of Impacts**

21 The objective of this element of the plan is to avoid and minimize potential impacts to the
22 WGS. In the design and construction of the energy facility, the certificate holder shall avoid most
23 of the known locations of WGS natal areas and associated use areas. The certificate holder shall
24 avoid habitat that is of high value for supporting the species currently or in the future. High-
25 value habitats are those areas characterized as areas of deep soil and the bluebunch wheatgrass
26 vegetation community.¹ Avoidance of disturbances in Category 1 habitat during construction and
27 rapid restoration of temporarily disturbed areas is critical to reducing the damage to the resource.
28 The certificate holder shall limit construction activities as much as possible in affected areas and
29 avoid the core of the known WGS colony.² The certificate holder shall prohibit vehicular traffic
30 outside of identified construction areas and limit foot traffic to environmental and cultural survey
31 needs and cleanup activities as required.

32 The certificate holder shall implement the following construction and operation
33 measures:

¹ Northwest Wildlife Consultants, Inc., *Washington Ground Squirrel Impact Minimization and Mitigation Plan, Stateline 3, Part B Wind Project*, Request for Amendment #2, Exhibit 14.

² The "known" WGS colony as used in this plan is based on survey data collected in 2001 through 2002.



Resource Impact Avoidance and Mitigation Plan

[JUNE 6, 2003]

- 1 1. The certificate holder shall locate turbines, roads and underground transmission lines
2 at strings BG-B, BG-C and BG-E to avoid Category 1 habitat to the extent possible.
3 Where impact is unavoidable, the certificate holder shall locate these facilities in
4 shallow, rocky soils to the extent possible and avoid deeper soils.
- 5 2. The certificate holder shall plan transformer box placement, crane pad locations and
6 underground transmission line routes to reduce the area of Category 1 habitat
7 impacts.
- 8 3. The certificate holder shall sequence the stages of construction to reduce habitat
9 impacts.³
- 10 4. The certificate holder shall locate new access roads to the upwind side of the turbine
11 string to avoid putting roads in deep soil areas.
- 12 5. The certificate holder shall provide an environmental inspector during construction.
13 The environmental inspector shall identify authorized construction areas. The
14 construction manager or his representative shall limit contractor activities to those
15 authorized areas so as to reduce additional potential habitat impacts. The certificate
16 holder shall provide contractors with maps showing sensitive habitat and closed areas.
- 17 6. The certificate holder shall locate areas of temporary disturbance during construction
18 (laydown and staging areas) outside of Category 1 habitat. The certificate holder shall
19 restore and reseed areas of temporary habitat disturbance according to the
20 *Revegetation Plan* included in the final order as Attachment B and as revised from
21 time to time. The certificate holder shall use the method of hydro-mulching on top of
22 drilled grass seed instead of the more typical straw crimping method. This method
23 avoids wind-blown straw collecting in undisturbed areas and potentially creating
24 artificial mulch on top of an otherwise open grassland plant community.
- 25 7. The certificate holder shall implement general mitigation measures and site-specific
26 restrictions on construction activities described in other site certificate conditions to
27 reduce temporary and permanent impacts to Category 1 habitat at BG-B, BG-C and
28 BG-E.

29 **2. On-Site Conservation Area**

30 Conserving WGS habitat in the area near BG-B, BG-C and BG-E offers a significant
31 benefit to WGS survival. Despite the state listing of the WGS as an endangered species, there is
32 no legal restriction on development by a private landowner of areas determined to be Category 1
33 habitat essential to the WGS. An on-site conservation easement offers an opportunity that is
34 otherwise unavailable for long-term preservation of known WGS habitat.

35 FPL Energy Vansycle, LLC, (FPL) has negotiated long-term Conservation Area
36 Agreements for two parcels (360 and 40 acres) of native grassland habitat surrounding the
37 known WGS colonies near BG-B and BG-C. The two parcels are contiguous but owned by

³ Normally, a wider area construction zone is needed to allow various contractors to work concurrently on their specific task without interrupting each other. At BG-B, BG-C and BG-E, sequencing the construction activities will minimize the disturbed area.

Resource Impact Avoidance and Mitigation Plan

[JUNE 6, 2003]

1 separate landowners. Together, both parcels encompass the primary WGS colony and small
2 active sites plus most of the associated use area as described in the Final Order on Amendment
3 #2. The proposed Conservation Area Agreements (Parcel #1 and Parcel #2) prohibit the
4 landowners from increasing livestock grazing beyond recent historical levels and from otherwise
5 adversely affecting the habitat quality or knowingly disturbing the squirrels.

6 The conservation areas established under this plan are located on private property. This
7 plan does not allow access to the conservation areas by the general public or government agency
8 personnel. Access to the conservation areas must be authorized by the landowner or by the
9 certificate holder under the terms of a lease with the landowner.

10 The conservation measures required under the terms of the Conservation Area
11 Agreements will provide habitat protection to an existing WGS colony and an important use area
12 that otherwise would be vulnerable to increased farm use or other land use changes. This
13 protection will allow the WGS to use good quality habitat in a pattern similar to what was
14 documented before construction, at least outside of the permanent footprint areas and reseeded
15 areas. The Conservation Area Agreements assure long-term protection of a large block of
16 Category 1 habitat suitable for the WGS and other grassland species for the life of the wind
17 leases. The purpose of the Conservation Area Agreements is to provide a net benefit, despite the
18 permanent loss of a relatively small area of Category 1 habitat.

19 The certificate holder shall provide to the Office of Energy fully-executed copies of the
20 Conservation Area Agreements or other proof satisfactory to the Office before beginning
21 construction of the Stateline 3 wind turbines at BG-B, BG-C and BG-E as described in the Final
22 Order on Amendment #2. The certificate holder shall promptly provide fully-executed copies or
23 other satisfactory proof of any future amendments or superseding future agreements. Any such
24 amendments or superseding agreements must conform to the terms of this plan.

25 Parcel #1

26 Parcel #1 is the 360-acre parcel. The specific terms of the Conservation Area Agreement
27 for Parcel #1 shall include, in substance, the following:

- 28 1. The life of the Conservation Agreement is the length of the wind lease. If the
29 certificate holder wants to continue wind power generation beyond the current lease
30 period, the wind lease would be renegotiated, and the Conservation Agreement's
31 terms would be extended for the length of the renegotiated wind lease.
- 32 2. If the Stateline Wind Project is sold to another operator before retirement of the
33 facility, the Agreement would remain in effect and transfer to the new operator or the
34 new operator shall obtain a superseding agreement that conforms to the terms of this
35 plan. If the landowner sells Parcel #1, the new owner shall be bound by the
36 Agreement or a superseding agreement that conforms to the terms of this plan.
- 37 3. Livestock grazing is optional. The grazing season will commence between November
38 15 and December 15 and shall end no later than May 5. Livestock shall not be
39 allowed to access Parcel #1 outside of the grazing season.
- 40 4. No more than one Animal Unit per 10 acres of land is permitted. "Animal unit" is
41 defined as (a) one adult cow or bull, (b) a cow and her calf, or (c) two yearlings. In

Resource Impact Avoidance and Mitigation Plan

[JUNE 6, 2003]

1 addition, the landowner shall be allowed to graze up to three horses. No other types of
2 domestic livestock are permitted on the Parcel #1. Currently the landowner grazes
3 approximately 710 acres as one contiguous pasture, inclusive of the 360-acre parcel.
4 Should the landowner wish to increase the number of Animal Units per acre for the
5 710-acre pasture above one animal unit per 10 acres, the landowner would be
6 required to separate the 360-acre Parcel #1 from the remaining acres to ensure the
7 allowed ratio on the 360-acre parcel is met. Fences would be required if the
8 landowner wishes to increase the number of Animal Units per acre on the adjoining
9 property.

- 10 5. Existing fences will be maintained in good working order. Fences enclosing Parcel #1
11 are not necessary unless the landowner wants to exceed more than one Animal Unit
12 per 10 acres permitted for the Parcel (see #4).
- 13 6. No watering sites or mineral blocks will be allowed to be placed on the east side of
14 the BG-C string so as to avoid the most sensitive WGS habitat.
- 15 7. The landowner agrees to refrain from any other use of the Mitigation Parcel that
16 might detract from its value as habitat for WGS, including but not limited to clearing
17 vegetation, plowing, grading, building barns, stables or similar structures, spraying
18 herbicides and/or pesticides, and human activity beyond what is needed for managing
19 the grazing. The landowner can spray weeds as needed to control starthistle or other
20 noxious weeds to promote good grazing practices.

21 Parcel #2

22 Parcel #2 is the 40-acre parcel. The specific terms of the Conservation Area Agreement
23 for Parcel #2 shall include, in substance, the following:

- 24 1. The life of the Conservation Agreement is the length of the wind lease. If the
25 certificate holder wants to continue wind power generation beyond the current lease
26 period, the wind lease would be renegotiated, and the Conservation Agreement's
27 terms would be extended for the length of the renegotiated wind lease.
- 28 2. If the Stateline Wind Project is sold to another operator before retirement of the
29 facility, the Agreement would remain in effect and transfer to the new operator or the
30 new operator shall obtain a superseding agreement that conforms to the terms of this
31 plan. If the landowner sells Parcel #2, the new owner shall be bound by the
32 Agreement or a superseding agreement that conforms to the terms of this plan.
- 33 3. Current land use practices will be maintained for the duration of the wind lease as
34 defined in the wind lease. Grazing is optional and can be eliminated if the landowner
35 chooses.
- 36 4. Animal Units are allowed depending on the seasonal characteristics; there is no
37 annual minimum or maximum. The landowner agrees to not increase the stocking or
38 extend the grazing season beyond what has historically been in place by the family.
- 39 5. No newly constructed watering troughs will be allowed on the parcel. Any use of
40 mineral blocks would remain consistent with recent historic use.

Resource Impact Avoidance and Mitigation Plan

[JUNE 6, 2003]

- 1 6. The landowner agrees to maintain good land-use practices, which have thus far been
2 compatible with a WGS colony, by agreeing to not plow the land for farming and to
3 not build barns, stables or similar structures. The landowner can spray weeds as
4 needed to control starthistle or other noxious weeds to promote good grazing
5 practices.

6 **3. Monitoring of the Existing Colony**

7 The WGS presents a challenge for monitoring because of within- and between-year
8 variability in patterns of WGS landscape use, recruitment, dispersal and natural mortality. Pre-
9 and post-construction population density estimates, though a viable technique, require intensive
10 effort and may be confounded by variable capture/recapture rates or violation of modeling
11 assumptions. Such estimates may fail to reflect changes in patterns of landscape use by the
12 WGS.

13 The objective of the monitoring element of this plan is to document measurable changes
14 to the overall level of use of the existing population at BG-B and BG-C as characterized during
15 the baseline study results conducted during the spring seasons of 2001, 2002 and 2003.⁴ “Level
16 of use” means the overall level of activity and distribution within and adjacent to the turbines in
17 established survey corridors. It does not include an assessment of population dynamics or colony
18 health. Measurable changes, for example, could potentially range from the known colony at
19 BG-C vacating the site to, at the other extreme, a measurable increase in the size and distribution
20 of the colony.

21 Two years (two squirrel seasons) of baseline data have been collected at the sites using
22 the baseline monitoring protocol, described below. If construction does not begin in 2003 until
23 after the peak squirrel use period (ending May 31), the certificate holder shall conduct a third
24 year of baseline data collection in 2003 using the baseline monitoring protocol to better assess
25 and update the baseline squirrel use.

26 Operational monitoring data collection will provide an understanding of the species’
27 response to a change in their environment and ability to adjust to the presence of wind energy
28 facilities. The certificate holder shall conduct operational monitoring in the first, third and fifth
29 years after completion of construction within WGS habitat in the area near BG-B and BG-C. For
30 example, if the certificate holder completes construction in these areas in 2003, the first year of
31 operational monitoring would commence in the spring of 2004. The second monitoring year
32 would be 2006 and the third, 2008. The monitoring schedule may be altered by amendment of
33 this plan, as provided in Section 7 below, if there is a need to monitor consecutive years due to
34 changes in use or other factors.

35 Baseline Monitoring Protocol

36 The baseline monitoring protocol is a survey consisting of walking transects within 1,000
37 feet of the proposed BG-B and BG-C turbines and all related or supporting facilities associated
38 with the BG-B and BG-C strings. The survey is conducted during the WGS activity season
39 (April and May). This survey method is designed to sample the area for presence of the WGS. In

⁴Described in the Request for Amendment #2, Exhibit 14 and a report of 2003 baseline data to be prepared in June 2003.

Resource Impact Avoidance and Mitigation Plan

[JUNE 6, 2003]

1 2003, the survey will exclude areas of steep, west-facing rocky slopes where WGS are not likely
2 to burrow.

3 This site has been studied extensively for presence of wildlife species of concern.
4 Intensive mapping of all squirrel holes in June 2002 validated the effectiveness of the 164-foot
5 wide transects. For these reasons, this survey method should detect a change from the
6 pre-construction use documented in 2001, 2002 and 2003. It may not be as sensitive to subtle
7 changes or be able to measure changes in numbers of breeding adults, but it is expected to be
8 thorough enough to detect a change in the level of activity characterized in the 2001, 2002 and
9 2003 surveys.

10 Operational Monitoring Protocol

11 Operational monitoring will utilize the standard pre-construction data collection methods
12 implemented in 2001, 2002 and 2003. The standard 164-foot wide transects will be walked once
13 in early to mid-April and again in early May within 1,000 feet of the turbine strings on both
14 Parcel #1 and Parcel #2 (measured from the outside edge of the permanent footprint, including
15 access roads). Within the total transect area of about 334 acres near turbine strings BG-B and
16 BG-C, approximately 43 acres have shallow, rocky soil on a steep slope that will not be
17 monitored. Therefore, the monitored area will total about 291 acres.

18 Data gathered during operational monitoring will include locations of concentrated
19 activity (indicating natal sites), estimated boundary of colony (if possible to determine), notes on
20 sign of predator activity and habitat descriptions such as plant community type and quality. This
21 survey effort will provide a representative sample of the area. It is not a complete survey. Data
22 will be entered into a GIS database and results will be mapped at a scale of 1" = 200'. The
23 certificate holder shall obtain continuous weather data covering the entire monitoring period
24 through July 2008, unless the monitoring schedule is altered as described above. Because WGS
25 populations appear to ebb and flow with vegetation response to weather patterns, the weather
26 data will aid in assessing extremes that may be influencing the WGS population in the monitored
27 area.

28 **4. Inventory of Nearby Habitat**

29 The certificate holder shall inventory and map WGS distribution near the BG-E turbine
30 string in 2006 (or the third year after construction, whichever is later) in the area of the historic
31 colony. The inventory areas include all of the suitable habitat and the young Conservation
32 Reserve Program tract within the leased land within 1,000 feet of the BG-E turbine string
33 (measured from the outside edge of the permanent footprint, including access roads).

34 The certificate holder shall conduct standardized surveys, using the operational
35 monitoring protocol method described in Section 3 above. Transects will be walked by
36 experienced field biologists, approximately 164 feet apart, twice from April 15 through May 20.
37 Data gathered will include locations of concentrated use (indicating natal sites), estimated
38 boundary of colony, notes on sign of predator activity and habitat descriptions such as plant
39 community type and quality. The data will be entered into a GIS database and results will be
40 mapped at a scale of 1" = 200'. The certificate holder shall obtain continuous weather data
41 covering the entire monitoring period. Project personnel will be trained on identification of the
42 species and will report any Washington ground squirrel observations at BG-E to the operations

Resource Impact Avoidance and Mitigation Plan

[JUNE 6, 2003]

1 manager for the duration of the first three years of operation. The data will be included in
2 monitoring reports prepared for this mitigation plan along with the formal inventory results
3 collected during the third year after construction.

4 Data gathered in this inventory effort combined with results of the operational monitoring
5 effort is intended to benefit the WGS in several ways. It will guide future regulatory decisions by
6 providing a fuller understanding of the use of available suitable habitat and the extent of WGS
7 distribution in the proposed development areas. It will aid in gaining insight on natal and
8 dispersal area use and activity. The data will provide a better understanding of the habitat needs
9 of the WGS. The data will provide insight to the ability of the WGS to use habitat in proximity to
10 developments such as wind turbines, roads and underground collector cables and the associated
11 vehicular traffic from maintenance vehicles. These data may also be useful for assessing the
12 overall status of the WGS populations throughout their geographic range.

13 **5. Research Support**

14 The certificate holder shall contribute a one-time payment of \$10,000 to a masters-level
15 WGS research project at Boardman, Oregon, before beginning construction in Category 1
16 habitat. Such research efforts indirectly benefit the WGS because they provide information about
17 the habitat requirements and behaviors of the WGS. This information can guide state agencies in
18 future regulatory decisions that may affect the survival and recovery of the species.

19 The certificate holder's contribution, in conjunction with other funds, will support
20 telemetry research into adult daily movements of the WGS in the Boardman study area. This
21 research will refine understanding of day-to-day movements of individual squirrels in a colony
22 and help determine the amount of room a colony needs to function successfully. The contribution
23 will also support completion of a 10-year study in colony dynamics. This research seeks to
24 clarify the evolution of a colony over time. This work will provide insight on why colonies
25 establish, enlarge and vacate specific locations under natural circumstances. The purpose of this
26 research is to shed light on the conditions and causes of colony disruption that result in size
27 reduction or loss of a colony.

28 **6. Data Reporting**

29 The certificate holder shall report the monitoring and inventory data and analysis to the
30 Oregon Office of Energy. This information may be included in the annual report required under
31 OAR 345-026-0080 or may be submitted as a separate document when the certificate holder
32 submits the annual report. In addition, the certificate holder shall provide to the Office any data
33 or record generated in carrying out this mitigation plan upon request by the Office.

34 **7. Amendment of the Plan**

35 This plan may be amended from time to time by agreement of the certificate holder and
36 the Oregon Energy Facility Siting Council. Such amendments may be made without amendment
37 of the site certificate. The Council authorizes the Office of Energy to agree to amendments to
38 this plan. The Office shall notify the Council of all amendments, and the Council retains the
39 authority to approve, reject or modify any amendment of this plan agreed to by the Office.